BLOQUE TEMÁTICO 3

Financiarización del espacio urbano

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En las últimas décadas, la financiarización se ha convertido en una dimensión central para comprender las transformaciones urbanas bajo el capitalismo contemporáneo, y en particular, para explicar la intensificación y expansión de los procesos de gentrificación en ciudades globales. Este bloque del marco teórico aborda cómo la vivienda y el suelo han pasado de ser concebidos principalmente como bienes de uso y espacios de reproducción de la vida, a convertirse en activos financieros que circulan en mercados globales, generando profundas transformaciones en las estructuras socioespaciales de las ciudades.

La financiarización como proceso estructural del capitalismo contemporáneo

La financiarización puede definirse como la creciente dominación del capital financiero sobre otros sectores de la economía y su influencia en la vida cotidiana y en los procesos de producción del espacio urbano (Aalbers, 2016). Este proceso implica que la lógica de rentabilidad del capital financiero penetra en ámbitos previamente protegidos, como la vivienda, transformándolos en espacios de inversión y especulación.

David Harvey (2003, 2012) ha señalado que, en el contexto de crisis recurrentes de sobreacumulación, el capital busca nuevas formas de valorización a través de la inversión en bienes raíces y en el desarrollo urbano, utilizando el espacio construido como una vía para absorber excedentes de capital. Este proceso se articula con las políticas neoliberales que promueven la desregulación de los mercados inmobiliarios, la liberalización financiera y la reducción del papel del Estado en la provisión de vivienda, facilitando la penetración de actores financieros en el mercado urbano.

La vivienda y el suelo como activos financieros

Raquel Rolnik (2015, 2019) ha documentado cómo la financiarización transforma la vivienda y el suelo en activos financieros, desconectándolos de su función social y de su valor de uso, para insertarlos en circuitos globales de inversión. Este proceso se expresa a través de diversos mecanismos, como la titulización de hipotecas, la creación de instrumentos financieros basados en activos inmobiliarios y la participación de fondos de inversión y capital privado en el mercado de vivienda. La vivienda se convierte así en un producto financiero cuya rentabilidad depende de su capacidad de generar ingresos a través del alquiler o la especulación sobre el valor del suelo.

Este fenómeno no se limita a los mercados inmobiliarios de las grandes economías, sino que se ha extendido a ciudades del Sur Global, donde la urbanización se convierte en una estrategia de inserción en los mercados financieros internacionales, con proyectos de renovación urbana y megaproyectos inmobiliarios orientados a atraer inversiones extranjeras y capital transnacional.

Vínculos entre financiarización y gentrificación

La financiarización del espacio urbano y la gentrificación están profundamente conectadas. Por un lado, la búsqueda de rentabilidad en mercados inmobiliarios lleva a los inversores a focalizarse en áreas urbanas con alto potencial de revalorización, impulsando procesos de renovación y expulsión de poblaciones de menores ingresos (Gotham, 2009). Por otro lado, la gentrificación crea las condiciones para la valorización simbólica y económica de los espacios urbanos, convirtiendo barrios antes devaluados en activos atractivos para la inversión financiera (Fields, 2017).

La relación entre financiarización y gentrificación es particularmente visible en los procesos de “nueva construcción” en barrios estratégicos (Davidson y Lees, 2005) y en la expansión de plataformas como Airbnb, que transforman viviendas en instrumentos de especulación turística, intensificando las dinámicas de expulsión y el alza de precios de los alquileres. Asimismo, la financiarización facilita procesos de acumulación por desposesión (Harvey, 2003), al desplazar a poblaciones empobrecidas mediante mecanismos de mercado y endeudamiento, al tiempo que crea nuevos espacios de acumulación de capital.

Implicaciones socioespaciales de la financiarización

Los efectos de la financiarización del espacio urbano no se limitan al plano económico, sino que generan profundas consecuencias en la estructura social de las ciudades. Entre estos efectos se encuentran la precarización del acceso a la vivienda, el aumento de la deuda de los hogares, la polarización social y la segregación espacial, así como la erosión de los derechos urbanos y de las comunidades locales. Este proceso contribuye a intensificar las desigualdades urbanas y a consolidar ciudades fragmentadas, donde el derecho a la vivienda y a la ciudad se subordina a las lógicas del capital financiero.

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Importancia de incluir el Bloque temático 3 en el marco teórico

Incluir el análisis de la financiarización del espacio urbano en esta investigación es imprescindible para comprender la gentrificación como un fenómeno inserto en las lógicas del capitalismo financiero global, que no se explica únicamente por dinámicas culturales o de mercado local, sino que está profundamente vinculado a las estrategias de inversión del capital financiero y a las políticas neoliberales que favorecen la mercantilización de la ciudad. Este marco permitirá, en el análisis de los casos de Chicago, París, Seúl, Ciudad de México, Johannesburgo y Mumbai, identificar cómo la financiarización condiciona las dinámicas de transformación urbana, reconfigura las relaciones sociales en el espacio y genera resistencias frente a la mercantilización de la vivienda.

Este bloque del marco teórico aporta una perspectiva estructural y crítica para entender cómo las ciudades globales se convierten en espacios de acumulación financiera, y cómo la gentrificación se articula con estos procesos para producir desigualdad, exclusión y conflictos urbanos en la ciudad contemporánea.

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The urban process under financialised capitalism

Louis Moreno

Over half a decade has passed since the first global financial crisis of the 21st Century, and political economists are still trying to make sense of its causes and ramifications. In a major recent intervention Costas Lapavitsas argues that what was thrown into relief was the sheer penetration of the financial process into all facets of everyday life. Financialisation represents, Lapavitsas says, nothing less than a historic transformation in the structural process of capital accumulation itself: one which has been globally unfolding and locally evolving over the last three to four decades, and has now installed itself at all levels and dimensions of everyday life. At the centre of this argument is an analysis which focuses on the way financial intermediaries have been able to draw people, and the social infrastructure people depend on, deep into the circuit of financial accumulation. To a considerable degree this thesis backs up Lefebvre and Harvey's analysis made some four decades earlier: that financial capitalism was liable to mutate into a new urban form, based on the intensification of 'secondary' circuits of exploitation operating both inside and outside the realm of production. In this paper I try to connect the financial and geographical frameworks of Lapavitsas and Harvey to see what new light is cast on emerging urban forms of rent-extraction. Through an examination of the financialisation of the urban landscape I argue that urbanism does not merely reflect or represent the culture of financial accumulation, but has been a crucial socio-spatial process enabling the permeation and penetration of finance into the fabric of daily life.

It was a tremendous gamble: the new neighbourhoods were speculated in as one speculates in stocks and shares.[1]
Émile Zola

Finance is the web of intermediation binding economic agents to one another, across both space and time.[2]
Martin Wolf

Robinson believed that, if he looked at it hard enough, he could cause the surface of the city to reveal to him the molecular basis of historical events, and in this way he hoped to see into the future[3].
Patrick Keiller

1. Introduction – the liquid terrain of finance capital

Written in 1872, Zola's novel *The Kill* offers a vivid account of the marauding social and cultural forms finance-capital assumes in the process of urbanisation. Underneath the *Beaux-Arts* grandeur of Napoleon III's new Paris, a 'complicitous city' begins to crystallise (Zola 2008, 133); where speculation and fashion replace enterprise and morality, and the immense improvement of the urban fabric, belies an intense degeneration of the human condition. But beyond the drama of a culture reaching

its apex and nadir in a single moment, what strikes the contemporary reader most forcefully is the anti-hero's entrepreneurial ascent. In an early part of the story Saccard arrives from the provinces utterly resentful towards the world because of his poverty. Whilst roaming the city's newly minted boulevards he begins to see the city's public realm as a boundless field of economic opportunity. Saccard feels wealth ooze beneath his feet, and as he walks the streets he hatches a plan to extract its liquidity.

> He walked for the sake of walking, marching along the pavements as if he were in some conquered country. He saw very clearly, the battle that lay ahead, and was happy to compare himself to a skilful picklock, who by cunning or violence, was about to seize his share of the common wealth which so far had been cruelly denied him. (Zola 2008, 41)

In the same year, Friedrich Engels also reflected on the urban redevelopment of Paris. For Engels what was historically resonant was not the manner of Paris's redesign, but the way in which the urban process offered the bourgeoisie with a method to wash its hands of social questions. By clearing slums and demolishing squalid housing, the bourgeoisie could 'lavish self-praise...on account of th[e] tremendous success' (1942, 71) of the more luxurious and civilised landscape they had produced. In reality, however, what this method - which Engels bluntly christened 'Haussmann' - created was a process through which the social problem of exploitation could be displaced to the periphery, so that the process of capital accumulation could be intensified at the centre.

Zola provides a fascinating account of the Haussmann method as Saccard takes 'possession of the city', worming his way into the municipal planning offices as a clerk. In the corridors of municipal power, he studies closely the 'second network' of favoured boulevards (traced by Napoleon III over Haussmann's plans) and spots the most fertile sites to make a profitable 'killing' from the new land-parcels expropriated by the state. Here, Saccard assembles the capital he needs to construct a property portfolio through speculative deals built on what Zola calls 'fictitious assets' (137); fictitious, because the financing orchestrated via a complex network of French municipal and colonial banks, are backed by capital secured by institutions with no basis in reality. Thus, the luxurious apartments built by Saccard, become what Zola calls 'the gilded facade of missing capital' (138).

Such descriptions of architectural forms cladding corrupt practices and 'mortgage-loan machine[s]' yielding 'useless luxury and real penury' (*ibid.*) finds a peculiar symmetry in 21st Century London. With fields of 'super-prime' real estate providing a safe haven for overseas wealth, spatial infrastructure paid by the public, but benefiting 'high-net-worth individuals', the new urban landscape appears in thrall to the same process of accumulation which gripped the Second Empire. Until very recently, however, the notion of *the global city* has been largely accepted as a structural fact of 'advanced' economic growth. Policies have been shaped, theories developed, and urban infrastructure laid on the promise that large agglomerations of financial and business services are essential engines of wealth creation and distribution. This agenda has given a platform for a new style of urban politics, based on a competition to attract, capture and monopolise the resources needed to dominate the 'global technological frontier' of financial and human capital.

Through the looking glass of the financial crisis, however, the triumphalist rhetoric of the global city is being seen in a darker light. With capital reversing into London's property markets in flight from social upheaval, economic turbulence and climate change, the notion of 'wealth preservation' suggests something different to 'wealth creation'. In the media the charge that London since

2008 has become increasingly 'a kind of 'City-State' within the national economy' (Ertürk *et al*. 2011, 3), has been widely voiced.[4] Even the Business Secretary, admits that the capital is like some 'giant suction machine draining the life out of the rest of the country' (BBC 2013). But for urban theorists what contemporary London represents is a far more extensive process of value *extraction*. In a stimulating and provocative work Merrifield argues that what the financial city represents is a new kind of urban apparatus of capture, consisting of nothing less that 'Haussmannisation' on a planetary scale.[5]

The thesis of 'neo-Haussmannisation', as Merrifield notes, has its roots in a line of thought which sprung from a few paragraphs Henri Lefebvre wrote in *The Urban Revolution* and developed, in sporadic form, in later work. Where the economist Joseph Schumpeter saw Keynesianism's collapse as laying a path to authoritarianism, the urbanist Lefebvre argued that capitalism could survive in a new competitive form: urbanisation offered a vehicle to provide a new medium of global accumulation. 'Such is the context,' Lefebvre said,

> of an unfolding 'economic' process which no longer answers to classical political economy and which indeed defies all the computations of the economists. 'Real property' (along with construction) is no longer a secondary form of circulation, no longer the the auxiliary and balanced branch of industry and financial capitalism that it once was. Instead it has a leading role, albeit it in an uneven way, for its significance is liable to vary according to country, time or circumstance. The law of unevenness of growth and development so far from being obsolete is becoming worldwide in its application – or, more precisely is presiding over the globalisation of a world market (1991, 335).

Drawing on Marx's notion of the circuits capital needs to negotiate to realise a surplus, Lefebvre considered what would emerge from the crises of production and consumption that destabilised the post-war model. In moments when, 'the production-consumption cycle slackens or when there are freak recessions' (1976, 34) Lefebvre claimed there was nothing stopping the primary circuit of productive investment, becoming geared towards the dominance of a secondary circuit of money and commercial capital capturing the production of urban space. 'Capital investment,' Lefebvre speculated, would find 'a place of refuge in the real estate sector, a supplementary and compensatory sector for exploitation'; realising a systemic inversion where the proportion of the global capital 'formed and realized in industry would decline' while 'speculation, construction and real estate grows' (Harvey 1974, 239). Half a decade on from a global crisis triggered by the multi-regional collapse of speculative real estate markets, this forty year old hypothesis feels like a fresh take on a process known today as *financialisation*.

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Finance has always played a fundamental role in the spatial development of world markets. Well before the industrial revolution the worlds of banking and commercial lending used urban centres to shape, influence and mould the political and economic structures of trade, production and consumption (Braudel 1984).[6] But in the mid 1990s, political economists highlighted the disproportionate influence of financial capital in global economic growth. The 'revolutionary transformations undergone by world capitalism,' Arrighi said, indicated a strong connection between the comparative expansion in financial accumulation relative to productive activity since the 1970s (2010, 309). The 'growing weight' of financial activity in the US economy, Krippner elaborated, suggested a break in the way capital was being accumulated in mature industrial economies. The leading trend of capitalism in the early 21st Century was 'a pattern of accumulation in which profits accrue primarily through financial channels rather than trade and commodity production' (Krippner 2005, 174). Similarly, over the 2000s a host of influential accounts came to the fore identifying financialisation to be a complementary trend to neoliberalism and globalisation. (see Duménil & Lévy 2011; Glyn 2006; French et al. 2011) Yet, as Krippner points out, the study of financialisation has taken such a variety of forms it becomes difficult to define in clear terms what in fact this process represents.[7]

Perhaps a reason for this lack of clarity lies with an ambiguity in the historical and geographical account of financialisation. For Braudel financial domination was a recurrent feature of any 'world-system' of capitalism. But as Arrighi notes, Braudel's analysis lacked a singularly 'consistent explanation of the patterns of recurrence and evolution' involved in the financialisaton of capital (2001, 120). Arguably, this problem reappears in contemporary presentations of the spatial structure of financial activity. Analyses of 'global city' systems tend to be descriptive in their outlook, interpreting the stratified, nodal structure of financial and business service networks. What is rarely tackled, even in Sassen's (2001) comprehensive work *The Global City*, is an account of the urban process that enables finance-capital to colonize not only global space but also that of everyday life. It was only at the latter level, Lefebvre suggested, that we could appreciate the molecular capability of capital to not only transform material use-values into immaterial exchange-values (and back again), but that this constant turnover of value into wealth could transform the very conditions of daily life; turning urban society from a solid industrial form to some more liquid state.

In short, while contemporary studies have tended to describe the institutional context, cyclical nature and social impacts of finance, what has been withheld is an account of the underlying process that creates the conditions of financial growth. But in a recent account of financial capitalism, Lapavitsas (2013) contends that to grasp the enormity of the crisis, the intellectual challenge is to explain financialisation as an unprecedented transformation in the way capital reproduces itself as a global system; one which has been globally unfolding and locally evolving over the last three to four decades, and has changed the 'molecular' relations of capital's production, consumption, distribution and exchange. Specifically, Lapavitsas highlights an interactive process where non-financial companies increasingly make profits by speculating in capital markets; banks in turn have transformed acting largely as agents converting assets into loanable funds for producers and consumers; and workers have sought assets and credit to finance consumption as wages have stagnated. The result, the shocks of 2007 and 2008 and aftershocks like the Eurozone crisis, has illuminated an apparatus of financial accumulation extending across all levels and dimensions of social and economic life, based on the essential principle of *profiting without producing*.

On the surface, Lapavitsas's analysis corresponds with Harvey's own approach to analysing capital as a 'molecular process of capital accumulation in space and time' (2003, 26). In the 1970s and 1980s, Harvey developed and expanded Lefebvre's strategic hypothesis about the urban circuits of accumulation by examining how monopoly-rent and finance capital merge in the urban process. Following an analysis of the way financial institutions and property development form a secondary circuit of accumulation in urban housing markets, Harvey concluded that within the investment process there were abundant opportunities for finance to take a controlling influence. In *Limits to Capital* Harvey (1982) said that the transformation of ground-rent into interest, mediated via real estate, meant that the production of space could be synched to the production of credit looking for its highest and best *spatial fix*. In other words, the financial system working within the production of built environments could find ways to extract profits from the income circulating through, and wealth incorporated in, social space. Thus, it was certainly conceivable, Harvey concluded, that cities could be restructured into financial ensembles of social relations, whose spaces could be fixed and liquidated according to the need to 'realize value without producing it' (1974, 254).

Yet while Lapavitsas's critique of financialised capitalism – perhaps the most systematic theorisation yet given - has clear resonances with Harvey's pathbreaking theorisation of finance-capital as a spatial entity, problems of geography and urbanism enter only at the edges. This perhaps reflects the fragmented picture of financialisation within the field of urban studies. As one literature review (French et al. 2011) concludes the spatial study of financialisation is loosely defined, fragmentary, and has failed to develop the implications arising from Harvey's theorisation of finance-capital's spatial fixity and fluidity.[8] Aspects of financialisation occur in urban studies of mortgage markets, the regulatory conditions of neoliberalism, geographical concentrations of finance, the complex ways architecture embodies the cultural logic of accumulation, and the rise of gentrification as an urban economic strategy.[9] All of these touch on important urban aspects of financialisation as a political and cultural phenomenon. But with a few exceptions,[10] outside of Harvey's own evolving molecular analysis of 'accumulation by dispossession', there has been less interest in connecting financialisation and urbanisation as a systemically inter-dependent process.

So although critical urban theory has deep political economic resources available – vis-à-vis concepts like the circuits of accumulation, the spatial fix, monopoly-rent, and so forth – the emergent forms and tendencies of 'planetary urbanisation' (Brenner 2013) have yet to be fully explored in terms of the *implosive/explosive* dynamics of financial accumulation. On one level this reflects the fact that the social forms finance takes arise through institutional mediations which are geographically and historically contingent; making theorisation fraught with difficulty. But given the relative ease with which financial and business services have made 'the global city' the normative expression of international financial domination, re-loading the spatial critique of political economy seems crucial. Particularly, if Lefebvre's concept of 'planetary urbanisation' is to have real traction in confronting the 'urban age' of global finance. (Brenner & Schmid 2014)

The rest of this paper examines how financialisation has taken shape as an urban process in recent decades. Theoretically it draws on Marxian political economy as a frame of reference with the intention of tightening the 'molecular' bonds of Harvey and Lapavitsas's accounts of finance-capital. I start by putting the role of financial intermediation in capital accumulation in context, and examine how systemic changes enabled finance to permeate the conditions of everyday life and enabled a huge shift in the share of wealth being absorbed in capital markets. The following two sections try to explain this transformation by tracing some points of intersection between Lapavitsas and Harvey's theorisation of financialisation and urbanisation. To conclude I develop this synthetic framework to try to define what is specifically spatial and 'contemporary' about the urban question of financial capitalism, the revival of interest in 'rentiership' and underline the important role of critical urbanism in confronting financialisation.

2. One-way street – the rise of financial intermediation and the 'new economy' of financial services

Before we can study the social transformations of finance-capital, it is useful to understand the systemic role finance plays in the economy. Put simply, the transformation of money into credit is an indispensable function in capitalist economies, providing a medium of exchange, an ability to store and circulate wealth, and a mechanism to create and allocate purchase power. While in reality these services are bundled in a range of operations and activities, it is possible to identify four basic categories of financial service provision: (i) retail and wholesale payment services, (ii) insurance and risk management, (iii) the trade in financial instruments (for example, commodity and currency trading), (iv) and provision of capital by connecting the users and suppliers of loanable funds (for example, savers and borrowers, investors and businesses) (Turner 2010). This last aspect, the ability to transform the deposits of savers into loanable funds for enterprise - known as 'financial intermediation'- is the focal point of speculative expansion. On the basis of what Walter Bagehot (1877) called 'good security or upon decent proposals of probable gain' banks are able to amplify the level of money in circulation thereby meeting basic payment obligations, advancing credit to entrepreneurs, and using financial instruments to help spread the risk of credit default.

For Bagehot, the superiority of English capitalism (over its French and German counterparts) was due to the ease with which deposits could be transformed by City banks into 'borrowable money' for overseas investment. But a different view was put forward by J.A. Hobson in 1902 who argued that the City's international superiority propped up a colonially 'vast system of outdoor relief for the upper classes' (1965, 51). This 'parasitism' of a rentier class, who monopolised the terms of politics and production, was such that Lenin ([1917] 2010) argued that investment banks created the conditions for worldwide revolutionary struggle. Some twenty years later, in the wake of the Wall Street Crash in 1929, Keynes acknowledged that 'functionless investors' were the worst characteristic of mature capitalism, but he argued that the 'euthanasia of the rentier' would take place as the cyclical nature of capitalism took its evolutionary course. By making capital abundant, Keynes thought the scarcity-value of property would diminish, thus requiring (at least in Great Britain) 'no revolution' ([1936] 2007, 376).

In an effort to tackle the disaster of the Great Depression, Keynes's view became prevalent as US legislators sought to 'repress' the power of bank capital through the 1933 Glass-Steagall Act. By enforcing the separation of commercial and investment banks, institutions were restructured to ensure that deposits and assets of ordinary workers and non-financial companies could not be used as raw material to raise and trade capital in open markets. Conventional retail and commercial banks were required to be highly capitalised to mitigate for the contingencies of credit default while ensuring a constant flow of money to meet their obligations to customers. The costs this imposed on banks necessitated, if they were to make profitable investments, strong working relations with customers and a deep understand of their financial requirements. Further, financial investors like pension funds and life assurance companies, due to the controls placed on trans-national capital flow, were limited to their own domestic territories. All these requirements placed constraints on the ability of banks to lend and trade, and tied the activity of both retail and investment banks to the ebb and flow in the performance of the industrial economies into which they were embedded.

But with the opening up of capital markets in the early 1970s, investors discovered techniques to circumvent these controls, and the sector of financial intermediation entered a phase of explosive expansion (*The Economist* 2008). According to Haldane (2010) during the period of financial liberalisation – roughly covering the early 1970s through to the autumn of 2007 – 'finance comfortably outpaced growth in the non-financial economy'. This process reached its apogee in the first decade of the 21st Century, with an astonishing increase in the value of financial firms with 'total returns to holders of major banks' equity in the UK, US and Euro area [rising] a cumulative 150% between 2002 and 2007' (*ibid.* 5). The net result of this incredible success – heralded in 2007 by British Chancellor Gordon Brown as the dawn of a new age of capitalism – was that financial companies were able to generate returns on capital that far outstripped the returns available through 'real' investment in production.[11] The extraordinary rise in the share of national productivity meant that finance no longer 'served' the 'real' economy, but had overtaken it as a key driver of growth.

To put matters in context, some insight into the profits that were collected and processes involved can be gleaned from a paper published by the management consultancy giant McKinsey in June 2007. Titled *Where is the Next Trillion?A Global Perspective on Banking*, it reflects on the explosive growth of banking profits in the early 2000s. What was striking about this boom, the authors say, was how unlikely it seemed at the start of the millennium. In the wake of the Asian financial crisis and the bursting of the tech bubble, market expectations for bank profits 'looked downright gloomy' (Dietz et al. 2007, 3). Yet by 2007 this situation had not only been reversed but changes in the global economy were helping to 'reinforce the position of banking as the single most profitable industry on the planet.' (*ibid*. 7)

According to McKinsey, the astonishing turnaround lay with the growing productivity and profitability of financial service provision. Innovations in banking, not only provided a means for the economy to expand, they simultaneously increased the customer base for credit services. In this way by 2006, $2.6 trillion of revenues had been pooled through a credit infrastructure, consisting of 'retail and corporate loans, deposits, credit cards, investment banking services, sales and trading services, asset management services, distribution of securities and even retail insurance.' This pipeline of financial services had become so fundamental to both international capitalism and US household consumption that by 'the first five years of the 21st Century, banking growth rates, both in revenue and in profit, consistently outpaced global GDP' (Dietz et al. 2007, 2). Sounding a note of triumph, the McKinsey document reported that any fears about the longevity of this system of financial accumulation were 'groundless' due to the sophistication of financial technology Just five years into the new century total profits made in the US financial sector were ten times the size of profits made in the industrial economy, galvanising a new era of capital accumulation. Thus the central task, as the title of the report stated, was for bank executives and policy makers to prepare themselves for competition to unlock 'the next Trillion'.

A few months following this report's publication, in August 2007 the securitisation markets which acted as a complex pumping mechanism creating trillions of dollars worth of 'sub-prime' mortgages, went into turmoil as debtors began to default on their payments, triggering a system wide collapse in confidence and sudden 'credit-crunch'. Soon after the shock it was argued that the technical complexity of 'securitisation' left bank executives and regulators unable to properly regulate lending (Tett 2009). But as the McKinsey report showed, economists already recognised that the massive increase in US retail banking revenues, which had grown by $224 billion between 2000 and 2005, was based on an intense acceleration in household indebtedness and a sharp decline in savings.

> The boom in [US] real estate prices and mortgage refinancing sustained an 11.3% growth rate [over the period of 2000 - 7] in consumer lending despite a stock market collapse and negligible new savings. This highlights now only the scale of the US retail market, but also the significant embedded risks… (Dietz *et al*. 2007, 6)

The inherent instability of the economic system was therefore not only clearly understood but seen by policymakers to be a source of growth in an economy based on financial markets which traded risk. And in the 1990s after a spell of growth in productivity, US Federal Reserve Chairman Alan Greenspan, announced that high technology, the expansion of consumer services and the 'creative destruction' of heavy industry, were signs of a 'new economy' to which all rich nations were converging. What this new economy consisted of however, was the proliferation of mechanisms through which finance capital could inhabit the field of production and consumption. In Marxian terms, the bubble economy overseen by Greenspan, provided capital with a host of new opportunities for 'secondary' forms of exploitation of workers' incomes both inside and outside the conventional sphere of production. In McKinsey's terms, the irresistible rise of global bank profits was the result of what they described as a 'leveraged...play on socio-demographics [sic] and financial accumulation patterns' (Dietz et al. 2007, 7).

US workers, faced with a stagnating 'real' industrial economy and diminishing job prospects, were encouraged to employ finance to provide future security for themselves – a state of affairs reflected in many other mature industrial economies (Schwartz & Seabrooke 2009). Facilitated by low interest rates, asset prices rose and households - faced with a cocktail of stagnating employment prospects, rising living costs, privatisation of public goods (see Glyn 2006) – 'became convinced that the way to build up their wealth was to borrow as much as they could to buy the most expensive home they could, and ride the wave of asset-price inflation' (Hudson 2013, 21). The technocratic language of 'risk management' and the ideology of a 'property owning democracy' effectively 'dragged' people into 'financial bubbles' through 'the transformation of housing and pensions into 'investments'' (Lapavitsas 2009b, 116). The net result has been to find endlessly inventive ways – ways which would have astounded Marx – to make the wealth transferred from labour to capital a one-way street.

3. The trajectory of financialised capitalism: asymmetric accumulation and financial expropriation

Lapavitsas argues that because we have witnessed a fundamental crisis in the global provision of finance, a curtain has been lifted 'on the transformation of mature and developing capitalist economies during the last three decades, confirming the pivotal role of finance, both domestically and internationally' (2013, 1). In essence, financialisation is presented as an epochal shift in the process of capital accumulation of developed countries manifested through huge expansion in the sphere of financial circulation, relative to sluggish growth in productivity. Socially the consequences of financialisation emerge in the forms of increasing instability of work, declining share of wages, intensifying concentrations of wealth preserved in private assets, growing privatisation of public assets and social services. The outcome of which intensify individual borrowing to pay for housing, consumption, education and growth of assets held by individuals to manage current and future welfare. A crucial point of departure for analysis, Lapavitsas insists, is not just the way a faltering Fordist-Keynesian apparatus has been restructured into a more globalised, neoliberal set of institutions supporting finance. Equally important is to understand how the gravitational pull of financial accumulation has been able to capture the social relations of production, distribution, exchange and consumption at all scales and dimensions simultaneously. Lapavitsas's critique of financialised capitalism is a rich blend of theory, historiography and empirical analysis. Here I shall largely draw on four points which help 'specify', as Lapavitsas puts it, the 'molecular' 'mediations through which malaise in production has been linked to booming finance' (2011, 618).

Real and Financial Accumulation

'The first step,' Lapavitsas writes, 'in gauging the relative importance of the financial system is to distinguish between real and financial accumulation' (2013, 201). In neoclassical economic theory, investment in machines and labour is seen to be the principal means to realise economic growth. In Marxian terms, accumulations of fixed capital do not simply embody the physical items of plant and technology, the values fixed in space and time, embody the social, political and legal rights of capitalists to exploit labour to create surplus-value.

Hence, the 'characteristic feature of real accumulation is the creation of surplus-value in production, which accrues as money profit through the sale of output and is subsequently re-invested' (*ibid*. 202). As production comprises the primary locus of surplus-value creation, 'real' accumulation, has represented the conventional arena of class struggle over the distribution of wages and profits.

Financial accumulation, on the other hand, has a complex interdependent role in the total accumulation process: production is responsible for the creation of societal use-values, but production requires financial systems in order to provide a medium to exchange these use-values, to store the resulting accumulations of exchange-value, and provide new capitals to unlock new markets. The circulation of money into this sphere enters competitive circuits where mere money can be converted into 'interest-bearing capital' seeking its highest and best financial return. Finance is therefore the realm of capital's own circulation and as such, even though it does not create value, the importance of capital markets make this social sphere 'the headquarters of capitalism' as it is the place where the motion of capital is governed.

According to neoclassical theory the credit system provides an entirely rational way to accommodate economic growth, capital market speculation on economic growth, and allows financiers to distribute capital to entrepreneurs so that future earnings can be supplied for present financial demand. The difficulty, however, is that the theory of market efficiency only identifies producers and consumers, and 'makes no mention of the third category which is vital to the functioning of any market economy, namely the 'dealer' or 'middleman' (or 'merchant') who is neither buyer nor seller because he is both simultaneously' (Kaldor 1985, 14). In many ways what defines the political dimension of political economy is the effort to shed light on the way intermediaries construct pricing mechanisms and other market apparatuses, which enables contact between production and consumption, supply and demand. For Lapavitsas, however, the institutional problems arising out of the 'agency' of speculators are emanations arising from the systemic process of 'mobilizing, trading, and advancing' the purchasing power arising out of the circulation of interest-bearing capital. More specifically, it is loanable capital, the collection and conversion of 'idle-funds' into securities ('promises to pay') thrown into circulation seeking the highest and best financial return, which give this sphere of accumulation its immense social force.

> Unlike real accumulation, financial accumulation does not produce measurable final output (value and use value). Although labour is employed and work effort is expended in financial transactions, there is no direct relationship between the expenditure of financial labour and the magnitude of financial accumulation. Similarly the capital invested in setting up financial intermediaries does not reflect the magnitude of financial accumulation since this capital is only indirectly related, to mobilizing, trading and advancing loanable capital. The concrete form taken by financial accumulation is the piling up of claims on others, that is, the amassing of financial assets which have their own (fictitious) price. (Lapavistas 2013, 202)

But as Lapavitsas points out, the appearance of 'fictitious capital' as theorised by Marx, and whose effects are illustrated by Zola, should not confuse one into assuming that the profits arising from financial trading are immaterial. While a capital market necessitates the calculation of financial price – an imaginary magnitude projected on the basis of an asset's future yield – the extraordinary profits that arise through speculative trades are indomitably material. The financial sphere is therefore not a sphere of 'fictitious accumulation' but a zone in which the transformations of loanable capital give finance the ability to make future (hence fictitious) claims over the social product. Although distanced from production, the conversion of idle funds into loanable capital – or 'financial intermediation' – has a unique ability to make profits in the profligate manner outlined in the McKinsey document.

The molecular forms of financial accumulation: banks, corporations, and households

Braudel, famously concluded that the moment of financial expansion and domination is always 'a sign of autumn' (1992, 246; Arrighi 2010) and often a cyclical signal of systemic crisis at the global scale. But Lapavitsas differs from the Braudelian-Arrighian school of thought by emphasising the essential 'difference' of the rise of financial accumulation since the 1970s. *This time was different*, in the sense that the immediate causes were not found in terms of a conventional cyclical pathology of underconsumption, overaccumulation, wage-squeezes and so forth, but arose out of the general entanglement of production and consumption in the sphere of finance. Hence, the causes of transformation of capitalism are to be found at the 'molecular' level of the 'relations of accumulation, rather than in policy or institutional change' (2009a, 7).[12]

In this sense what Lapavitsas presents is an update of Hilferding's analysis of finance-capital and monopoly (2006) but with some important modifications. Hilferding and Lenin developed Marx's thinking on finance into a theory which saw the financial accumulation of capital as central to the systemic transformation of capitalism as a social structure. Yet what transpired was not, as Hilferding proposed, the incorporation of the management of industrial capital into the banking system, but rather a more general imbrication of social relations which become dependent on the circulation of loanable funds. Thus what has unfolded over the last three to four decades is the emergence of a financialised system of capital accumulation comprising three interlocking dimensions. The first is the emergence amongst producers of processes of 'self-finance'. Companies outside the financial sphere turned to 'open markets' – the 'natural terrain for investment banks' (Lapavitsas 2009b, 133) – and sought profits in the sphere of circulation quite apart from seeking profit on enterprise through fixed capital. Second, as the non-financial sector accumulated cash, commercial banks – the conventional providers of finance – were forced to transform, acting increasingly like investment banks who facilitated speculative transactions, rather than linking lenders and borrowers. Third, since investors sought assets which could absorb masses of loanable-capital, residential and commercial real estate became a critical focus of this activity. On the residential side, households became financialised not only due to the increasing amount of secured and unsecured debt taken on through mortgages, credit-cards, etc. but through the increasing consumption of assets like pensions, insurance, etc. Thus, what the crisis of 2007 and 2008 illuminated was a highly distributed, precariously layered system of accumulation connecting all levels and dimensions of social and economic life.

Financial Profit as Financial Expropriation

The social penetration of financial services – what economists aptly call 'financial deepening' – provides manifold opportunities for banks to reap surplus-profits. In classical Marxian terms, profits arise in the production process through the exploitation of labour-power. But, the financialisation of workers' incomes through, for example, the securitised expansion of mortgage and consumer debt markets, represents a form of exploitation Marx would have found extraordinary. The molecular relationships which have evolved in recent decades between financial and merchant capital, between for example investment banks and real estate development, have led to the rise of popular interest in owning housing assets as a gateway to financial markets. Marx and Engels perceptively recognised that outside of the field of production, the realm of consumption, and particularly housing consumption, provided opportunities for capitalists to open up areas of 'secondary exploitation' of workers. But the 'models that Marx erected,' Lapavitsas says 'were models that didn't assume that home ownership was very prevalent among the working class. But today we've got a vast mechanism whereby people buy houses.'[13]

But Lapavitsas underlines the fact that debt is not the only feature of financialisation. Another major characteristic has been the aggressive expansion of the private provision of assets like insurance, pensions, and so on. This is where we do begin to recognise the role of the state, and the influence of neoliberalism. Representatives of the state have actively promoted the privatisation of social assets on grounds of economic efficiency, and low taxation. In the British case, successive governments have promoted and facilitated a system of 'asset-based welfare' mainly through the vehicle of home ownership (Watson 2009). The 'state' therefore becomes a fundamental channel through which institutions are restructured in order to enable the generalisation of private finance in the social fabric. For example, the 'channelling' of private provision of public services, can be seen in the way major accountancy firms like Ernst & Young, Deloitte, KPMG, PWC, Capita and so on have now become major providers of local government services. (Cox et al. 2014) The penetration of financial and commercial capital into the very fabric of everyday life and local service provision, would appear to be one major consequence of financialisation.

The question of the rentier

Another theme raised by Lapavitsas turns on the social forms and cultural logic of financialisation. Since Ricardo and the Manchester School, through to Lenin and Keynes, radical theorists of whatever stripe have long argued that political structures which monopolise scare resources, prolong the survival of archaic social forms like 'rentiers'. Zola's Saccard is in many respects a representative figure of the kinds of capitalist which evolved from the mid 19th Century soup of colonial parasitism and metropolitan rentiership. But Lapavitsas says that the classic representation of the rentier is an anachronism which say little about the innovative modes of financial expropriation we are now witnessing (2009b, 141–3). So while advanced financialisation seems to crystallise out into a new rentier class, it is important not to 'fetishise' the process of financialisation by reducing it to earlier 'gentlemanly' expressions of individual property owners. The re-appearance of rentier style capitalism today belie an extensive institutionalisation of finance in the social fabric – particularly in the emergence of 'asset-based welfare', the new manifestations of private finance in the realm of public asset provision, and the virulent spread of the 'buy-to-let' phenomenon.

The primary point for investigation, here, Lapavitsas argues, is not simply the way neoliberal ideology and speculative practices have gripped the popular imagination and political process. Crucial though they are, matters of ideology, culture and sociology, he suggests, gain explanatory force only when we appreciate dynamic changes in the accumulation of capital.[14] Such dynamics have, in recent decades, reinforced the rise of financial accumulation while productivity growth has struggled, socially this has resulted in widening disparities in the distribution of income, and outbreaks of systemic economic crisis, and huge social upheaval. So as well as being able to point out the contemporary facts of inequality, and the apparent hegemony of neoliberal ideology, political economic analysis needs to be able to examine the way molar concentrations of financial-capital, and the 'external conditions through whose channels' (Lapavitsas 2009a, 13) the capital flows, enable the socio-spatial extraction of personal and social revenues. One open question arising from this analysis however is the question of the geographical conditions and spatial conditions which affect capital flow. But what we can deduce from Lapavitsas's argument is the need for some mediating apparatus through which the molecular balance of capitalist power is shifted. This is where I suggest Harvey's account of urbanisation maps onto Lapavitsas's account of financialisation.

4. The fabric of accumulation: fixed capital, finance-capital and urban rent

For Harvey, the strength of Marxian theory is the capacity to 'pull focus' and shift from the site of simple contradictions arising out of the struggle over the use and exchange-value of commodities through to more complex events arising when tectonic forces of 'real' and financial accumulation push and pull so violently they culminate in crisis. Urbanisation is the classic case of abstract contradictions between use-value and exchange-value 'crystallising out' into the material field. The generation of urban accumulations of use-values in the material form of social and physical infrastructure can qualitatively improve levels of productivity. Simultaneously, however, the incorporation of land with capital assets, can affect the market values of locations, changing the prices and costs of productions. In essence, what Harvey offers is a framework which shows how the urban relations of accumulation are shaped by the tensions arising between qualitative use-values fixed in space, and quantities of exchange-value flowing through time. And, as we shall see, it is due to the unstable nature of the values consisting in the built fabric of cities, that the urban process becomes a crucial point where the balance of force can shift in favour of financial accumulation.

Fixed capital and the credit system: the relations between real and financial accumulation

At the heart of this spatial and temporal instability lies the fundamental process of fixed capital formation, essential to the development of the economy's productive powers. But difficulties arising in the 'primary' circuit of productive capital can cause problems for the entire process of accumulation. As Keynes said, fixed investment plays an almost ontological role in the capitalist system[15], laying down some material basis for economic decision-making, and providing grounds for confidence in the 'theoretical link between to-day and to-morrow' (2007, 145). For Harvey, the spatial and temporal fixity of capital can just as easily lead to something of an existential crisis. Given the large scale of capital needed in the production of built environments, the 'time taken for the value of a given capital to be realized through production and exchange' (1982, 62) – can precipitate systemic problems. '[P]roblems arise,' Harvey writes, 'because of the massive outlays of money by users of this fixed capital and because of the long time it takes – say, 30 years or more – to get that money back through production' (1982, 225). So although the use-values buildings and infrastructure provide are essential to economic growth, the 'turnover time' involved in the development of fixed capital imposes 'drag' on the ability to advance capital to other points in the economy.

The production of fixed assets like buildings and infrastructure, therefore, generates a huge demand for financial services due to the substantial capital outlays required to manage: (a) the scale and complexity of production costs, and (b) the risk involved with the length of time required to 'realise' the prospective yield of fixed capital.[16] Ostensibly, this is the 'socially useful' service that financiers provide a capitalist economy with: balancing the demand for credit from entrepreneurs with the need to repay creditors at interest. As Keynes also pointed out, the decisions of capital investors to buy assets are based on speculative expectations of the 'prospective yield' of a capital investment over a period of time (discounted against the rate of interest on simply holding money). What capital markets offer therefore is a mechanism that offers investors with the ability to calculate, discounted against the interest-rate, the return on their capital, 'defined in term of the expectation of yield and of the current supply price of the capital-asset' (Keynes 2007, 136).

What a professional investor (a commercial or financial capitalist) is looking for, therefore, are assets which offer a favourable projected rate of return on their capital over a given period. As such an asset's value is determined by its prospective ability to generate a return in future – based on its historical performance and possibility for improvement through investment in the present. Hence such assets represent 'fictitious capital' based on speculative expectations of future returns. One of the basic mechanisms that enable a constant stream of credit is the creation of financial securities which give their owners an entitlement to a stream of income in the future (be it in the form of dividends on a company's earning, a return on a bond, etc.). The outcome of the process of credit innovation is the provision of 'interest-bearing capital' or loanable funds which increases current purchasing power based on financial claims on future (hence fictitious) projected revenues. Hence the systemic inter-dependency in the accumulation process between the *primary circuit* of productive capital and the *secondary circuit* of finance. Although the latter group is not directly responsible for 'real accumulation', the process of 'financial accumulation' is integral to the formation and development of fixed capital.

Banks and financial services therefore have a critical distributional role connecting commercial capitalists (looking for interest), landowners (looking for rent) and producers (looking for credit to turn into profit on enterprise). And of course caught in these oscillating circuits of accumulation, are working people looking for wages. Thus, as a conduit that channels the revenues of ground-rent and profit into a single stream, the capital market provides a nexus in which direct relations between rentiers (owners of loanable funds) and producers (employers of these funds), while by no means harmonised are mediated. The realm of capital market decision making is therefore what Braudel called a 'shadowy zone', a level that looms over production, in which arrangements are made and deals struck in an abstract space which remains opaque and aloof from the world of those who toil in the realm of production. Deciding on the most appropriate route to navigate the 'knife-edge path' (Harvey 1989, 83) between a return or loss on fixed investment, gives the banking system enormous power, and can influence the 'spatial fixes' capital investors seek in trying to establish the highest possible returns. How then is capital able to shape the landscape to the forms required by the growth process?

Rent, land markets and the spatial forms of finance-capitalism

To answer this, we need to look at the problem from a different angle. If we look from the point of view of how decisions impact on the ground, then we begin to see that the process of urbanisation and the production of physical and social infrastructure embody these molecular relations in concrete form. In this respect, Harvey's analysis of the spatial dynamics of fixed capital and financial capital, anticipates the thesis of financialisation in as much as it specifies the mechanisms through which financial capital can envelop social relations. Here, both Harvey and Lapavitsas share a debt to Hilferding and Lenin's theory of finance-capital and imperialism. But what is distinctive about Harvey's approach is the change in the terms of Hilferding's argument. Instead of seeing 'monopoly-capital' as a teleological expression of capitalism's 'latest stage' Harvey argues that financial-capitalism was, and is, central to the urban and geographical expansion of capital.

Harvey bases this claim on two principles. The first is that certain 'primitive' social forms like landed capital and merchants' capital provide basic mechanisms to accumulate the 'monopoly power of private property in land and the capacity to appropriate rent which that power confers' (1982, 370). The second, is that rent and private ownership of land need to be regulated according to the economy of capital accumulation and not the private interest of rentiers. Otherwise landowners can gnaw industrial profits to the bone. One solution to this is to move landed assets into the realm of capital markets moderated by the 'independent variable' of the interest rate. Thus, the rate of interest set by financial markets provides a common quantity to decide which units of landed capital are offered to the market based upon their highest and best economic use. The process of market decision making is, of course, 'imperfect' as producers, landowners, financiers pull in different directions, but under the system of 'liberal' capitalism it provides some objective medium to co-ordinate the relations of real and financial accumulation.

> Capitalism cannot do without land price and land markets as basic coordinating devices in the allocation of land to uses. [But it can only] strive to constrain their operation so as to make them less incoherent and less vulnerable to speculative disorders. Two implications then derive from this...First...rent and private property in land are socially necessary to the perpetuation of capitalism...Second, [l]and price must be realized through future rental appropriation which rests on future labour. (Harvey 1982, 371)

Hence Harvey's penetrating insight that once ground-rent becomes recognised as 'some imaginary capital, constitut[ing] the 'value' of the land', then it becomes possible for financial and commercial capitalists to treat 'land as a pure financial asset which is bought and sold according to the rent it yields' (*ibid.*, 347). This is because the rents returned to landowners from property can be converted into 'interest on the money laid out on land purchase' and 'in principle no different from stocks and shares, government bonds etc.' (Harvey 1989, 96). Moreover because labour is fundamentally dependent on capital for its own survival, and will converge on urban agglomerations of capital, land markets provide manifold opportunities for 'secondary exploitation' of workers' incomes. The payment of rent is therefore no 'innocent mechanism' benignly transferring revenues between physical, landed capital and the state. Rather the 'institutionalisation of rent', through urbanisation, constructs and perpetuates a set of *socio-spatial property relations* in which the owners of land and the owners of money are able to shape the microeconomies of cities. Or put differently, the circulation of loanable funds in real estate is an (imperfect) extension of the circulation of loanable funds in capital markets; as such it is what gives the latter its ability to lay claim on the conditions, activities and produce of everyday life.

The spatial imprint of the different demands placed on capital is most obviously seen in the 'creative destruction' of built environments. The history of capitalism is filled with cases where the demand to improve the spatial productivity of regions, by incorporating cities with socially useful products like houses, offices, roads, railways and the like, can soon turn into manic bouts of speculation as investors chase rising land values. As historians, economists and geographers have shown, the growth of major industrial cities like Chicago can be explained in terms of these convulsive implosions and explosions of urban accumulation.[17] Just as soon as capital flows into urban places building up regional productive capacities, a speculative boom takes over as commercial investors seek to cash-in in a rising market. But when the asset bubble bursts, the flow of investment in production is arrested as confidence in a region falls away. Machines are scrapped, buildings are abandoned, labour is unemployed. Once the devalorisation of land values bottoms out, and cheap terrain for new enterprise is opened up, the cycle revolves again as a new spatial fix of capital flows in.

The forces though of 'creative destruction' arise not only through the evolution of technology (Nelson 1990). The crises of creative destruction are just as easily unleashed through the tendencies of over-speculation by financial and commercial capitalists driven by manic expectations about their claims on rents, profits, capital gain and so forth. And since real estate is fundamentally a capital asset looking to capture present and future revenues, the exchange-value of buildings can, in a rising land market, easily lead investors to chase pure financial returns. Through the monopolisation of assets, the creation of scarcities gives financial and commercial capitals the ability to seek 'monopoly-rents'. Thus, if such spatial products are now seen to 'drive growth' because of their ability to beat returns on enterprise, absorb wealth and lay claim to future social income (instead of the ability to produce and reproduce the social product), then the 'preference' of investors for 'liquid' over 'fixed' investments can also lead to crisis.[18]

The urban question of collective consumption

One of the keys to checking the forces of financial speculation, Keynes said, was for central banks to keep interest rates so low there would be no incentive for individuals and institutions to hold money as capital. Again there is a spatial equivalent in the urban arena. Through the provision of social and physical infrastructure, public investments in built environments and social services not only build up productive capacities, but they can also prevent speculators from 'appropriat[ing] monopoly-rents' (Harvey 1982, 370) through the financial accumulation of capital in landed and built forms. Given the scale of public investment needed to reconstruct the social and physical infrastructure destroyed through the Great Depression and two world wars, Harvey described Keynesian investments in social and physical infrastructure as forming an overlapping tertiary circuit of capital: one which provided a social apparatus to rebuild productivity, absorb surpluses and provide a 'counter-cyclical' buffer against forms of property 'appropriation...inimical to [real] accumulation' (*ibid*.).

The notion of a 'tertiary circuit' of investment in the reproductive fabric of cities is complemented by Castells' notion of *collective consumption* (1977, 459–62). For Castells, alongside the departments of production and consumption (and luxury consumption), for capital to reproduce itself of necessity some 'third department' was needed to provide public goods that capital required but was not prepared to pay for. In practice this third department of collective consumption, therefore represented the public monopoly of the state over urban accumulations (paid through taxation) of social goods and services. State managed investments in housing, education, healthcare, education, and in the public realm, produced a social space – consisting of 'urban units' of social and physical infrastructure – which could underwrite perpetual economic growth along the macroeconomic lines prescribed by Keynes, plus also providing a vehicle to regulate urban production to absorb surpluses.

The 'urban question' of the post-war period therefore revolved around a critique of the managerial nexus of industrial, financial and state interests who used and manipulated the levers of collective consumption to keep both capital accumulation and class struggle in check. Moreover if one followed the circuits made by money capital through the built environment, what was illuminated was a highly complex set of economic power relations, linking the circuits of production, commerce and finance (Lamarche 1976). The complex networks between those who improve and transform space (builders and architects), those who own and trade space (landowners and merchant developers), those who regulate the transformation and exchange of space (the state) and those who fund the ownership, trade and adaptation of space (banks and financial institutions) threw into relief the systemic linkages between tangible investment in land and buildings, and intangible investments in real estate and social assets. The built environment of the capitalist city therefore represented the locus where the worlds of real and financial accumulation not only converge, but provided a socio-spatial apparatus – what theorists called 'growth machines' – to reconfigure the urban fabric accordingly.

As we have already seen, for Lefebvre the economic turbulence of the late 1960s and 1970s proved that the post-war ideology of growth was giving way to an unprecedented social form of capitalism. He conceived of an 'urban revolution' whereby the secondary circuit of financial claims on resources, could subordinate the primary requirements for industrial production and social reproduction. The result would be a mode of urban production, supplanting industry, serving the global reproduction of urbanised finance. Harvey disagreed with Lefebvre's contention that urbanisation, in thrall to finance at a global level, could replace production, but concluded that it was conceivable for the urban process to become 'transformed from an expression of the productive needs of the industrialist to an expression of the controlled power of financial capital, backed by the power of the State' (1974, 254). What Harvey therefore introduced was an urban question about the future social forms capital exploitation might take. And although not explicitly stated, implicit in the proposition of monopoly-rent was a sense that not only could the primary circuit of production become financialised, but so too could flows of capital into a *tertiary circuit* of capital (Harvey 1978, 108) – comprising the ensemble of social and physical infrastructure vital to collective consumption. If land expropriation had been integral to the rise of 19th Century capitalism, now molar concentrations of private finance in the circuit of collective consumption opened up the possibility to reconstruct the landscape of late-capitalism.

5. Financialisation as a spatial process: towards a framework for analysis

Over four decades ago, Harvey said any critique of contemporary capitalism had to be able to lay bear the ensemble of 'relations through which we have arrived in our contemporary state and *which also serve to sustain us in it*' (1974, 254 original emphasis). Published at the dawn of the era of financialisation, Harvey's account gave a *prospective* view of how finance-capital could evolve as an urban process. Lapavitsas's research some decades later provides a *retrospective* account of the way capitalism has been financialised. The question remains how, in the intervening years, the production of social space urbanised a transition in the system of capital accumulation.

Laid down in the mid to late 1970s little could be said about the kind of restructuring which would come to define the content and form of urbanism in the age of neoliberalism. But, looking back, what was clearly stated by the urban question of finance capital, was a prescient sense that urbanisation represented endless scope for capital to open up new channels of exploitation outside the closed field of the workplace. The city, comprising a fabric of social assets saturated with value, provided a space in which capitalism could re-fortify itself, through restructuring the ownership of the relations of production, consumption and collective consumption. And by moving the value captured in both production and consumption into the 'secondary circuit' financial capitalists were able to extract profits directly out of social income. Hence, based on the foregoing, its possible to connect four points which provide a synthetic account of financialisation as an urban process.

1. Systemic tensions in the accumulation process register in the realm of fixed capital formation, as mature capitalist economies increasingly seek profits through financial investments and by restructuring the regional organisation of

production to meet the highest and best spatial fix determined by capital markets.

2. These tensions appear socially in the way the relations of banks, companies, households, and governments all engage processes of financial intermediation to fund production, consumption and collective consumption.
3. Financialisation as a recognisable socio-spatial form emerges as flows of loanable-capital concentrate in the social fabric of capital assets which urban society requires to produce and reproduce itself.
4. The production of space for financial profit crystallises out into an urban fabric comprising a complex spatial 'mesh of intra-financial claims and obligations' (Turner 2011), realising a *new urbanism* – a new urban 'spirit' of capitalism – that justifies the social extraction of rent.

I should stress that these claims emerge as strategic hypotheses requiring empirical development. The analysis of financialisation – if it is to have real political traction – needs to be able to deal with the social and geographical specificities of places and how they affect, and are affected by, the consolidation of capitalism on a global level.[19] But equally, I also have tried to underline the importance of theorisation as a political tool to speculatively grasp capital as a totality; an abstract global process with objective material effects. As such analysis of urban environments – comprising the spatial fabric of accumulated claims on the social product – offers a generous vantage point to observe and conceptualise a multi-level and multi-dimensional shift in the way the production of space has become financialised. The themes I've outlined offers points of departure for research into the spatial *apparatuses* of financial accumulation; apparatuses which enable capitalists to turn the social and physical infrastructure of cities into real estate controlled and managed within financial networks. The test of course of this framework turns on how well it clarifies what is specifically 'new', 'urban' and 'revolutionary' about the contemporary state of finance-capital today.

Following the crisis questions of credit and debt have become fundamental to the critique of contemporary capitalism. But in this article I have suggested that equally significant, though less well identified, are certain urban processes that make financialisation so integral to the way we live now. Specifically I've argued that *rent has become the operative form of social value in a spatial system of accumulation dominated by financial interests*. In the aftermath of the 2007 disaster it has become obvious that the 'relief effort' of austerity has prioritised and galvanised the wealth and influence of private capital. Policies like 'quantitative easing' have created investment conditions which have intensified the ability of monopoly-capital to inveigle itself into the systems of collective consumption. What 'we are seeing', the economist Michael Hudson (2013) writes, is 'a neo-rentier grab for basic infrastructure as part of the overall asset stripping [of public resources].' The intention, Hudson argues, is to deliberately engineer scarcities in the provision of social goods and services, precisely in order to generalise/urbanise the claim of rent on future social income.

> This is a different kind of inflation than one finds from strictly financial bubbles. It is creating a new neo-feudal rentier class eager to buy roads to turn into toll roads, to buy parking-meter rights (as in Chicago's notorious deal) to buy prisons, schools and other basic infrastructure. The aim is to build financial charges and tollbooth rents into the prices charged for access to these essential hitherto public services. Price are rising not because costs and wages are rising but because of monopoly rents and other rent-extraction activities. (Hudson 2013, 22)

This conclusion echoes Harvey's view that the appearance of technological advancement and cultural progress under post-Fordism represented primitive accumulation in postmodern form. 'Accumulation by dispossession' (Harvey 2003), thus, becomes the imperative for a new imperialism which is distinguished from colonialism, only to the degree to which colonisation today extends to intellectual, cultural, and even biological territories. (Zeller, 2006) Interestingly, the neo-Marxian critique of finance-capital has found considerable support in Thomas Piketty's remarkable and widely discussed work *Capital in the Twenty-First Century* (2014). What Piketty demonstrates, based on a data-set of wealth and income for the world's largest economies, is a staggering macro-historical swing towards a concentration of wealth placed in financial property since the 1970s. Such is the weight of evidence demonstrating capital's rapacious search for 'unearned income', that Piketty is like a latter-day Hobson; a 'non-Marxist', as Lenin might have said, providing astonishing evidence of huge private concentrations of monopoly-capital, buttressing a new imperialism supporting the 'extraordinary growth...of *bondholders (rentiers)*' (2010, 125). In short, the era of financialisation seems to be, as even the New York Times admits, returning capitalism to 'the European tradition of inherited aristocracy and rented wealth' (Cowen & Rugy 2014).

Yet Lapavitsas reminds us that we need to be careful about historicising financial capitalism to the point that we fail to explain what has *produced and continues to reinforce* such a radical change. Similarly, theorists also argue that it is a mistake to view the rise of financialisation and rent-seeking strategies as the parasitism of finance-capital on productive-capital. The rise of financial accumulation, for Marazzi (2010), is immanent to a technological transformation in the way value is produced and profits are accrued. The analysis of financialisation therefore needs to be linked to an account of the way post-Fordism is now socialising the costs of production through the activity of consuming goods and services.[20]

6. Finance Capital, Monopoly-Rent and the New Urban Revolution

Exploring the urban forms of financialisation presents us, then, with a historical and spatial problematic - one that turns on the way we conceptualise and periodise a system of accumulation which is not just global and local, but also extensive and intensive in range, cosmopolitan and parochial in perspective; simultaneously embodying a futuristic spatio-technical form like 'the global city' but which ultimately serves an atavistic figure such as 'the rentier'. To try to clarify what is at stake here, I want to return to our opening example of contemporary London, to highlight a set of features which indicate that urban rent-extraction today is expressive of an emergent, rather than residual, mode of capitalist urbanism.

The new technological and financial context of urban accumulation

The conditions of technological and financial investment which shape the economic life of cities today exist in a manner quite unlike the accounts provided by conventional theory. During the period of the 'great moderation' where interest-rates were historically low, rentier activity should have been starved of oxygen and euthanised out of existence. Yet financial accumulation has boomed as producers sought equity through financial channels rather than extending employment, delivering bondholders enormous wealth and political power. To describe this as the 'parasitism' of idle capital on active production, however, says little about the interactions between finance and the rise of technologies like advanced analytics and social media. In a moment of technological change, as the competitive applications of ICT matures Schumpeterian theory suggests that productivity increases lead firms to competitively invest in new fixed capital to capture market share and in doing so unlock the full human resources of the economy.

However, the extraordinary growth in the value of companies has been achieved whilst employment and wages have stagnated. In short, the new economy *is here* and it is delivering a new wave of deindustrialisation, but one different to the one which devastated industrial regions from the seventies onwards.

What appears to be driving the financial logic of high technology is the acquisition of property rights for innovations which strip out the need to employ labour. For example, one extraordinary feature of the explosive profitability of companies like Google and Facebook is their ability to arrogate surplus profits with very little fixed investment and job growth to show for it (Turner 2014).[21] Further, the equity value of new technology is based on accessing the data 'produced' by consumers of knowledge services, tied into rental contracts for technologies like smart phones that deliver these services. New technology has become a medium offering companies intellectual property-rights which enable them to extract economic rents from the consumption and use of these technologies.

Such devices have a singular significance in the contemporary economy, and not just because of the rate of change of technology. 'Smart' technologies seem to hold in suspense traditional and emergent forms of surplus-value production. On one level their production is handled through endless outsourcing in search of spatial fixes where input costs like materials and wages are cheapest. On another level their consumption realises a form of value that is drawn through the surplus of 'peer-to-peer' relationships and experiences people accumulate in their daily lives. Unpicking the relations of class struggle and the changing composition of value in a time when (a) the consumption of information goods and services has become a source of value, and (b) privatising access to the 'general intellect' has become the critical arena of financial competition, is one of the most pressing tasks of radical political economy.

The social and spatial layering of rent-seeking capital

In the conditions set by financialisation, the rise of a cosmopolitan rentier class is undeniable. But when we look more closely what we learn is that 'the emergence of a new layer of rentiers' is defined, Lapavitsas says, not by their *ownership* of interest-bearing capital, but their *relationship* to it (Lapavitsas 2009b, 114). Proximity to the flow of loanable funds has become crucial to the way profits have been extracted from society in the era of financialisation. Thus, the social property relations which rentiership conforms to have been transformed out of recognition. Contemporary rentiers, whether of the species of fund managers, CEOs and so forth, are quite unlike the 'professionally idle' forms of inherited wealth that parasitised productive capital in the late 19th and early 20th Century (Piketty et al. 2011). Quite the opposite, as sociologists and management theorists have demonstrated, the business class that took shape in the early stages of the 'network society' appear captive to an 'always-on' *new capitalist work ethic* (Boltanski & Chiapello 2005). And as dramatists and filmmakers like Oliver Stone and Martin Scorcese have shown in such vivid detail, the culture of finance and producer services that emerged in the 1980s has been based on a self-aggrandising business vigour and self-mythologising business brutality.[22]

No longer are a patrimonial stratum of aristocrats the ultimate beneficiaries of unearned income. They have been replaced by networks of operators whose rationale and 'talent' revolves around connecting hydraulic flows of 'loanable capital' with a capital market 'fix'. The urban process therefore becomes a conduit through which financial intermediaries are able to take commissions, fees, bonuses, and so on directly out of the urban circulation of capital. These then are channelled into more conventional 'rentier' products like property, stocks and so on. In this context, real-estate represents a complex type of asset; a medium to access and capture the advantages of urban spaces which concentrate and centralise both capital and life opportunities.

The production of a spatial web of financial claims and obligations

In the 19th Century the fixed, inelastic supply of urban space in London provided the grounds upon which financial and landed rentiers constructed the social property relations which governed industrial capitalism (Cannadine 1980; Anderson 1992). Clearly, there are echoes today in the extraordinary phenomenon of London's residential resale market. In a fascinating document called *The World in London*, published in 2011, the upmarket real estate agent Savills describes the irresistible attraction of inner-London for a new type of cosmopolitan rentier. 'From its leafy family enclaves to the ultra-chic urbanism of its stucco squares and newer apartments of its recently regenerated docklands' (2011, 3) Savills reports that the city has become a 'hospitable city'; a place exclusively designed for high-net-worth individuals wanting to bunker down and 'cluster [with] other HNWIs' (5). All of which suggests that the gentlemanly capitalist of the early 21st Century is alive, well - though not necessarily *living* - in their upscale Richard Rogers apartment in West London (Gentleman 2012; Moreno 2012).

But the antagonisms surrounding the extraction of rents that flow from the financialisation of the urban fabric (or the fabrication of urban finance) are socially more complex and finely distributed than a narrow analysis of gentrification might suggest. Contemporary processes of gentrification and post-industrialisation have unquestionably promoted the asset rich and displaced the poor. But this is just one aspect of a much wider spatial practice of financial expropriation now defining the urbanism of contemporary capitalism. What also needs to be taken into account are the interaction effects – not simply between global nodes like London, New York and so on – but between the intensification of property ownership in places like London and the spatial economic displacement of employment in regions made surplus to capital requirements.

Appreciating these interaction effects is crucial to revealing the socio-spatial property relations which structure decision-making. The profits of financial classes, and the success of political classes, have been based on compelling large sections of working classes to acquire financial assets. The result are social structures where working people's private interests become aligned with the assets they may have managed to accrue over their lifetime. From working class households looking to remortgage their homes to pay for education, holidays and retirement to the most sophisticated corporate enterprises and private investors able to use techniques of leverage and arbitrage to move international markets, residential real estate has become a principle apparatus of financialisation. Moreover, through privatisation, the social property relations which underpin collective consumption have become embroiled in a spatially distributed meshwork of financial claims and obligations. The colonisation of government services and infrastructure by international consultants like PWC, Ernst and Young, Deloitte, KPMG suggests that the urban question today, if it is to have political relevance, requires an analysis of the building of new forms of capitalist monopolies deep in the 'tertiary circuit'.

Rentier Urbanism today, from Saccard to Mastercard

Finally, where the novels of Zola and Trollope taught us that custom and culture was a way of concealing the financial crime of 'missing capital', today art, architecture and culture emerge as an *operative* rather than a merely ornamental feature of financial capital. For example, when one looks at what encapsulates financial influence in the urban system, and shapes urban policy regarding investments in collective consumption, what we find are credit institutions who assess the value of a city against an objective rate of comparative spatio-economic performance. In this respect the urbanism and political influence of property speculators like Saccard has been replaced by the urbanism of financial operators like MasterCard. MasterCard's Worldwide Centre of Commerce Index evaluates cities as platforms for investment, based on a comparative analysis of the 'compelling global and regional economic trends that distinguish Centers of Commerce from other cities around the world' (MasterCard 2008, 1; see also Scott 2011). The rise of an urbanism directed by management consultancies, rating agencies and style magazines, is indicative of the way urban space has become an integrated platform through which finance-capital is geographically concentrated and centralised.

As socio-spatial proximity and position have become integral to the detection of new technologies and properties, financialisation has secreted its own urban culture. In this way we might speak of new urban layers of rentiers, highly skilled intermediaries, as providing financial-capital with a 'cognitive fix' based on their embodied 'human capital'; comprising their education, their social and familial networks, and intuition about trends that can be cultural as much as economic. And it's no accident that the rise of financialisation in the 1990s was accompanied by (a) the surge of theoretical interest in exploiting the microeconomic qualities of urban places - location, proximity, clustering, etc. – as a kind of technological instrument of competitive advantage (Porter 2000); and (b) urban 'regeneration' policies that argued that economic growth could be achieved through public investments to attract and concentrate agglomerations of highly skilled 'creative' workers, anchoring ex-industrial locations in the global economy. In this context architecture and urban culture becomes a kind of 'pattern language', a *new urbanism* funded by the circulation of financial claims on the future but articulating the ebb and flow of contemporary consumer needs and desires; whose mix of weak and strong signals are constantly 'swept' to identify sources of business advantage.

7. Conclusion - confronting the urban process of financialisation

The figure of the urban speculator once provided Zola with a way to expose the social tyranny of finance-capital. And to some extent the late 19th Century model of the rentier bares some comparison with the experience of the contemporary city. But what I've argued is that the situation which has enabled the return of the rentier as an urban force requires us to look at the molecular social conditions which have produced this pathology. And when we look closely, what we find is a situation of urban accumulation radically different to the conditions which cultivated the speculators of the Belle Époque. Where outside the factory gates, it was only landlords who could exploit the income of labour through 'house-rents', now the 'social factory' of contemporary urban space comprises a complex meshwork of material and virtual terrains, providing multiple opportunities for value-creation and rent-extraction. And because work, wealth and infrastructure have become increasingly concentrated in cities, the financialisation of urban space has provided a complex political mechanism to structure and manage society. Financialisation has not only produced a space conducive to the needs and requirements of wealthy individuals, this process has used real estate as a medium to harness and regulate the way urban value is socially constructed. Urban space now provides, in other words, a complex apparatus through which the interlocking forms of landed, financial and technological capital construct a new kind of 'spatial-cognitive fix'.

Now, one reason for optimism, albeit bittersweet, is that as the crisis exposed many of the apparatuses of exploitation, the Marxian theory of urbanisation has offered a demonstrably prescient and accurate account of the way capitalism has undergone, at a molecular level, a phase-transition. Not only has capital used the production of space to *concentrate* itself in financial forms, 'the urban' has become the primary political, economic and cultural infrastructure through which these units of capital are *centralised*. And it is because this process has been so efficient in realising its goals that contemporary London today embodies a strangely advanced and primitive mode of accumulation, and that quasi-utopian proposals for a 'global register of financial assets, as well as a progressive global tax on capital' (Piketty 2014, 114) are being aired in the mainstream. In this context, the question then becomes, if the urban stakes of financialised capitalism are now more transparent than ever, how does critical knowledge of space turn into a real political force that can create a different kind of molecular revolution? Seeing as urbanism for the last four decades has become so immersed in concretising finance's grip on society, politics and culture, the new urban question hinges on conceiving a spatial revolution; one that can release urban *ensembles* of social relations from serving and sustaining urban *apparatuses* of financial power.

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Notes

1 (Zola 2008, 94)
2 (Wolf 2008)
3 Taken from *London* (1994) Patrick Keiller's fictional documentary film portrait of London in the early 1990s. See Catterall (2012) for another discussion in *CITY* in context of Keiller's later film *Robinson in Ruins* (2012).
4 See the following recent BBC TV and radio programmes first broadcast in 2014: 'Mind the Gap: London vs. the Rest' and 'The Country Formerly Known as London'.
5 "What happened to mid-nineteenth century Paris," Merrifield writes, "is now happening globally, not only in big capital cities and orchestrated by powerful city and national political-economic forces, but in all cities, orchestrated by transnational financial and corporate elites everywhere, endorsed by their respective national governments. While these class forces in and out of government aren't always consciously conspiring, they nonetheless create a global orthodoxy, one that's both creating and tearing apart a new urban fabric that clothes the whole wide world." (2014, x)
6 As Braudel succinctly put it: "Towns spelled money, the essential ingredient of the so-called commercial revolution" (1984, p94–5); a proto-urban revolution that laid the spatial infrastructure for industrialisation and market expansion in the 19th Century.
7 Some highlight the dominant trends surround the problem of 'shareholder' value, others technical and institutional innovation in the financial system. A hybrid Marxian and Post-Keynsian tradition links the phenomenon to the rise of neoliberal restructuring making way for a new social form of rentiership (see Krippner 2005and Lapavitsas 2011 for an overview of the debates).
8 See Walker (2004); French *et al.* (2011) for a commentary on this.
9 See Aalbers (2009); Zeller (2007); Wójcik (2009); Jameson (1998); Smith (2002) respectively.
10 See Christophers (2011); Kaika & Ruggiero (2013); Merrifield (2014)
11 This was, as Haldane shows, reflected in the sharp divergence in the recent trajectory of the market valuation of financial and non-financial companies: 'To illustrate this rather starkly, consider a hedged bet placed in 1900, which involved going long by £100 in financial sector equities and short in non financial equities… From 1900 up until the end of

the 1970s, this bet yielded pretty much nothing, with financial and non-financial returns rising and falling roughly in lockstep. But from then until 2007, cumulative returns to finance took off and exploded in a bubble like fashion. Only latterly, with the onset of the crisis, has that bubble burst and returned to earth' (5).

12 This is something borne out by the crisis, Lapavitsas says, although the restructuring of institutions along the lines of neoliberalism certainly enabled the crisis it did not directly produce it. What *is* emphasised as a significant motive-force, however, is that of technological change and new organisational forms. Without transformations in 'internal organisation…the speed of transactions, the feasibility of financial engineering, the techniques of pricing and risk management, and so on" it would have been impossible to "deal with huge numbers of borrowers' (2010, 12). Yet, the crucial point is precisely the centre of gravity created by financial concentrations of capital: drawing banks, industry and households more and more into the sphere of circulation.

13 From an interview transcript with Costas Lapavitsas and the author, 12 December 2013.

14 We should add an important caveat here to avoid the charge of economic determinism overriding cultural and social aspects. Cultural theorists sometimes labour under the view that Marxian political economy reduces all cultural and social phenomena to the 'infrastructural' realm of material production. But the most creative Marxian thinking on the relations between culture and economy occurs, as Fredric Jameson says, when one views abstractions such as base and superstructure not as a universal theory of determinism, but a more nominal description of the process of determination 'whose solution is a unique, ad hoc intervention' (1996, 46). In this case our interest here is to understand the 'malaise' of real accumulation, and the way finance has become a solution which has absorbed the urban fabric. The reproduction of the infrastructure of everyday life, in other words, has become shaped according to the adventitious search of finance for its highest and best spatial fix.

15 'It is by reason of the existence of durable equipment,' Keynes said in a remarkable passage, 'that the economic future is linked to the present. It is, therefore, consonant with, and agreeable to, our broad principles of thought, that the expectation of the future should affect the present through the demand price for durable equipment' (2007, 146).

16 Hence we see the reason why investment in the largest types of capital goods – infrastructure – often require the formation of public concerns to manage their investment. The relationship between the public and private sectors of the economy is, therefore, not an antagonistic structure as crude economic theory may lead one to believe. In fact the formation of these dual sectors can be see as a product of the internal contradictions of capital accumulation, requiring public funding mechanisms to 'socialise' the costs of production.

17 See Hoyt (1933) and Barras (2009) for comprehensive accounts of the relationship between accumulation and development in building cycles.

18 'The circulation of interest-bearing capital in land titles,' Harvey writes, 'plays an analogous role to that of fictitious capital in general. It indicates the locational paths for future accumulation and acts as a catalytic forcing agent that reorganises the spatial configuration of accumulation according to the underlying imperatives of accumulation. The fact that it sometimes forces too hard (beyond the capacity of either labour to bear) or in erroneous directions (because of the inevitable distortions that arise when the circulation of money capital…makes use of the monopoly privileges that attach to private property in land) simply establishes that the land market internalizes all the fundamental underlying contradictions of the capitalist mode of production. It thereby imposes those contradictions upon the very landscape itself' (372)

19 In a forthcoming article, based on research of the UK urban experience of financialisation, I will try to develop this point in context of the way the production of the built environment has become central to a change in the urban pattern of financial accumulation.

20 In a fascinating example Marazzi suggests that the furniture store IKEA is paradigmatic of a business model which 'delegate[s] to the client a whole series of functions (individuation of the code of the desired item, locating the object, removal of shelves, loading it into the car, etc.), externalizes the labour of assembling the "Billy" bookshelf; this is externalizing consistent fixed and variable costs that are now held by the consumer with a minimal benefit in prices, but with large savings in terms of company costs' (2010, 51).

21 'When General Motors was at its peak,' Turner points out, 'it employed over 800,000 people' now 'Facebook has an equity value of $170 billion but employs only 5000 people: and it has recently acquired Whatsapp for $19billion, a company that employs just 55 people.' (2014, 5)

22 Less entertaining are the more recent stories of stress, intimidation, exhaustion - and in one highly publicised case, death - of those competing to intern in the worlds of high finance (Malik 2013).

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Centering Housing in Political Economy

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Abstract

The issue of "housing" has generally not been granted an important role in post-war political economy. Housing-as-*policy* has been the preserve of social policy analysis and of a growing field of housing studies; housing-as-*market* has been confined to mainstream economics. This paper insists that political-economic analysis can no longer remain relatively indifferent to the housing question since housing is implicated in the contemporary capitalist political economy in numerous critical, connected, and very often contradictory ways. The paper conceptualizes this implication by identifying the multiple roles of housing when "capital" – the essential "stuff" of political economy – is considered from the perspective of each of its three primary, mutually-constitutive guises: as *process of circulation*, as *social relation,* and as *ideology*. Mobilizing these three optics to provide a critical overall picture of housing-in-political-economy (more than a political economy of housing), we draw on and weave together the many vital contributions of housing research to our evolving understanding of capitalism.

Keywords: housing, political economy, capital, circulation, ideology, social relations

Section 1. Political Economy and The Housing Question

Historically, property and land – their use, the desire to acquire them, and the need to regulate their transfer – were among the fundamental reasons for the development of states. Property and land were, and still are, foundational to both power and wealth. The tensions present in acquiring and maintaining power and wealth are embedded in a property system that brings into play an entire social order, and in which housing relations today figure prominently. That, it seems to us, should be reason enough for political economy to take housing seriously; it is likewise reason for housing researchers to take political economy seriously.

But what do we mean by "political economy"? There are many schools of thought that call themselves political economy. Sometimes the term is used to refer to a specific group of heterodox economists; or, to a cohort of political scientists especially interested in the economy, in what is often called "international political economy" or "comparative political economy". In addition, there is a different (but related) political economy within sociology and geography, heavily influenced by Marxist thinking (as we can clearly see in the work of David Harvey), though by no means exclusively so. What these different political economy traditions have in common, and what tends to distinguish them from mainstream economics, is that they analyze "the economy within its social and political context rather than seeing it as a separate entity driven by its own set of rules based on individual self-interest" (Mackinnon and Cumbers 2007, 14). In the present paper, we are mostly interested in reaching out to this interdisciplinary field of political economy outside the economics discipline.[1]

Yet despite our opening assertion that housing *should* be central to political economy thus conceived, it never really has been. Marx, like the classical "bourgeois" political economists who preceded him, gave it short shrift. And while Engels was the author of *The Housing Question* (1979[1887]) and had discussed housing at length in *The Condition of the Working Class in England* (1987[1845]), his perspective on housing was deeply ambivalent: he recognized its social and political importance but, for reasons we shall discuss below, resisted making it a core concern of radical political-economic theory.

Similarly, and partly because of that historical sidelining, the issue of housing has not been granted an important role in post-war political economy. Housing-as-policy became the preserve of social policy analysis and of a growing field of housing studies that have both shown relatively little interest in the issues that typically concern political economists. Housing-as-market was similarly largely siloed, within mainstream economics. The latter's preoccupation with "free markets" and its lack of analysis of power relations or of state involvement – beyond the statement that the latter hampers the functioning of markets – has militated against an integrated analysis of housing as a crucial part of political economy. Equally, interest in housing within what was by now a very isolated Marxian political economy tradition (see especially Berry 1979) tended to restrict such interest not only to a limited set of analytical concerns but also to a productionist perspective. The important work of in particular Michael Ball (1988) on "structures of housing provision" sought to break away from Marxian productionism, but only with modest success.

In recent years, however, there has been a growing and broadly-based recognition of the increasing centrality of housing to the political economy of advanced capitalist societies in much more than a production-related sense. This recognition is most explicit in the work of Schwartz and Seabrooke (2009), who have introduced the concept of "varieties of residential capitalism", building on both the varieties of capitalism literature within political economy and debates within housing studies on the role of homeownership in welfare states. Based on the simple variables of owner-occupation rate and mortgages-as-a-share-of-GDP they have developed four sophisticated residential capitalist "ideal types" that each have a distinct set of housing politics. By doing this, Schwartz and Seabrooke offered an important and illuminating perspective on the role of housing in different varieties of capitalism; nevertheless, we continue to lack a coherent and relatively comprehensive conceptualization of the place of housing in the contemporary capitalist political economy more generally.

This paper sets out to try to offer such a conceptualization – partly to help bring together existing but typically self-standing arguments about different elements of the political economy of

[1] That does not imply, however, that we are not interested in seeking a dialogue with political-economy-within-economics (see Aalbers 2012; Dymski 2012). But we think this requires a different kind of argument since the relationship between political-economy-within-economics and housing-as-a-field-of-research is quite a different one; more political-economists-within-economics have taken housing seriously, albeit very selectively.

housing; partly to help frame and connect up ongoing research in this area; and partly to insist that political-economic analysis more generally *must* take housing seriously. We argue that housing is implicated in the contemporary political economy in numerous critical, connected, and very often contradictory ways. In doing so we lean on the housing studies literature to the extent that it addresses the questions that political economists are interested in and we connect these often fragmented and isolated insights to those of the relatively few political economists who have studied housing. And we present our argument specifically by going back to what it is arguably the central category of political economy, *capital*, and identifying the multiple (and ever more material) roles of housing when capital is considered from the perspective of each of its three primary, mutually-constitutive guises: capital as process of circulation; capital as social relation; and capital as ideology.

The three main sections of the paper, therefore, consider housing's centrality to each such "modality" of capital. There then follows a short conclusion in which we reflect primarily on implied priorities and possibilities for future research. Before proceeding, however, two brief observations are necessary by way of framing. First, in view of space constraints, our discussion of rent is limited to the rent of housing and does not therefore encompass land rent. The latter is obviously a crucial vector of coordination of spatial economies of the built environment, and it shapes – and is shaped by – the political economy of housing, not least in relation to capital circulation, in significant ways (e.g. Ball 1985; Haila forthcoming, chapter 5). Equally, we recognize that when we speak of house prices, we are in fact, in most instances, speaking of a combination of prices for the physical house *and* the underlying land. After all, differences between and particular developments in house prices are first and foremost a result of differences between and changes in the price of the land that a house sits on. But a proper consideration of the role of land as separate from housing is simply not possible here. Second, and related to this, it is important to distinguish between housing *per se* and the more ill-defined category of "property" with which housing is often used interchangeably, but which (equally often) also can include land not used for housing. Our paper is about housing. That said, some its arguments, such as that pertaining to capital switching, apply equally to other forms of (e.g. commercial) property (though even here we would argue that housing is, today, especially material); but many of its arguments do not, but rather are specific to the housing phenomenon.

Section 2. Housing and the Circulation of Capital

In political economy in general, and Marx in particular, capital is conceptualized as a process of circulation. Stripped down to its essentials, this process is typically seen to comprise the following main stages. First, money is advanced to secure the means necessary to produce goods and services; those means often include raw materials, and *always* include wage labour. Second, those collective means are mobilized in the production process to produce the goods or services in question. Third, these goods or services are offered for sale ("realization") on the market in exchange for money: money now, in theory, comprising the quantum originally invested in production *plus* the "surplus" value created in production. This money – minus, *inter alia*, consumption expenditures and deductions for things like interest and rent – is then reinvested in production once more. And so, the circle having been squared, the process is renewed.

Our argument in this section is that housing is pivotal to this process of circulation in numerous key respects, and is increasingly so; or, to put it another way, it is that we cannot hope to understand the circulation of capital, least of all today, without recognizing the multi-facetted materiality of housing to this process.

Perhaps the most obvious and logical place to begin building this recognition is with housing's important figuration as itself an output of the production process: as, that is to say, the "thing" produced by labour and sold for profit (e.g. Ball 1988). Housing may of course be produced by the labour that intends to consume the end-product (i.e. it may be self-built), but increasingly in both advanced and less advanced capitalist societies housing is not produced and consumed by the same people. Its creation is the locus of wage-labour-based production. Thus housing construction and development is an important sector in narrow economic terms, whether measured in terms of added labour value and number of jobs created or in terms of contribution to GDP. Additional jobs are also created in other housing industries, e.g. housing renovation and refurbishment, furniture and housing accessories, kitchen and bathroom outfitters, and home improvement stores (Bourdieu 2005). This partly explains why the housing industry is often seen as an economic sector that needs to be stimulated in order to foster economic growth more widely. This was most visible in the first post-WWII decades when Keynesian policies often singled out the housing sector as a prime beneficiary of government-induced economic growth (e.g. Florida and Feldman 1988).

Yet housing's physical materialization as a product of labour is only one small dimension of its significance to capital circulation. If we return to our basic picture of this process, we saw that some of the value that is realized through the sale of products and services is thrown back into production. But not all of it is. And even that which is, does not necessarily get used immediately. Value, under capitalism, also has to be stored. And while money – cash – is one vehicle of such storage, it is not the only one. Housing is another. Contrary to most other commodified consumer goods, it can pay to invest not only in the production of housing, but also in the ownership of it, for while the market price of a car or a laptop goes down merely by owning it (even without using it), the market price of a house often remains stable or appreciates whether one uses the house or not, largely because the price of the underlying land typically will not decrease in the long term. This simple fact – housing-cum-land's role as a store of value – turns out to be of enormous significance for understanding capital circulation in the contemporary world.

Consider first of all, in this regard, the fact that housing *itself circulates*. We buy and sell it among one other. We do so sometimes because we desire one house's "use value" over that of another. But we might also do so partly or exclusively to exploit housing's "exchange value", which derives from the fact that value is stored *in* housing-cum-land. In other words, one way to profit from owning a house is to sell it for a higher price than it was bought for, as one can also do with stocks or pieces of art, for example. Ownership for the exclusive reason of selling a product for a higher price is referred to by economists as "speculation" and housing speculation assumes many guises. First, there is the homeowner who lives in a house but hopes to resell it for a higher price and trade-up in the market. Second, there is the pure speculator who buys and sells houses without even considering occupying them or renting them out. Third, there is the speculator who tries to buy in one market segment and sell in another, i.e. speculators who benefit from – and often contribute to – the socio-spatial division of housing markets. "Blockbusters", for example in the U.S. context, were real estate brokers who preyed on white homeowners' fear of the prospect of black neighbours and of the impact of their presence on housing prices by encouraging such homeowners to sell their houses for low prices "while they still could", then reselling the houses for higher prices to aspiring black homeowners who were often excluded from buying properties in other neighbourhoods and were willing to pay a premium (Gotham 2002). One can also think here of downmarket private landlords who buy up dilapidated housing in declining neighbourhoods and make money first by "milking" the property – minimizing maintenance and maximizing rents, often by renting to people lacking choice in the wider housing market (e.g. undocumented migrants) – and then by selling it for a higher price, either to landlords or developers preying on gentrification or zoning changes who plan to vacate and renovate (or vacate, demolish and new build) the housing, or to government agencies involved in urban renewal and revitalization schemes (Aalbers 2006).

Whether housing is exchanged for its use or exchange values or both, its circulation is highly material to the circulation of *capital* in the wider sense introduced above. For one thing, the exchange of housing has important "knock-on" effects within the production process at the heart of capital circulation – in relation both to the production of housing per se, and the production of other goods and services. In the case of the former, the significant fact is that in most markets the circulation of existing housing also sets the prices for newly constructed housing, thereby calibrating the value and surplus value that can be generated through housing production.[2] In the case of the latter, the pertinent issue is that housing's spin-off sibling industries include not only the aforementioned production-related sectors but also sectors implicated primarily in housing *exchange*: most notably, of course, the field of real estate agents, brokers and other intermediaries, who are all dependent on the circulation of housing (Bourdieu 2005).

For another thing, the exchange of housing often assumes a vital function in actually *enabling* capital to continue to circulate. One of Marx's great insights – and one of the things that distinguished his work most clearly from his "bourgeois" predecessors – was that circulation periodically, and for all manner of reasons, can break down. Capital's flow is rarely smooth and often interrupted. Indeed "crisis", for Marx, was – and for David Harvey and many Keynesian economists, even more so, is – a question in large measure of blockages to circulation. One such blockage concerns the question of what is called "effective demand," and it is in this context that the exchange of housing is especially relevant. An obvious problem that capitalism can face is that there simply is not enough demand in the market for the products and services that are being or can potentially be produced. If people cannot afford to buy things, or choose to hoard their savings instead of consuming them, circulation grinds to a halt: value cannot be realized, and thus reinvested; and if value cannot be realized, capitalists will soon stop producing it. This is called a crisis of "effective demand". But where does housing fit in? The answer is that housing, as an exchangeable store of value, furnishes means of funding effective demand when other sources dry up. If a buoyant housing market sees prices rising, demand for capitalist products and services tends to rise. Some people, after all, *are* wealthier – those who sell up, at a profit. But even those who do not actually crystallize their gains through sale may *feel* wealthier and spend accordingly

[2] House prices rarely (if ever) merely reflect the cost of labour added to the costs of materials. They also reflect, *inter alia*, the cost of land, depreciation, rent potential, and, of course, what people are willing and able to pay. Thus, housing production through labour not only reflects the social relations embedded in the labour process, but also its key role in the circulation of surplus values.

– sometimes nominally crystallizing gains through equity release (where one "releases" cash by taking on more mortgage debt) (Wood et al. 2013).

Crouch (2011) and Watson (2010) discuss this dynamic in terms of an explicit government policy that they have respectively dubbed "privatized Keynesianism" and "house price Keynesianism", where households, rather than the government itself, are encouraged to take on debt – under the banner of "wealth effects" – to stimulate the economy. Privatized or house price Keynesianism is hereby seen as a way both to fuel the economy by propping up consumption and to "compensate" labour for decades of negligible or even negative real income growth. The result is that in many countries mortgage debt has increased much faster than homeownership rates or even than house prices (Stephens 2003; Aalbers 2008). This has vital implications for how we understand the propulsion of capital circulation. In the U.K., for instance, approximately two-thirds of all bank lending in 2009 was for residential mortgages (Turner 2013): to the extent that they lubricate ongoing circulation through credit creation, in other words, U.K. banks have increasingly replaced supply-side (i.e. corporate lending) with demand-side stimuli, with housing debt being overwhelmingly privileged.[3] Moreover, increasing homeownership latterly drew in more vulnerable households with an insecure labour market position as a result of economic and labour market restructuring (Ford, Burrows, and Nettleton 2001; Doling and Ford 2003; Smith, Searle, and Cook 2009). Such households enjoyed less price inflation and thus fewer "wealth effects", with commensurately less upside impact on effective demand – especially given that these households usually lacked the buffers to ride out succeeding price declines.[4]

Indeed, many Western economies have become so addicted to high and increasing house prices that it seems difficult for governments and households alike to deal with a situation of declining prices, which are seen as lowering people's economic perceptions and therefore as having a negative influence on the economy at large. Thus although declining house prices could imply increased housing affordability, the mantra that "rising house prices are good" remains entrenched, buttressed as it is by pressure on states from the home-owning electorate and the housing market lobby to do everything in their power to protect price levels. Even in times of austerity, the housing sector is still seen as a key vehicle to foster economic growth beyond housing markets per se (Forrest and Yip 2011). Sometimes the dominant thinking appears to be: if only people would believe that their houses prices would go up again, they would start spending more, thereby kick-starting the economy. Whether this is really the case is not even that relevant; the fact that state institutions act based on this belief by promoting the circulation of housing, e.g. by (temporarily) lowering stamp tax, means that its effects on the housing sector and the wider economy are real.

[3] Although we should not forget that banks do provide a stimulus on the supply side of the housing market, too – much of the one-third of U.K. bank lending *not* destined for residential mortgages financed housing construction instead, meaning that credit (often provided by the same financial institutions) underpinned both sides of the market.

[4] It could be argued that "privatized Keynesianism" is fundamentally about debt rather than housing: that, in other words, the latter is merely a contingent vehicle for the crystallization of the former. In our view, however, this is not the case: household debt could not have grown to contemporary levels, and hence have driven effective demand to the extent that it has, without the debt "security" or "collateral" that housing, uniquely, nominally provides the non-commercial borrower. In this respect it bears remembering that the famous phrase "safe as houses" originally referred to the relative risklessness of mortgage lending, not of home ownership: i.e. to the "safety" enjoyed by the financial institution, rather than by the homeowner with whom the phrase is typically now (mis)associated.

If exchange practices in the housing sector can help relieve problems of effective demand and get capital flowing again, housing also constitutes part of the "fix" to other notable problems of capital circulation. The most important is that of "overaccumulation". Where a lack of effective demand entails too much output of products and services relative to the demand for such output, overaccumulation – which may be connected to problems of effective demand, but does not have to be – entails too much value being produced in the aggregate relative to profitable opportunities for reinvestment thereof. It represents, therefore, another way in which circulation can grind to a halt: if capitalists feel they cannot make money by reinvesting their wealth in the production of new products and services, they hoard their wealth instead, and economic growth – not to mention employment – is threatened accordingly.

Housing helps avert crisis tendencies here, too, though it is housing *production* rather than exchange that comes to the rescue in this case. How? Harvey's (1985) work is particularly insightful here. Not only, Harvey argues, is surplus value generated through the production of housing, but surplus value generated in other sectors of the economy is pumped into the housing sector through a process that he calls "capital switching". The idea of capital switching, building on Keynesian foundations, needs to be situated against the backdrop of Harvey's wider (1982) argument that financial institutions see the built environment – which includes but is not limited to housing – as an asset in which money can be dis/invested by directing and withdrawing capital to the highest and best use. If the generic "circuit of capital" which we sketched above (revolving around the production of goods and services) represents the "primary" circuit of capital, then Harvey suggests that we can think of production and reproduction specifically of the built environment, including housing, as a "secondary" circuit of capital. To be sure, such production generates surplus *sui generis* insofar as labour is put to work. But, for Harvey, it does so much more: it serves as an overflow tank into which "surplus" (i.e. overaccumulated) capital can be switched – and then, effectively, parked, until such time as conditions of overaccumulation have eased – when capitalists are unable profitably to reinvest it in the primary circuit. In short, capitalists respond to signs of overaccumulation and try to avert a crisis in the primary circuit by investing in the secondary circuit – albeit eventually overinvesting in the built environment, too (Harvey 1985).

Harvey's capital switching may sound uncomfortably structural and abstract, but once we start looking at actual housing crises, it is easy to see how many of them have been caused by overinvestment in the previous years of housing boom. The boom periods, just like the bust periods in housing cycles, are produced in the wider political-economic sphere, not only because surplus capital is extracted from other sectors of the economy but also because this is politically facilitated. The deflation of the IT bubble and the inflation of the housing bubble are empirically and analytically related – it is a clear example of capital switching to the secondary circuit of capital (Ashton 2009; Gotham 2009; Christophers 2011). But switching of capital has also been facilitated by the state: the spread of mortgage securitization, for instance, was enabled by adapting existing legal frameworks for housing finance to the needs of lenders and investment banks who wanted to expand the existing secondary mortgage market to free up capital for other uses – i.e. to facilitate the switching of capital in and out of housing (Aalbers 2008; Gotham 2009). Similar stories can be told for subprime and predatory lending in the US (Wyly et al. 2009), the demutualization of building societies in the UK (Martin and Turner, 2000) and Ireland (Murphy 1995), and the entry of consumer banks into the domain of mortgage lending in a whole range of countries (Dymski 1999).

Section 3. Housing and the Social Relations of Capital

For Marx, capital was a social relation just as much as a process of circulation. This social relation, as he conceptualized it, was first and foremost a dualistic and antagonistic one: capitalists (the owners of the means of production) on the one side and labourers on the other. In today's world, where housing is so often discussed in the abstract, depersonalized terms of "exchange", Marx's inherently socialized framing of political economy remains as vital as ever, even if his particular dualistic depiction requires revisiting. Capital is constituted by social relations, and housing, we argue here, is multiply implicated in the forms and dynamics thereof. To envision housing merely as a "commodity" is therefore to lapse into precisely the fetishism that Marx attacked, whereby relations between people – the people who build, own, rent and *live in* houses – are reduced to the politically- and analytically-impoverished status of relations between things.

How might we begin systematically to conceptualize housing and capital-as-social-relation beyond Marx? A logical place to start is with the manifestation of the very fact of uneven social relations in the shape of the inequalities of wealth generated *by* capital. When capital circulates, value, as we have seen, is accumulated, distributed, and stored as what we term "wealth." Such wealth takes numerous forms, among them cash money and company securities (often held in pensions), but it is of immense significance that in many capitalist societies residential property is the largest individual wealth/asset class although at the same time many – in some countries most – households own no residential property whatsoever. As such, it is in housing that the vast wealth inequalities of capitalist societies, which we hear so much about today, are often most visible and most material.

Social relations and their dissonance are, in other words, writ large in the physical landscape of housing. Housing, not least due to characteristic spatial expressions of inequality in segregated towns and cities, is vividly representative of capital's production of haves and – strictly in terms of holdings of wealth – have-nots (Wilson 1987; Massey and Denton 1992; Van Kempen and Özüekren 1998). The latter come in many guises, of course, among them slum-dwellers, most (if not all) renters, and those whose home "ownership" means much less in practice than in name – either because their houses are of limited use or exchange value, or because the mortgage lender is the effective owner. But two other categories of have-nots testify to housing's mediation of unequal social relations more clearly still. One is the homeless (e.g. Somerville 1992; Fitzpatrick 2005). The other is the growing army of live-in domestic servants not only in cities of the Global South but also increasingly in cities such as London and New York (Jelin 1977; Sassen 1996; Lutz 2002), a class whose re-materialization harks back to the Victorian age as well as to colonialism and their own sharp social inequalities (Hecht 1981; Higgs 1983). Not only can such servants typically not afford their own housing, they are compelled to service the homes and lives of those who can, with the divide between them inscribed in the social and physical space of the house itself.

While housing clearly crystallizes the dislocation of social relations, it also reproduces and reinforces such dislocation in an explicitly spatial – dis*location* – sense. The poor location of housing may, for instance, increase commuting times and hamper access to good schools, clean air, transportation and a wide range of other services, recreational and commercial spaces, and so forth. It may also increase residents' exposure to crime, environmental pollution, flooding and a whole range of other problems. The so-called "neighbourhood effects" literature has amply demonstrated this (e.g. Briggs 1997; Friedrichs, Galster, and Musterd 2003; Van Ham et al. 2011), albeit without sufficiently recognizing that the spatial relations of housing are not constitutive in a socially-abstract sense but are themselves always and everywhere the outcome of social, power-laden processes (Aalbers 2011; Slater 2013). And of course, the location of housing influences not only its use value but also its exchange value – i.e., the geo-physical landscape of housing works through and impacts both on capital's social relations *and* on the capital circulation processes discussed in the previous section.

Meanwhile, the social inequalities manifested in the ownership of housing stock are potentially very problematic for capital. This is partly for reasons alluded to earlier, relating to the problems of realization and effective demand (the more unequal ownership is, the more "house price Keynesianism" becomes dependent on the demand provided by a privileged minority). But it is also problematic because, *ceteris paribus*, ownership correlates with access and the cost thereof, and affordable access to housing is a *sine qua non* of the very reproduction of capitalism and its social relations. Without the healthy social reproduction of labour, after all, circulation grinds to a halt.

Housing, in short, is central to the matter of social reproduction, and not only insofar as the domestic sphere is where much of the work of social reproduction occurs. The – literally – vital imperative of housing to social reproduction helps explain, in large part, the persistence and power of the discourse of a "right" to housing, as opposed, pointedly, to the "right" to buy and sell it (Lefebvre 1996; Bengtsson 2002; Rolnik 2013). And the question of social reproduction and its viability also relates to housing in a way that brings to the fore a social-relational issue that is never far away when capitalist housing is in the spotlight: that of social conflict. For ultimately, there is surely only so much inequality, embedded inter alia in differential housing wealth, that society's have-nots will tolerate whilst still contributing to the circulation and reproduction of capital.

All of this helps to explain a further crucial aspect of housing's role in the negotiation of the social relations of capital. Given the importance of housing to social and (therefore) economic reproduction, interventionist states have often made housing provision, whether in the form of subsidized physical property itself or of housing "benefits" of some kind, part of their redistributive programs. Such programs aim, explicitly, to rebalance and redistribute – even if only modestly – the skewed social relations endemic to capital and intensified by it (and crystallized, of course, in unequal housing ownership and access); and in so doing they aim, also more-or-less explicitly, to make social reproduction smoother. There are certain similarities here with the methods and objectives of the private "welfare capitalists" of the late nineteenth and early-twentieth centuries who supplied workers with housing. They, too, recognized that capital was endangered by *not* redistributing wealth in this way. Engels was scornful of such assistance – it tied to one place workers whose mobility was seen to enhance their bargaining power – but recognized the (for capital) productive purposes it served.

To think about housing only as a store of wealth, as a prerequisite of reproduction and as a tool of redistribution, however, is to overlook the fact that social exploitation occurs *in and through* housing, too. Such housing-centred exploitation has been shown to take place in a myriad different ways: in the infamous redlining practices of mortgage lenders (Harvey and Chatterjee 1974; Jackson 1985; Squires 1992; Aalbers 2011); in the discriminatory allocations of public housing companies and other urban gatekeepers (Pahl 1975; Pearce 1979; Henderson and Karn 1984); in the predatory lending and foreclosures of the subprime crisis (Squires 2004; Immergluck 2009; Saegert, Fields, and Libman, 2009; Wyly et al. 2009); in the lack of rights or local knowledge of migrants, both documented and undocumented, in poor overpriced housing in both the owner-occupied ("emergency buyers") and rental sectors (Teijmant and Schepens 1981; Karn, Kemeny, and Williams 1985; Aalbers 2006); in the creation of the domestic-servant class discussed above (Hecht 1981; Lutz 2002); in the dispossessions engineered by the architects of neighbourhood gentrification (Smith 1979; Marcuse 1985; Lees, Slater, and Wyly, 2008); and in the evictions effected (Desmond 2012) and monopoly rents charged (Berry 1981; Harvey 1985; López-Morales 2011; Fields 2013) by private landlords.

That private property rental *can* be exploitative, by virtue of its frequently monopolistic qualities, partly explains why the state has often endeavoured to control residential rental prices to one degree or another. Rent is a contractual social relation; rent regulation and control, which can take innumerable different forms, thus constitute another, indirect tool of redistribution, in contexts where housing is seen to enable the dislocation of such relations. At certain points in time, some states – often in conjunction with expanding direct control over the local housing stock – have regulated the private rented sector, and in particular rent pricing, to the point where private landlords feel that is it difficult to extract profits and have thus opted out of housing, resulting in a declining private rental market (Harloe 1985). Although the private rented sector, especially with a lack of tenant protection, can be vulnerable to exploitation, it can also be seen as a crucial part of the housing stock that potentially offers greater flexibility for tenants when both social rented housing and homeownership are inaccessible/unattractive – whether the reason is waiting lists, income limits, mortgage lenders' requirements, citizenship restrictions, or a desire to avoid long-term investment. It is a sector that defies sweeping generalization (Allen and McDowell 1989). Private rental markets are, for instance, usually the only segment that is accessible to the lion's share of newcomers to a housing market, including intra- and inter-national migrants, young people, ex-prisoners and others. A country like Germany, moreover, has shown that a private rental market – with rents and other variables suitably regulated – can be profitable to landlords as well as relatively free of tenant exploitation (Kleinman 1996). But as neoliberal, market-oriented reforms have swept the capitalist world in recent decades, rent regulation has been phased out in many countries, giving increasingly free rein to the "free" markets within which, seemingly paradoxically, monopoly pricing can thrive.

There is, to be sure, a legitimate question-mark over whether "exploitation" is the right word in this regard. Engels, for his part, actually believed not. The landlord-rentier merely "cheated" the labourer (and tenant); only the factory capitalist truly *exploited* her, by stealing her unpaid labour time. This was a large part of the reason why Engels saw the housing question as only a secondary "evil." It was pointless, as he saw it, to strive to abolish such evils – as the likes of Proudhon urged – while maintaining the capitalist mode of production that was the basis for the generation of those evils. To eliminate interest on mortgages, for instance, was, in Engels' view, merely to advantage the industrial capitalist vis-à-vis the rentier, not the worker vis-à-vis the industrial capitalist. Nor, we should say, is this mere semantics: exploitation, for both Engels and Marx, could occur only in production because it was only in production, and not in exchange or the secondary circuit of capital, that value was created.

These issues help to foreground what became, in the 1970s and 1980s, a lively and influential debate over the relationship between housing and the particular dimension of social difference emphasized by Marx and Engels: that of class. On the one side were Marxists who insisted that one's position in the housing market is a result of one's position in the labour market, i.e. social class determines housing position (Ball 1986; Barlow and Duncan 1988). On the other side were Weberians who maintained that this was a reductive reading that underplayed housing's role in actively *shaping*, as opposed to merely crystallizing, social relations. They suggested that perhaps, instead, social position is derived from housing position, i.e., position in the housing market determines social class (Rex and Moore 1967; Pahl 1975; Saunders 1984). Pahl (1975), for example, argued that capital gains from housing would blur inequalities arising in the labour market and create a division between owners and renters. Saunders (1984) took the Weberian view the furthest, arguing that the housing market gives rise to a new class division. Over time, a more balanced view of so-called "housing classes" has emerged: Murie and Forrest (2001), for example, pointing to an essential reciprocity: housing position is class (labour market) dependent, but housing itself also transforms this class division.

What is also clear, crucially, is that such divided social relations, and housing's role in their realization/reproduction, are not reducible to class dimensions alone. Race/ethnicity and gender palpably intersect with class, in all manner of different and complex ways, in producing the variegated landscape of social difference and inequality we associate with capitalist societies. Of course, social scientists have researched and demonstrated these intersections much more widely than in relation to housing alone. But housing's intimate implication in what we *do* choose to refer to here as processes of exploitation does appear to be especially emblematic of the intersections in question. This has nowhere been more evident than in regard to the recent financial crisis and its subprime epicentre, where race/ethnicity and gender were centrally bound up with class in the systematically uneven predations of mortgage finance and foreclosure (Squires 2004; Wyly et al. 2009; Aalbers 2012; Ashton 2012; Roberts 2013).

In short, we know, and political economy must therefore recognize, that housing serves as a principal crucible for the exacerbation of multiply-constituted social inequality. And in closing this section, we can usefully consider one axis on which such inequalities play out that we have not yet addressed: the generational axis. This axis is complicated because it needs to be examined from more than one perspective. Inequality *between* generations is certainly one: with widespread deregulation of housing and financial markets having spurred owner-occupancy and driven huge real house-price inflation in large parts of the capitalist world in recent decades, older generations, where ownership of housing wealth is inevitably concentrated, have benefitted disproportionately. But inequalities *within* those older generations are important, too, as they do not just die away with the latter – through various pre- and post-mortality inheritance mechanisms, they are passed on to descendants (Allen et al. 2004; Helderman and Mulder 2007), and magnified, as the gap between those who benefit from housing wealth and those unable to access it grows ever larger, in particular now that in the post-boom landscape access to mortgages has decreased and reliance on intergenerational wealth transfers increased (Forrest and Yip 2011). Equally importantly, meanwhile, these fractured social relations are being handed down not just to any generation – but to a generation seemingly more obsessed than any that came before with the ideology of homeownership.

Section 4. Housing and the Ideology of Capital

As well as a process and a constellation of social relations, capital is quite clearly also an ideological institution. As depicted by both critics and champions over the course of more than two centuries, this ideological institution has three critical components. One is the absolute centrality of private property, the monopoly power over which is, says Harvey (2002, 97), "both the beginning point and the end point of all capitalist activity." A second is the primacy of markets, characterized by "free" competition, as the superior mechanism for the allocation of resources. And the third is the imperative of the accumulation of wealth. "Accumulate, accumulate! That is Moses and the prophets!", as Marx famously wrote of capitalist ideology in Volume 1 of *Capital*.

Our argument in this section is that housing, for at least two reasons, is fundamental to this ideology. First, because the ideology in question is arguably nowhere more explicit and pronounced than in relation to housing; which is to say that the ideology of housing today *epitomizes* capitalist ideology more generally, inasmuch as private property ownership, market allocation mechanisms and accumulation strategies are decisively privileged. And second, because housing not only epitomizes but *buttresses* that wider capitalist ideology: it is in and through housing that much of the political work of reproducing and reinforcing the ideology of capital is performed.

Private property ownership is an ideological institution that is most dominant and absolute in capitalism but also present in many other state/market forms. Private property is not truly "private" because it is protected by the state and because it confers a very public power over resources and others (Gray 1991, 304). Indeed, private property rights presuppose states and are presented as natural and normal even though they are quite meaningless without being validated by the state's apparatus, whether that is the law or the state's monopoly on violence. In "pre-modern" states, the state and powerful landowners relied mostly on the monopoly on violence, but in advanced capitalist societies the law is the institution par excellence to embed the ideology of private property rights in wider societal relationships. But if the institution of law turns out to be insufficient to enforce private property rights, property owners will often try to mobilize the state's monopoly on violence, e.g. in the case of evicting squatters. Private property is not only about power over an object, it is fundamentally about the ability to exclude others from the use of it (Davies 2007).

Furthermore, while it may now seem like a long time ago that land and property ownership was a *condicio sine qua non* for formal political participation, in various places around the world communities are still effectively governed by homeowner associations and other private forms of government based on the ownership of housing (McKenzie 1994; Atkinson and Blandy 2005). Thus, private property is not only about the power over an object and the ability to exclude others from it; it is also related directly to political participation. Even in the present day and age the acquisition of housing sometimes entitles people to citizenship rights. Spain has recently been in the spotlight for trying to rejuvenate its housing market by offering second citizenship to those purchasing property for more than €160,000. But outside the spotlight, a few dozen countries as diverse as Latvia, the Czech Republic, Austria, Panama, the Bahamas, St. Kitts and Nevis (e.g. Grabar, 2012), and in some way also the U.S. (O'Toole 2012) have a type of "citizenship-by-investment" programme or policy. The idea – and for some philosophers and policy-makers the ideal – of a capitalist property-owning democracy (Rawls 1971; Daunton 1987; O'Neill and Williamson 2012) is not only an historical artefact but also standing practice in some countries.

As both material artefact and ideology private property is also contested, and at the forefront of ideological battles within capitalism, as illustrated by social movements related to, for example, squatting and the right to housing. Furthermore, debates on the privatization, neoliberalization and financialization of housing go to the core of debates about capitalist ideology and practice more generally (Aalbers 2008; Ronald 2008; Saegert, Fields, and Libman 2009; Rolnik 2013). There are many reasons for this, but one is that housing is tied directly to *each* individual, household and community as well as to the very heart of what states and markets do and the debate over what they should do. Since the dichotomies of state and market, of public and private, are by their very nature problematic in the field of housing, the latter is a febrile place to study the political economy of actually-existing capitalisms.

The fetishization of the ideology not only of private property but also of wealth-accumulation and markets is, of course, writ large in the political project of expanding homeownership (Kemeny 1981; Ronald and Elsinga 2012), which has characterized the vast majority of capitalist states – new and old – in the post-war era, particularly since the 1980s and (in post-communist states) 1990s, important exceptions such as Germany and Switzerland notwithstanding (Kleinman 1996; Lawson 2009). The often-mentioned advantages of homeownership – including but not limited to so-called "wealth effects" (Case, Quigley and Shiller 2001); saving-in-brick for (and lower expenses during) retirement and therefore lower state expenditure on senior citizens ("asset-based welfare") (Regan and Paxton 2001); "better", more involved and empowered citizens (Rohe, Van Zandt, and McCarthy 2002) – are generally not so much intrinsic features of homeownership as they are consequences of the political project of pushing homeownership at the expense of other tenures. This is not only a political project in the most general meaning of political, but also in the narrow meaning of what politicians and political parties do. It was Engels who warned against the embourgeoisement of the working class as it would minimize their autonomy by making them dependent on income from labour and therefore diminish the chance of them starting a revolution. It is exactly for this reason that politicians of various stripes have promoted working-class homeownership (often alongside suburbanization): as a bulwark against communism and revolts by giving working class residents a stake in the system, by making them dependent on wage labour, and by locating them further from the urban centres of oppositional movements.

Widened homeownership, crucially, may also erode support for various kinds of welfare state intervention. Kemeny (1995) and Castles (1998) have shown that the expansion of homeownership in countries that traditionally had bigger housing rental markets and bigger and often publicly-funded pension systems has been accompanied by declining support for welfare state intervention in general and public pension systems in particular. They have termed this "the really big trade-off", suggesting that people's housing situation is fundamental to welfare state support, and (thus) that the politics of housing are fundamental to the political economy of advanced capitalist states more widely. The policy ideal of "asset-based welfare" – in fact, housing asset-based *wealth* – certainly suggests – explicitly or implicitly – that state redistribution can be diminished if more low-income households are homeowners who can reap the ostensible benefits of homeownership (Regan and Paxton 2001; Doling and Ronald 2010).

The political promotion of homeownership takes many forms, but none perhaps more transparent than housing privatization initiatives – from the Right-to-Buy in the UK and housing-privatization-as-shock-absorber in many post-communist countries to many demolish-subsidized-housing-and-replace-by-private-housing schemes throughout advanced capitalist countries (Clapham et al. 1996; Forrest and Murie 1998; Murie et al. 2005). Such policies are often clad in the language of "giving property back to the market" even though, with the exception of the restitution of private properties that made up a minor part of the privatizations in post-communist countries, most of these properties were never produced as commodities, as goods for market exchange. All such privatization schemes are the outcome of political processes and have social and economic consequences, not only for those displaced-by-privatization, but also for new homeowners – who are predominantly low- and moderate-income and are often not as well situated to reap the full benefits of homeownership or bear the costs of maintaining a house – and for real estate agents, mortgage lenders and others who benefit from an increase in housing circulation. That privatization boosts circulation is, indeed, a vital point, for it is in privatization that we arguably witness most clearly the indissolubility of capital's three modalities and of housing's mediation thereof: housing privatization reflects and reproduces ideologies of capital; it augments the circulation of capital by making "dead" public capital private and liquid; and, in the process, it represents an explicit reworking of social relations, a socio-economic "enclosure" process whereby individualized private accumulation is facilitated by the dispossession of public resources (Hodkinson 2012a).

To appreciate this is to appreciate why housing is often discussed in terms of its three major segments or tenures: owner-occupied, public or social rented, and private rented housing. As owner-occupation in capitalist societies has increasingly been privileged both ideologically and economically – for instance through preferential tax treatment – so the other tenure types have been ideologically and materially squeezed, even in nominally social-democratic states where tenure equality has long been brandished as a central political philosophy (Kemeny 1981; Christophers 2013). Under capitalism and its different currents such as neoliberalism, ordoliberalism and welfare state capitalism, "things" in general become increasingly regarded as commodities, and this is certainly the case for housing. The different commodified forms of housing – and owner-occupation in particular – become naturalized and normalized while non- and partially-commodified forms are othered and denormalized, even though all forms of housing are the product of a specific context and a specific ideology (Kemeny 1981). Social rental is the most "abnormal" of all, but even private rental has been ideologically devalued. And, in keeping with the growing centrality of market allocation mechanisms to (neoliberal) capitalist ideology, states' appetite for using rent regulation to override market forces in the private rental sector has over time (and as noted in the previous section) ineluctably diminished in many countries.

While the aforementioned tenure categories are often useful in describing and analyzing housing, however, this threefold distinction is not as straightforward as it seems (Barlow and Duncan 1988; Lee and Murie 1999) and is itself ideologically charged. The segment of public and social rented housing includes a wide range of housing that is managed on a not-for-profit basis, whether this is owned by state institutions or by private non-profit and hybrid organizations that often receive government subsidies. Yet, not all so-called social housing is built with state support and a great deal of housing that is not classified as either public or social is built with government support or is managed on a non-profit basis, such as the housing owned by community development corporations and mutual housing associations in the U.S. Moreover, not only tenants of public and social housing receive government subsidies; so do numerous tenants of private rented housing and many homeowners. For the U.S., Wyly and Defilippis (2010) have even argued that all housing, and in particular owner-occupied housing, is public housing as it is supported by public funding, most importantly in the form of mortgage interest tax deductions from which wealthy homeowners benefit most. But we could also think of the government support of tax and other breaks given to housing developers that further problematize the dichotomy between public and private housing. This is exactly how Singapore has classified most of its housing: as *both* social *and* owner-occupied housing (Chua 1997).

Besides the evidently blurred boundaries it relies upon, the conventional three-way segmentation of housing also needs to be problematized in view of the great diversity within each segment and the different meanings each segment has in different places (Ruonavaara 1993). In places where public or social housing makes up only a few percent of the housing stock, for example, it tends to be more marginalized, impoverished and stigmatized than in countries where thirty or more percent of the housing stock is classified as such. It makes a big difference if public/social housing is considered to be a residual sector for the poorest of the poor or a sector for "the masses", i.e. including people from all walks of life. In a provocative thesis that would be hard to extrapolate beyond the U.S., Wacquant (2009) has famously compared public housing to prisons, arguing that both are part of a penal state in which the poor are housed in the worst possible conditions and residents of the former have become increasingly likely to end up in the latter at some time in their life, especially if they are male and of a different ethnicity or colour than the dominant groups in society.

The diversity within the owner-occupied segment is also substantial (e.g. Hamnett 1999). The most common distinction made here is between housing that is owned outright and housing that is mortgaged. If we observe how easy it often is for lenders to "repossess" housing (as if taking back what was already rightfully theirs) where mortgage payments are in arrears, it makes absolute sense that so many homeowners say they "rent from the bank". Of course, the differences within owning-outright and renting-from-the-bank are often equally striking. Many homeowners in post-communist countries were either given their formerly rental units or were able to acquire them for a symbolic price; yet, they often acquired poorly maintained properties; frequently do not earn enough to put money aside for maintenance; and sometimes cannot make necessary structural repairs since their properties are found in mid- and high-rise complexes with structural defects affecting the entire building (Murie et al. 2005). Likewise, some mortgaged homeowners have manageable mortgage payments and maintenance costs while others have been sold mortgages (e.g. "predatory loans") that they are unable to service (Squires 2004; Wyly 2009).

Last but not least, there are other housing segments than the three main ones, including but not limited to (and often overlapping): free housing (often provided by relatives); housing as part of a labour contract (including the aforementioned live-in domestic servants as well as nannies and people living in factory housing or service housing, but also some expatriates); second homes (which are not really owner-*occupied* and are in reality sometimes third or fourth homes and so forth); squats (i.e. non-owner occupied housing); sub-lets ("room tenants" often include many students and other young people as well as poor people and migrants)[5]; trailer-park housing (accommodating more than ten percent of the population in a country like the U.S.); a wide range of institutionalized housing forms (accommodating not only prisoners but also many students, senior citizens, mental and physically challenged people and others); and of course the "un-housed", i.e. the homeless, most not necessarily rough sleeping (or at least not all the time), and many also part of the institutionalized group. In short, the commonly accepted labels for different housing segments and different residents reflect deeper socially constructed distinctions between haves and have-nots, deserving and undeserving residents (and labourers), property owners and property-subjects, public and private, and state and market. All these terms are ideologically loaded and politically-economically reproduced – reflecting, and re-embedding, the ideology and political economy of capital.

Section 5. Conclusion: The Housing Question Revisited

For all our attempt in this paper to formulate a generalizable conceptualization of housing in political economy, we are only too aware that it emphasizes certain dynamics while relatively underplaying others. This strikes us as unavoidable, however. And instead of seeing such imbalances as a negative, we would much rather cast them in a positive, *enabling* light: as issues to be further explored, theoretically *and* empirically, in relation to the provisional heuristic framework we have offered here. It is important also to stress that we do not present political economy as a method but more as a *perspectival* necessity to frame, contextualize and ultimately understand the role of housing in society. A political-economic perspective can be mobilized in combination with a wide range of methods and modes of analysis, both of the quantitative and qualitative variety and both of the empirical and more hermeneutic and discursive kind. An open political-economic approach does not privilege certain methods; but it does force the researcher to always embed the empirics, theories, policies and markets of housing in their political-economic context – to *not* study housing in isolation from its societal context.

Comparative political economists, for example, will likely judge that we have paid far too little attention to the state, and its role in shaping different housing outcomes in different historical and geographical political-economic conjunctures. We have certainly tried to demonstrate that in regard to each of the three "modalities" of capital, the role of housing in the wider political economy is heavily tied to the role of the state. But of course, there is wide variation in how housing enters each national (and to some extent, each local) political economy. Housing is a central part of the national and local political-economic configuration, which implies housing is differrent everywhere and has different meanings and implications. Common terms such as "homeownership" and "social housing" may even have very different meanings in different contexts. Furthermore, states may make new, and sometimes unexpected, connections *between* the different modalities (e.g. asset-based welfare). In our view, however, this does not gainsay the generic pertinence of the modalities identified but instead calls for adding more flesh to the framework thus provided, for instance through comparative studies of the role that housing plays in different political economies, building on existing comparative studies that have taken seriously

[5] Although it would seem convenient to include sub-letting in the category of private rented housing, many sub-letters are also found in housing classified as owner-occupied or social/public housing, contributing to a further blurring of the categories.

both housing and one or more of the modalities of capital in question (Kemeny 1981; Harloe 1985; Allen et al. 2004; Lawson 2006; Ronald 2008; Schwartz and Seabrooke 2009; Aalbers 2011).

Meanwhile, political economists interested more in *changing* the world than in interpreting it will doubtless be frustrated by our lack of discussion of housing in relation to progressive or *different* (even non-capitalist) political economies. What are the alternatives to commodified housing provision under capitalism? How might they be advanced? And what macro-scale political-economic reconfigurations might they require? While we are not naïve enough to imagine that "fixing" the housing question will fix capitalism's problems more generally – the very Proudhonian fancy that Engels ridiculed – we would insist, equally, that there can be no meaningful and sustainable progressive socio-economic change *without* the housing question being directly addressed (cf. Turner 1976; Ward 2002; Harvey 2012; Hodkinson 2012b).

One particularly intriguing prospect in relation to the figuration of political-economic change, we believe, is to focus critically on the *contradictions* of housing under capitalism, and on the spaces for change that such contradictions potentially open up (Dymski 2001; Harvey forthcoming). It is, in our view, no coincidence that Harvey identifies housing as a principal locus of capitalism's manifold contradictions. Not the least of these, of course, is the contradiction between housing's use value and exchange value, and the tensions which result from expecting and encouraging the former to be delivered by a system which relentlessly prioritizes the latter (cf. Christophers 2010).

But housing manifests, and indeed generates, various other contradictions, too; and we want to suggest that the framework developed here can help to expose these for critical analysis. For, the different modalities of capital we have analyzed in relation to housing are intimately interconnected with one another (as we have noted at several points, despite discussing them mostly in isolation). More than that, however, they *depend upon* one another for mutual reinforcement: capital could not and would not circulate in the way it does, for example, if it were not for the distinctive ideologies that characterize it. It is precisely in the conjoining of these modalities – and in housing's implication therein – that contradictions tend to emerge. We have explicitly encountered one of these: namely, the fact that the unequal social relations arising from the circulation of capital, and expressed in housing wealth, tend to endanger the very social reproduction required for circulation safely to continue. But there are many more such contradictions to housing's role in our contemporary political economy, and exploring and understanding these represents a vital step in figuring different (housing) futures.

Taking housing seriously also implies bringing housing into the future of political economy *not* just in terms of the study of political-economic institutions but also in terms of policies and politics. In this sense, our conceptualization of housing as a crucial part of political economy is also a call to re-integrate housing-as-policy with housing-as-market. Housing plays such a vital role in actually-existing political economies that it is no longer justifiable – if it ever was – for political economists to cede housing analysis either to economists who ignore or reduce the importance of power, politics and the state, or to a separate field of housing/social policy where the wider political economy is equally invisible. Researchers in the field of housing studies, similarly, could make a greater effort to connect their analyses and arguments to the questions of political economy – not because political economy is necessarily the privileged approach to tackle housing questions, but because housing cannot be discussed sensibly without relating it to its political economy.

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Urban struggles with financialization

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Abstract: The 2008 financial crisis and its impacts on the urban landscape contributed to a proliferation of research on the financialization of urban space, particularly of housing. Today, financialization is a mainstream focus of study within geography. But while scholars have responded to earlier calls to center space and place in their research, it has only been quite recently that geographers have taken up efforts to politicize and contest the financialization of urban space. This essay assesses the emerging body of literature on urban struggles with financialization. It first draws on historical materialist perspectives to situate financialization within urban contexts, showing why there is a particular relationship between this process and urban space, and how moments of crisis reveal tensions in this relationship. Reviewing literature focused on places exposed to the most systemic housing-financial crises in 2008, the essay then explores how residents, activists, and movements have grappled with financialization. It argues that a key aspect of such struggles is the ability to make their presence felt within chains of financial intermediaries or the corporate headquarters of foreign investors. The essay also highlights how moments of crisis open space for more radical tactics that disrupt the dominant production of space and emphasize the social value of housing. It suggests ways to fruitfully expand geographic inquiry into urban struggles with financialization through focusing on the formation of political subjectivities and engaging geographies beyond the global north.

Since the early 2000s, geographers, political economists, and social and cultural theorists have sought to explain the meaning and significance of the rise of finance, and its implications for the production of space, corporate governance, accumulation regimes, and everyday life. The concept of financialization--denoting a process of becoming financial--serves as an organizing idea for these multidisciplinary pursuits. Whereas in 2008 the term was not yet in wide use in the social sciences (Engelen, 2008), by 2015 'financialization' had become as mainstream as 'neoliberalization' and 'globalization'(Christophers, 2015), a shift owing largely to the 2008 global financial crisis.

According to Aalbers (in press), financialization entails a "structural transformation of economies, firms (including financial institutions), states, and households" resulting from "the increasing dominance of financial actors, markets, practices, measurements, and narratives" (p. 3). This comprehensive definition highlights how the concept of financialization subsumes a wide-range of concerns and traverses geographical and institutional scales. Rutland (2010) and Christophers (2015), among others, add dimension, outlining the diversity of approaches to financialization, including: 1) the growing role of financial (relative to non-financial) sources[1], processes and imperatives in capital accumulation (Krippner, 2005); 2) the rise of "shareholder value" in which financial markets and value dictate corporate (and even macroeconomic, as Rutland points out) governance to the exclusion of other business objectives (Froud, Haslam, Johal, & Williams, 2000); and 3) finance's influence over, and transformation of, aspects of everyday life, subjectivity, society, and culture thought to be "beyond its formal borders" (M. Haiven, 2014, p. 2; Randy Martin, 2002).

[1] And within this, increasing reliance on finance derived from capital markets rather than banks (Rutland, 2010).

The varying interpretations of financialization, together with the rapid growth of research mobilizing the concept, has given rise to concerns that financialization is becoming an analytically imprecise "blanket term" (Aalbers, 2015; Christophers, 2015; French, Leyshon, & Wainwright, 2011, p. 801). But different understandings of financialization can and do overlap in reality. As Krippner (2012) argues, shareholder value-driven models of corporate governance will translate to profits generated via financial channels. Adding to this, the pursuit of financial profits and of social power by "actors occupying strategic positions vís-a-vís financial markets" (Krippner, 2012, p. 74) also depends on shaping lived experience in myriad ways (M. Haiven, 2014), generating new income streams by, e.g. cultivating investor (or debtor) subjectivities oriented toward active, ongoing management of mortgage relationships (Langley, 2008; Lazzarato, 2012). This conceptual overlap underlines Randy Martin's point that "to be useful to any comprehensive understanding of a complex world, financialization must refer to many different processes at once" (2002, p. 9). Yet such *de facto* intermingling, together with an ongoing proliferation of meanings, risks rendering financialization incapable of "conferring analytical significance and coherence *in its own right*" (Christophers, 2015, p.187, emphasis in original). This critique highlights the challenge—and importance of—"being rigorously specific" (Christophers, 2015, p. 197) when invoking the term, and the need to situate financialization as something to be explained, rather than an explanation in and of itself (Ouma, 2016).

Another set of critiques relates to how financialization is conceived in geographical and political terms. As Pike and Pollard (2010) caution, an all-too-common emphasis on finance's complexity, high speed, and global dimensions can lead to errors of interpretation, namely the notion that finance is disconnected from both the real economy and place, while also being so pervasive as to be incapable of either regulation or contestation. 'Earlier' (in the history of a relatively young concept) debates within geography stressed the need to recognize the inescapably spatial qualities of financialization and for researchers to reckon more directly with space and place (cf. French et al., 2011; Pike & Pollard, 2010). However, in recent years a raft of special issues, panels, and symposiums have made significant progress on this front, and today studies of what Aalbers (2015) terms “real-world financialization” abound. While geographies beyond Anglo-America and advanced Western economies (both as ‘cases’ in their own right and as they are enrolled in Anglo-American financialization) are beginning to be addressed, this is an ongoing challenge for research concerning financialization: further study of financialization from postcolonial and peripheral perspectives is needed (Halbert & Attuyer, 2016; Pike & Pollard, 2010, p. 37; Wissoker, Fields, Weber, & Wyly, 2014).

The proliferation of research on financialization, particularly in the aftermath of the financial crisis, highlights the urban scale as central to the current conjuncture of financialization.[2] This is not only because of the profound impacts of the crisis upon urban space, effects that continue as the link between real estate and finance is reconstructed in the aftermath of the crisis. As will be discussed in the following section, finance capital and the urban process are interdependent, and this is heightened under financialized capitalism (Moreno, 2014). Furthermore, the key role of cities in reproducing neoliberalism (Theodore, Peck, & Brenner, 2011) makes them critical entry points for finance capital in search of yield, e.g. through the sale of public assets such as infrastructure or land (Ashton, Doussard, & Weber, 2012; Christophers, 2016). Another way in which financialization revolves around the urban

[2] I do not mean that financialization is limited to urban settings; important work on finance and farmland, food systems, and sustainable development (cf. Clapp, 2014; Knuth, 2015; Ouma, 2014), among other themes, attests to the relevance of financialization beyond the urban.

relates to how capital markets are anchored in global financial centers such as New York, London, and Hong Kong. Concentrations of expertise and infrastructure make such cities "obligatory passage point(s) for the relatively assured realization of capital under conditions of financialized globalization", thus placing new spatial demands and pressures on cities (Bassens & Van Meeteren, 2015, p. 754; Van Meeteren & Bassens, 2016; Wójcik, 2013). Altogether, the centrality of the urban scale in financialization, the importance of urban space to a range of recent political struggles (cf. Castañeda, 2012; Harvey, 2012; Kuymulu, 2013), and the enduring significance of urban movements to scholarship within geography, sociology, and urban studies (cf. Mayer, 2009; Novy & Colomb, 2013) suggests that urban struggles with financialization should be a research theme of some significance. Yet the surge of early debates about financialization rarely considered contestation (Pike & Pollard, 2010), particularly at the urban scale: it is only more recently that researchers have started to grapple with how city residents and grassroots organizations contend with, and attempt to politicize, the reduction of the urban landscape to a set of financial criteria.

Building on the debates outlined above, the objective of this essay is to assess scholarship on urban struggles with financialization. While finance capital operates through urban development in all kinds of potentially contestable ways (such as infrastructure and commercial real estate, see respectively O'Neill, 2010; Rutland, 2010) that merit further attention by geographers, the essay focuses in particular on struggles related to housing in the post-2008 era. It begins by drawing on historical materialist perspectives to situate financialization within urban contexts, showing why there is a particular relationship between this process and urban space and how this relationship becomes rife with tensions in moments of crisis. The next section explores how social scientists have engaged with movements that seek to push back against or escape financialization. Such popular movements largely revolve around housing and are tightly linked to the 2008 crisis, which was most severe in Ireland, Spain, and the US. Correspondingly this section of the essay is circumscribed geographically, spatially, and temporally. The essay concludes by setting an agenda for further inquiry on financialization and urban struggles.

The urban scale and financialization

Financialization has recently become a mainstream object of social scientific inquiry (Engelen, 2008), but is not a new or exceptional phenomenon (Arrighi & Silver, 2001; Christophers, 2015). Rather it is a cyclical, world-historical process: when capitalism's global hierarchy is being shaken up, declining economic powers undertake financial expansion to maintain their hegemony (Arrighi, 2010), resulting in finance-led transformation of social and economic life at a variety of spatial scales (Aalbers, in press). The waning of the US-dominated 'Golden Age of Capitalism' starting in the 1970s has made financialization particularly prominent today (Silver, 2003; Stockhammer, 2004, 2008). As Arrighi (2010) explains, amid shrinking profits and increasingly fierce competition capitalists began "competing intensely with one another for the capital that accumulates in financial markets", leading to "massive, system-wide redistributions of income and wealth...thereby inflating and sustaining the profitability of financial deals largely divorced from trade and production" (p. 373). Today's era of financialization is thus rooted in a global restructuring of capital accumulation starting with threats to Anglo-American hegemony within global capitalism in the 1970s.

Led by the US and UK, home to the nerve centers of global finance, the state aided this process, facilitating financial markets[3] and opening up international capital flows (Krippner, 2012; Obstfeld & Taylor, 2003; Wainwright, 2009; Wójcik, 2013). Accordingly, as the amount of global assets managed by institutional investors and investment companies has grown dramatically, finance capital has disproportionately influenced global economic growth over the past four decades (Christophers, 2011). This explosion of finance capital has created challenges as profitable investment opportunities become saturated and new ones must be created. In turn, urban space has become an increasingly important channel for absorbing finance capital.

Finance capital and the (re)development of the urban built environment are interdependent. The dense concentrations of infrastructure and real estate characterizing urban areas provide the "material basis for economic decision-making" in a capitalist system (Moreno, 2014, p. 255). Though critical to capitalist production, urbanization entails considerable 'sunk costs', i.e. capital outlays only recoverable over long periods of time (Harvey, 1985). Financing development therefore requires a functioning credit system, which allocates interest-bearing capital to real estate and infrastructure projects (Harvey, 1985). Because finance capital is distributed to the production of built environments that will secure the highest and best returns (Moreno, 2014), the urban landscape is an attractive escape valve for the finance capital that has accumulated globally in recent decades and is on a perpetual 'hunt for yield'.

Urbanization therefore provides what David Harvey terms a 'spatial fix' for capitalism's inherent crisis tendency to accumulate capital beyond what can be profitably reinvested, and

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[3] As Aalbers (2016) points out this process is not only one of liberalization via lifting rules and regulations: as old regulations are loosened they are usually replaced by new or adapted laws and rules, though some actors enjoy relatively broad latitude within this framework.

which threatens the survival and reproduction of capitalism (Harvey, 1985, 2007). The spatial fix provides a means of profitably reinvesting surplus capital by plowing it into the built environment (Christophers, 2011; Harvey, 2007; Kutz, 2016; Schoenberger, 2004). Investments in infrastructure, transportation and communication networks, and real estate absorb overaccumulated capital while creating "an expanded and improved built environment" to support future capital accumulation (Schoenberger, 2004, p. 429).

In recent decades, state facilitation of financial markets and instruments has helped open new avenues for realizing the spatial fix through expanding opportunities to invest in the built environment and contributing to the liquidity of real estate investment. A signal example of such facilitation is the state's role in creating, and actively contributing to the growth of, the secondary mortgage market and mortgage securitization (Gotham, 2006; Wainwright, 2009), which helped expand mortgage credit in the 1990s and 2000s. By the 2000s the debts financing real estate investments had become "raw materials" for "securities, derivatives, and the related products of a financialized economy" (Newman, 2009, p. 315). Of course, this process also depends upon social actors who understand their daily life and life chances through the logic of investment: a "constant pursuit of opportunities and the negotiation of risk in order to yield rewards" necessitated by the hollowing out of post-war welfare states (Allon, 2010, p. 367; Garcia Lamarca & Kaika, 2016; M. Haiven, 2014; Langley, 2008; Randy Martin, 2002). As Haiven (2014) and Garcia Lamarca and Kaika (2016) observe, social reproduction is increasingly organized in ways that reproduce financialized capitalism. Thus the growth of homeownership helped realize a spatial fix for finance capital. Yet the spatial fix can only delay or displace crisis. As competition for profitable investment in the built environment heats up, the role of finance capital in urbanization becomes increasingly speculative and prone to setting off a property crisis, thereby dramatically devaluing assets and risking a broader economic breakdown (Fainstein, 2016; Harvey, 2007).

This dynamic is easily observed in the 2008 financial crisis. Capital market demand for real estate-backed financial instruments came to play an outsize role in global flows of credit into local urban landscapes (Newman, 2009), creating a nearly-worldwide mortgage credit and house price bubble centered in the US, Spain, and Ireland (Beswick et al., 2016). The inevitable bursting of this bubble laid the groundwork for a subsequent round of accumulation. The state is also crucial here: Since the crisis, the US, along with Spain and Ireland, has taken on a notable market-maker role through the sale of distressed real estate and financial assets to private equity and hedge funds at a discount, the latter countries also creating (or loosening tax or regulatory obligations on) vehicles for real estate investment (Beswick et al., 2016; Byrne, 2016).

As real estate has become more amenable to capital flows, capital flows have also been rescaled. Financial institutions have increased their market power and ability to operate globally due to the state lifting capital controls, the consolidation local and regional lenders by national institutions, and an increasingly porous border between retail and investment banks (Berger, Demsetz, & Strahan, 1999; Obstfeld & Taylor, 2003, 2004). Not only is real estate is easily transformed into a liquid and tradeable commodity, capital can also shift "in and out of different types of market in different corners of the globe" (Schoenberger, 2004, p. 431). The current moment of financialization therefore represents both aspects of the spatial fix: capital's absorption in the urban process and its extension into new markets (Kutz, 2016; Schoenberger, 2004).

Today's unprecedented capital mobility also creates tensions between governance priorities, i.e. maintaining social welfare on one hand, and supporting economic growth on the other. Such tensions are particularly apparent when the speculative tendency of finance comes to dominate cycles of capitalist urbanization, setting off a crisis like that which occurred in 2008. Global linkages created by the production and circulation of financial instruments backed by mortgage debt ultimately intensified and spread the impacts of the financial crisis created when property values stopped rising (Aalbers, 2009; French, Leyshon, & Thrift, 2009; Ron Martin, 2011). Rather than coming to the aid of mortgage holders, states largely opted to bail out financial institutions in order to restore capital market stability (Bratt & Immergluck, 2015; Fawley & Neely, 2013; López & Rodríguez, 2011; Whelan, 2014). However this decision also undermined social welfare provision in many countries through the onset of austerity programs (Berry, 2016; Blyth, 2013; Karanikolos et al., 2013). The close relationship between urban space, market-led political economic restructuring, and financialization means much of the tension between economic growth and social welfare, or between "the privatization of gains and socialization of risk", plays out at the urban scale (Fainstein, 2016; Garcia Lamarca, in press, p. 9; Harvey, 1989; Theodore et al., 2011).

Politicizing financialization: urban movements

The urban scale is essential to financialization. Urban development absorbs surplus finance capital that has built up in recent decades due to global economic restructuring, but also becomes subject to crisis owing to speculative deals and rapid cycles of investment and disinvestment. The state plays a key role here through making the built environment amendable to investment, rescaling capital flows, and working to reinstate "normal" operation of capital markets after crisis (Ashton, 2011; Byrne, 2015; Gotham, 2006). IN so doing, it creates governance tensions between social welfare and economic growth, particularly at the urban scale. However this urban political economy of financialization is missing a sense of the urban as the site where struggles over the production of space emerge and seek to challenge capitalist urbanization (Lefebvre, 1996). As both David Harvey (2012, xiii) and Henri Lefebvre (1996) insist, “revolutionary movements frequently if not always assume an urban dimension” and residents (not only workers) are central in such movements. Urban space is properly understood as the nexus for financialization and radical movements.

The impacts of the 2008 financial crisis have indeed sparked struggles disputing the enclosure of urban space by financial processes and imperatives, and inquiries into such movements by social scientists. Scholarship on financialization engaging on-the-ground urban struggles stands to open up important areas of political geographic understanding. However, this body of work remains quite small, suggesting an area of inquiry ripe for development. Popular movements focused on financialization are also rare (cf. Christophers & Niedt, 2016 on the lack of a widespread popular movement around the US foreclosure crisis), local, and thus far largely limited to the geographies where the systemic housing-financial crises was most severe, namely the US, Spain, and Ireland. Indeed some of the very dynamics that characterize financialization—particularly that of distance--pose a significant challenge to such efforts (Aalbers, 2012; Clapp, 2014; Fields, 2015). As Jennifer Clapp (2014) argues, financialization introduces more, and more varied, intermediaries to supply chains, while the production of financial instruments such as derivatives entails several layers of abstraction from underlying material goods. While Clapp is concerned with financialization and global food politics, the notion of distance she develops is instructive for thinking about financialization and urban struggles.

Distance operates in the financialization of the urban landscape in a number of ways. First, we might consider how the globalization of capital markets and real estate investment allows actors working from afar to have a stake in local contexts. This may be observed in the rise of North American private equity and hedge funds buying up distressed real estate in Barcelona and Dublin in the aftermath of the 2008 crisis (Beswick et al., 2016) or consortiums of international investment firms and sovereign wealth funds taking control of public infrastructure in Chicago (Ashton, Doussard, & Weber, 2016). Cross-national real estate and infrastructure investment allows powerful actors to be "invisible" to those on the ground (Clapp, 2014, p. 800), complicating efforts to confront specific actors and hold them accountable for the consequences of their actions (Fields, 2015; Garcia Lamarca & Kaika, 2016).

We can also consider distance in terms of how financialization expands the role for middlemen (Clapp, 2014). For example, Wyly and colleagues (2009) comment on how the dynamics of class monopoly rent[4] have transcended the familiar local figures of slum landlords and payday lenders to include "transnational banks, investment houses and hedge funds, and worldwide MBS [mortgage-backed securities] investors" (p. 338). The resulting interruption of the "ethical and economic interdependencies" inhering in closed, place-bound networks of capital means "it is entirely possible for abusive subprime lending to flourish even when all of the individual actors involved have honorable intentions of providing fair treatment to the customers they deal with *directly*" (Wyly et al., 2009, p. 338, emphasis mine). Distance in this sense operates through blurring, dispersing, and rescaling lines of responsibility and allowing for the exploitation of information asymmetries between

[4] The legally codified, state-supported market power of property owners and the economic returns resulting from their claims on assets (Harvey, 1974; Wyly, Moos, Hammel, & Kabahizi, 2009).

intermediaries (Clapp, 2014; Wyly et al., 2009). This operation of distance may represent an obstacle to the articulation of grievances and formulation of demands by urban movements.

The dynamic of distance within financialization prompts a consideration of the spatialities of power along the lines of Allen's topological approach (Allen, 2004, 2011). Allen emphasizes how the "spatial reworkings of leverage and authority" call for a view of power as neither centralized nor wholly networked and deterritorialized, as both conceptions lack room for political agency (Allen, 2004, 2011, p. 285,). Rather than being measurable in terms of fixed distances and locations, power and political agency are better understood in terms of how shifting webs of mediated relationships allow "those physically distant in space to be, somewhat paradoxically, both absent and present in terms of their authority and influence" (Allen, 2011, p. 289). These insights capture quite well how the dynamic of distance operates in financialization. But furthermore, Allen's topological perspective suggests that it is not only those enacting financialization who can draw on capabilities of proximity and reach: urban movements might also seek to dissolve distance (or place themselves beyond reach), making their presence felt within chains of financial intermediaries or the corporate headquarters of foreign investors.

The potential for finance to serve as a political terrain for grassroots efforts has in fact been actualized in several settings. Take for example eminent domain[5] plans targeting mortgage debt being pursued by coalitions of progressive local government and social movement groups in majority-minority US suburbs (Niedt and Christophers, 2016). Such plans seek to deploy local eminent domain powers to seize "underwater" [6] mortgages at a discount from banks and investors, then re-price them in line with property values. As Niedt and

[5] Eminent domain allows government to enact compulsory purchase of private assets for public use or benefit.
[6] Loans in negative equity, i.e. where the loan amount outweighs the value of the asset.

Christophers (2016) argue, eminent domain plans declare "local jurisdiction over mortgage debt that is presumed to be 'delocalized' as it churns through the circuits of finance capital" (p. 13). They collapse the chain of financial intermediaries holding various claims on mortgage debt, pulling apparently delocalized debts back down to the suburban communities suffering the effects of the foreclosure crisis. Moreover they circumvent a federal government that has failed to substantially alter a relationship between risk and value in which risks are borne by homeowners and communities while financial interest capture value (Niedt and Christophers, 2016). Despite facing substantial legal and political challenges to implementation (and indeed ontological challenges for real estate investment), this novel use of eminent domain demonstrates the role topological tactics can play in urban struggles around financialization.

When considering the possibility to use such tactics however, it is important to consider how the complexity and abstraction involved in financialization contribute to its dynamic of distance (cf. Clapp, 2014 on how the production of financial derivatives involves abstraction from underlying material goods). Here we should be mindful of how these properties, which are frequently deployed by agents of finance (not to mention academic and popular commentary), may serve to redirect critical attention away from the on-the-ground impacts of financialization (La Berge, 2014; Pike & Pollard, 2010). Representing finance as so complex and abstract to be "beyond our collective cognitive, linguistic, and epistemological reach" serves to obfuscate it and shield it from contestation (La Berge, 2014, p. 93). It follows that a crucial aspect of politicizing financialization entails making it knowable so as to trace the interrelationships between the abstract and the concrete.

Politicizing financialization in this way creates new challenges for activists and campaigners

(Clapp, 2014; Fields, 2015; Teresa, 2016). One reason is that the organizations behind urban movements are rooted in their own histories and those of the urban contexts with which they engage; these circumstances do not necessarily impart the capability to contend with financialization. For example, in the case of US cities many present-day community organizations emerged in response to “disinvestment and mortgage market exclusion” rather than “economic expansion and flows of capital into property markets” (Teresa, 2016, p. 476). These circumstances may require gaining new technical knowledge and familiarity with a new set of actors (Clapp, 2014; Fields, 2015). Similarly, the rapid pace at which financial strategies, tactics, and instruments are reinvented and relocated geographically (what Max Haiven, 2013 discusses in terms of liquidity) places serious demands on urban struggles. Here research can be a critical tool, just as documenting the relationship between capital flows (or lack thereof) and minority urban neighborhoods aided struggles over disinvestment in the US in the 1960s and 1970s (Bush & Immergluck, 2003; Littrell & Brooks, 2010). The uncertainty at the heart of efforts to use financial engineering to unlock value ‘trapped’ within urban real estate leaves such efforts open to contestation when their ambitions are not realized (Teresa, 2016). At these moments, the relationship between the abstractions of finance and the concreteness of urban places and everyday lives becomes most apparent, creating an opportunity to document the effects of speculative investments on the urban landscape and its social actors.

What is variously termed activist research, action research, or militant research—all referring in some way to inquiry aimed at changing the world, often as part of a wider social movement (Halvorsen, 2015), can constitute a topological tactic in struggles around financialization. The case of a wave of highly leveraged private equity buyouts of affordable rental buildings in New York City undertaken during the mid-2000s real estate boom demonstrates how the failure of speculative investments creates space to make finance knowable. When the 2008 financial crisis led private equity owners to default on unsustainable mortgage obligations, properties deteriorated rapidly, exposing tenants to hazardous living conditions (Fields, in press; Teresa, 2016). Community organizations mobilized public data on housing code violations and property liens to develop a new indicator of housing distress (Teresa, 2016). Activists used this data tool to identify overleveraged buildings experiencing the highest levels of distress and the bank financing the lion's share of speculative deals, shaping a subsequent organizing campaign against the bank and helping get its rating downgraded by financial supervisors (Fields, 2015; Teresa, 2016). The ways in which everyday life is enmeshed with finance via mortgages, rental contracts, and other mechanisms is a powerful site for critical inquiry by urban movements. Such alternative knowledge production can collapse the distance between financial techniques that abstract from local places and the concrete impacts of such practices in the everyday lives of urban residents. Furthermore, it can serve as a means for locally-based movements to coordinate their efforts, as seen in a series of global days of action organized in 2015 by housing activists in the US and Spain against private equity firm Blackstone, which has been active in acquiring distressed real estate in both countries since the crisis (Beswick et al., 2016).

The breakdown of speculative investments exposes the fiction of neatly separating financial value from the use values with which it is enmeshed (Christophers, 2010). As O'Callaghan and colleagues (forthcoming) argue, moments of crisis rupture dominant relations of private property, allowing for their (partial) renegotiation. The 2008 crisis thus opened space for more radical struggles with financialization, or what García Lamarca (in press) terms "insurgent practices": collective action aiming to "enact equality and disrupt the dominant production of space" (p. 5). In Ireland, the large amounts of vacant space left in Dublin after the property crash, combined with growing levels of homelessness, rapidly rising rents, and a lack of social housing led grassroots groups to position vacancy as a "site of antagonism" (O'Callaghan et al., forthcoming, p. 18). The way the crisis troubled the link between real estate and finance allowed activists to draw on "the 'waste' of the property bubble to create alternative social projects" with strategies including publicly opening vacant buildings to homeless families (ibid, p. 21). Likewise, the platform of mortgage-affected people (PAH) in Spain and City Life/Vida Urbana in Boston, among other groups, have undertaken insurgent practices of eviction blockades and occupation of vacant, bank-owned housing, aiming to prioritize the social value of urban real estate over its financial character (Di Feliciantonio, 2016; Garcia Lamarca, in press). Such insurgent practices expose the contradictions characterizing the urban landscape in the aftermath of the financial crisis while attempting to make alternatives to financialization a reality. They demonstrate that although the dominant approach is to treat property as a financial asset, collective action can socially produce new spatial possibilities (Di Feliciantonio, 2016; García Lamarca, in press).

Moments when the real estate-finance link is unsettled are windows of opportunity for urban struggles with financialization. But we must acknowledge that activists and grassroots movements are not alone in using crisis as an opportunity to reimagine urban space (O'Callaghan et al., forthcoming). Indeed, as Teresa (2016) notes, "space of capital's rupture are increasingly filled by the distressed debt market that profits from such failures" (p. 481). Thus in many of the places hit hardest by the crisis-prone nature of financialized urbanization, global financial actors have acquired distressed loans and real estate, thereby reinstating financial rent extraction (Beswick et al., 2016) and threatening the advances made by insurgent practices like those seen in Ireland and Spain.

Toward an agenda for inquiry on financialization and urban struggles

As scholars in geography, urban studies, and cognate disciplines have brought financialization into the mainstream of social scientific inquiry in recent years, they have increasingly drawn attention to how the post-1970s accumulation regime revolving around finance has had profound implications for the production of urban space. While finance and urbanization are always interdependent due to the need for credit in order to undertake large, long-turnover development projects, an explosion of finance capital, the globalization of capital markets, and the ability to treat real estate as a liquid and tradeable commodity have made the role of urban space in absorbing surplus capital increasingly important. However, finance capital's 'hunt for yield' via the urban process has a tendency to become speculative, pumping investment into (re)development and inflating property values to unsustainable levels, resulting in crashes that devalue property and destabilize everyday urban life. Indeed, much of the world experienced just such a finance-led real estate boom from 2001 to 2006, and when US property prices stopped climbing, the interconnectedness of financial markets through short-term interbank lending and the circulation of mortgage-backed financial instruments meant the fallout was amplified and felt globally.

The urban impacts of the crisis—dispossession, evictions, increasing homelessness—are inextricable from the rise of a finance-led accumulation in which property is seen more as an opportunity for financial rent extraction than as shelter and the site of social reproduction. The contradictions exposed by the crisis have given rise to a range of efforts aimed at contesting the financialization of housing, particularly in Ireland, Spain, and the US, where the housing-financial crisis was most systemic and severe. In turn researchers have begun to attend to such efforts, bringing a much-needed perspective on how financialization may be politicized in progressive or even radical ways.

Reviewing this emerging body of literature, this essay found that a distinguishing characteristic of urban struggles with financialization is how they contend with the dynamic of distance that allows financial actors to operate in urban space from afar and shield themselves from the on-the-ground consequences of their actions. A key aspect of contesting financialization is thus collapsing this distance, as eminent domain plans targeting mortgages in negative equity have done (Christophers & Niedt, 2016), and cutting through abstraction and complexity to make finance knowable, for example by undertaking militant research connecting financial accumulation to its impacts on the urban landscape (Teresa, 2016). Moments of crisis have also afforded radical reimaginings of the production of space through, for example, occupying vacant and bank-owned properties (Di Feliciantonio, 2016; Garcia Lamarca, in press; O'Callaghan et al., forthcoming). Yet despite the severity of the crisis and its aftermath, we are witnessing the reformulation of the link between financial accumulation and housing as investors acquire nonperforming loans, repossessed homes, and a range of other distressed real estate assets in places exposed to the most intense fallout of the property-finance crash (Beswick et al., 2016; Fields, Kohli, & Schafran, 2016).

This development raises a critical set of interrelated issues for urban struggles with financialization and inquiry focused on such struggles. First, how to critically evaluate the "success" or "effectiveness" of efforts to contest financialization. Considering that financial accumulation predicated on housing is proceeding, one might judge these efforts as falling short of the mark. The second, related issue is the potential for such efforts to be dismissed as reactive, kicking in when it is too late, i.e. in the event of a crisis rather than working to avert it. But both interpretations neglect, as García Lamarca (in press) argues, how insurgent practices are “not only reactive and resistance-based, but also active and propositional” because they allow “previously unforeseen paths and possibilities [to] emerge” (p. 6).

Here we might look to possibilities including how collective action—such as that occurring in and through urban struggles with financialization—contributes to the formation of new political subjectivities (Garcia Lamarca, in press; Rutland, 2013). Indeed, just as financialization depends on certain transformations in subjectivity (Haiven, 2014), processes of political subjectivation have been crucial to post-2008 housing struggles. Collective spaces of assembly have allowed those struggling with dispossession to shift from individualized feelings of guilt and shame to understanding their problem as a collective, structural one, a shift motivating collective action through insurgent housing practices (García Lamarca, in press). Newly politicized subjects may also expand and sustain movements and take up new struggles as conditions change; for example members of the PAH are actively seeking ways to confront post-crisis financialization in Spain (Font & Garcia, 2015). Following Rutland (2013), we can see (political) subjects as “made and remade along with contexts”, thus “the making of *subject*s is correspondingly entangled with power” (p. 1000, emphasis in original). As the financialization of housing (and indeed urban space more broadly) continues apace then, a productive direction for geographic inquiry is the study of the dynamic and power-laden relationship between this process, the (re)constitution of activist-subjects, and urban movements.

Finally, the circumscribed geographic reach of this essay should be acknowledged. The urban struggles discussed are all situated in the global north, in places the 2008 financial crisis hit housing markets hardest. By no means is the financialization of urban space confined to this geography. The inherent contradictions of capitalism necessitating the spatial fix are of course generalized and the overaccumulation of finance capital in recent decades global, with its absorption into the built environment creating or improving landscapes for accumulation both within and beyond the global north (Harvey, 1985; Kutz, 2016; Soederberg, 2015). Thus financialization affects a wide range of geographies in context-dependent ways (cf. Butcher, 2016 on transnational private equity groups investing in affordable housing in South Africa; Sanfelici & Halbert, 2016 on the role of finance capital in real estate development in Brazil; Soederberg, 2015 on mortgage securitization in Mexico). As Rolnik (2013) comments, "the takeover of the housing sector by finance has been a massive and prevailing trend" not only in developed economies but also postsocialist states, South Africa, India, China, Thailand, and much of Latin America. This trend points to the need to expand critical inquiry on urban struggles with financialization beyond the global north and to better understand how the participation of development aid in financialization (Mawdsley, 2016) may shape such struggles in the global south.

Whereas research on financialization and the urban built environment has expanded dramatically in the wake of the 2008 financial crisis, only a very small subset of this work looks at how residents, activists, and movements seek to contend with financialization and its impacts. However, a body of literature on efforts to contest the financialization of urban space, particularly of housing, is emerging, offering insight on politically and conceptually fruitful activist strategies. Investigating the formation of political subjectivities in relation to financialization and examining how struggles are taking shape beyond the global north will deepen and expand this vein of research in exciting new directions.

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Neoliberalismo reciente: la financialización de la vivienda propia
Y el derecho a la vivienda[1]

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Resumen

Durante estas últimas décadas hemos sido testigos de un global giro en U de las prevalentes agendas de vivienda y política urbana esparcidas por el mundo por las fuerzas de la globalización y del neoliberalismo. El nuevo paradigma se basó, principalmente, en la retirada de los Estados del sector de la vivienda, y de la implementación de políticas diseñadas para crear modelos más fuertes y amplios de financiación de la vivienda con un enfoque de mercado. La mercantilización de la vivienda, junto con la aumentada utilización de ésta como inversión dentro de un mercado financiero globalizado, ha afectado profundamente al disfrute del derecho a la vivienda adecuada. Tomando el manifiesto del Banco Mundial de 1993 como un punto de partida, y la crisis del *subprime* como el primer gran punto de ignición internacional, este ensayo rastrea algunos elementos claves del enfoque del neoliberalismo

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para la vivienda y sus impactos en el disfrute del derecho a la vivienda en diferentes contextos y tiempos. La reforma de la política de vivienda –con todos sus componentes de tenencia, propiedad privada y el amarre de compromisos financieros–ha sido central en las estrategias políticas e ideológicas a través de las cuales se mantiene el dominio del neoliberalismo. De la misma manera, la crisis (y sus orígenes en el mercado de la vivienda) refleja la inhabilidad de los mecanismos del mercado para proveer vivienda adecuada y accesible para todos.

Prefacio:

El pensamiento de Raquel Rolnik en el marco del Séptimo Foro Urbano Mundial en Medellín

Raquel Rolnik no solamente será un foco de atención en el foro, sino que también tendrá un lugar central en la revista *Bitácora* con su artículo titulado “Neoliberalismo reciente: la financialización de la vivienda propia y el derecho a la vivienda”en la traducción al español. Desde el concepto de esta nueva palabra explica asuntos pertinentes para el debate del foro y para el momento y lugar en que se escenifica. Raquel Rolnik no solamente plantea el marco abstracto del fenómeno, sino que permanentemente, en su artículo, lo ilustra y relaciona a escenarios territoriales específicos de diferentes escalas y complejidades, en donde caben todos los casos de posible estudio. Recorre el continuum entre lo global y local, entendiéndolo y exponiéndolo como un solo sistema.

Con la pertinencia de su visita se esperan aportes y reafirmaciones importantes para las instituciones y organizaciones internacionales, y para la puesta en común con la ciudad y el país. Cuando juega con la expresión “the West and therest” (Occidente y el resto), propone una manera de catalogar al mundo donde diferentes variables operarán en distintas categorías pero dentro de un mismo universo. En una de esas particularidades, en Colombia, el gerente del Banco Emisor ha declarado recientemente que los precios de la vivienda en este país se encuentran en su punto más alto en las series históricas registradas y que la cartera hipotecaria está creciendo por encima de la economía, pero descarta de plano que esto implique una burbuja inmobiliaria. La meteorología de la economía espera pronosticar el tiempo para la vivienda. En ese sistema caótico la visión metódica, cuidadosa, estructural e integralmente organizada de Raquel Rolnik aporta dedicadamente al conocimiento de algunas posibles trayectorias de las naves de vela de este sector.

Un estudio publicado por el Banco de la República asegura que los precios de la vivienda son predecibles, y que la razón del aumento en los precios se debe a la escasez de suelo. El *Tiempo.com*, en febrero de este año, informó cómo el estudio concluye que **"se requieren medidas estructurales que permitan liberar suelo urbanizable, especialmente en las grandes ciudades**, lo cual exige esfuerzos conjuntos de las autoridades nacionales y locales". Coincide esto con el momento en el cual en la ciudad sede del Séptimo Foro Urbano Mundial las fuerzas neoliberales a través de la Cámara Local de la Construcción abogan por destrabar y liberar el acceso al suelo para la inversión y el mercado (erradicar el aeropuerto regional insertado en el perímetro urbano para aprovechar a cabalidad el cono de aproximación de despegue y aterrizaje con probables torres de gran altura). El neoliberalismo global, el mismo de la financialización de la vivienda, que es la arena de su economía, opera simultáneamente en la gran escala y en la pequeña escala, como un sistema totalizador.

En un marco más amplio e integral, Raquel Rolnik, como importante crítica, arquitecta, planificadora y gestora urbana, a través de su artículoexplora, estudia y explica en diferentes profundidades el fenómeno. En una perspectiva de una década nos presenta el auge del*subprime*, que finalmente corresponde a los préstamos hipotecarios de alto riesgo (por la desconfiguración misma de las garantías, porque si bien el mercado libre tiene su orden también tiene la capacidad de "desordenar" la tradición a través de la innovación ingresando al espacio del riesgo). Este riesgo ha producido un calentamiento económico, del cual se tiene la expectativa de que afecte el "West and therest".

La globalización ha llevado al mundo a pensarse como un conjunto de sistemas universales de funcionamiento de la economía y por ende de su devenir. Cada región o país, en su particularidad, recibe los impactos de la evolución de la economía en el contexto de su propia escala y realidad construida históricamente.

En el marco del WUF7, con su interés en el tema de la equidad urbana en el desarrollo, resultan imprescindibles las referencias a la arquitecta Rolnik.

> La creencia de que los mercados podrían regular la asignación de la vivienda como el más racional de los medios de la distribución del recurso, combinado con productos experimentales "creativos" financieros sostenidos por la vivienda, llevó al diseño de políticas públicas hacia el abandono del significado conceptual de la vivienda como un bien social, como parte de lo común acordado por una sociedad para compartir y proveer a aquellos con menos recursos: un medio para distribuir la riqueza.

También nos presenta la falacia de que el Estado se ausentó del escenario de la provisión de vivienda, entendida como una de sus responsabilidades. Asumiendo que la desregulación alivianaría sus cargas y que la privatización de la propiedad por otra parte autorregularía la oferta y la demanda, el Estado nunca se ausentó. Las políticas y estrategias en el campo de la vivienda, desde el mismo Estado, crearon las condiciones para la mercantilización de ésta, la socialización del crédito y la crisis envolvente, la cual aún hoy persiste y se manifiesta de manera conocida por todo el mundo a través de los indignados al ver esfumarse el disfrute prometido de sus derechos.

Buen momento el del Foro para reafirmar, como dice Rolnik, lo público de los asuntos de la gobernanza, la justicia social y las políticas de Estado. Buen momento para revisar la dependencia misma de los gobiernos del mundo en el modelo neoliberal, cuando parece que la economía no sirve a la construcción del proyecto moderno, a cuyos principios el pensamiento humano no ha podido renunciar aunque esta ideología de mercantilización se imponga en un mundo paralelo pero subyugante.

Introducción

Millones de endeudados y embargados propietarios de vivienda víctimas delya decenal boom del crédito del *subprime*; vecindarios vacíos, ciudadesdespobladas y nuevos desarrollos en quiebra, manifestantes ocupando por meses las calles y los espacios públicos y una huelga de hambre llevada a cabo por dueños que han sido privados de sus apartamentos prometidos, son las escenasque se dan en diferentes ciudades y regiones al final de la primera década del siglo XXI.[2]Una crisis del mercado hipotecario estadounidense se convirtió en un envolvente crac crediticio que rápidamente se diseminó por todo el mundo. No es sorprendente que el primer sector gravemente impactado fuera el de la vivienda.Alimentado por fondos de pensiones, valores, bienes privados, fondos de protección y otras clases de "mercancía ficticia", la vivienda misma se convirtió en una mercancía falsa cuando pasó a la finanza (Fix, 2011; Rossi, 2013, en esta misma publicación [Rolnik,2013]).La intensidad de este cambio se puede describir como un movimiento que trasformó una "bella durmiente"—un bien poseído por medios tradicionales—en un "fantástico ballet" donde los bienes cambian de manos a través de rápidas y constantes transacciones (Zivkovic, 2006, citado en Carvalho, 2011:155).La vivienda representó una de las más dinámicas fronteras delneoliberalismo reciente durante las décadas del boom económico, y al inicio de la crisis, ella misma se convirtió en una de las principales estrategias keynesianaspara la recuperación.De acuerdocon Aalbers (2013:en esta publicación [Rolnik, 2013]):"el neoliberalismo es así: puede adelantar su agenda, de ambas maneras, durante los booms económicos y durante loscolapsos económicos".

Respaldado por la fuerza política, de la ideologíade la vivienda propia (Ronald, 2008), profundamente enraizada en algunas sociedades y recientemente adoptada por otras, y por la "socialización del crédito", con su resultante inclusión de consumidores de clase media y de bajos ingresos en los circuitos financieros, el relevo del sector de la vivienda por la finanza

**Este ensayo es una versión revisada, actualizada y editada de un reporte temático sobre la crisis financiera y el derecho a la vivienda adecuada presentado por la autora como Relatora Especial para las Naciones Unidasanteel Consejo de Derechos Humanos de esa misma organización, en marzo de 2009.El reporte se escribió con la ayuda de BahramGhazi, quien para la época era el asistente del mandato de vivienda de la Oficina del Alto Comisionado para los Derechos Humanos

[2] Las escenas descritas corresponden a Estados Unidos, España, Méjico y Kazakstán respectivamente, todos ellos visitados por la autora como Relatora Especial en misión oficial o en viaje de trabajo durante los años2009 y 2011.

global abrió una nueva frontera a la acumulación de capital, permitiendo la libre circulación de valores, virtualmente, a lolargo y ancho de todo el suelo urbano (Harvey, 1989; Rossi, 2013).Este movimiento ha resultado en un cambio sendero-dependiente (path-dependent)del paradigma de la vivienda en casi cada Estado-nación. Este cambio, iniciado por Wall Streetylos políticos neoliberales estadounidenses, transformó el significado y el rol económico de la vivienda que ganó impulso con la caída del Muro de Berlín y la consecuente hegemonía de la ideología del mercado libre.Ya fuera libremente decidido por gobiernos, o impuesto por las instituciones financieras internacionalesy otros actores, como condiciones parapréstamos,el nuevo paradigma estaba principalmente basado en la implementación de políticas diseñadas para crear más fuertes y grandes mercados financieros basados en la vivienda,para incluir a consumidores de ingreso mediano y bajos ingresos.

Hace veinte años, un influyente informe del Banco Mundial (1993),"Housing;EnablingMarketstoWork", resumió el nuevo pensamiento sobre las políticas de vivienda: no solamentecontenía argumentos extensos sobre qué tan importante podría ser para la economía, sino que también contenía directrices para los gobiernos sobre cómo diseñar, de la mejor manera, políticas adecuadas.Desde los años noventala financiación de la vivienda ha crecido dramáticamente en las economías desarrolladas.En los Estados Unidos,el Reino Unido,Dinamarca, Australiay Japón, los mercados hipotecarios residenciales, hoy, representan entre el 50% y el 100% del Producto Interno Bruto(PIB)(Schwart y Seabrooke, 2009: 16). Desde el anterior bloque soviético de Asia central y Europa del Este (v.g. Kazakstán y Ucrania) hasta Latinoamérica (v.g. Chile, Méjico, Perú y Brasil), y desde África (v.g. Suráfrica) hasta Asia (v.g. India, Tailandia, China), el cambio del sector de la vivienda ha sido masivo y con tendencia prevalente, tanto que la publicación del Banco Mundial,una década después,manifestó que"el genio (de la financiación de la vivienda) salió de la botella"(Buckley y Kalarickal, 2005:41).

La mercantilización de la vivienda, así como el uso incrementadode ésta como un bien de inversión, integrado al mercado financiero globalizado, ha afectado profundamente el disfrute del derecho a la vivienda en todo el mundo.La creencia de que los mercados podrían regular la asignación de la viviendacomo el más racional de los medios de la distribución del recurso, combinado conproductos experimentales "creativos" financierossostenidos por la vivienda, llevóaldiseño de políticas públicas hacia el abandono delsignificado conceptual de la vivienda como un bien social, como parte de lo común acordado por una sociedadpara compartir y proveer a aquellos con menos recursos: un medio para distribuir la riqueza. En la nueva economía política, que se centra en la vivienda como un medio para alcanzar la riqueza, es posible crear aún más valor según la velocidad y el número de transacciones que generen mayor apreciación. De la misma manera que en otros campos sociales, la vivienda ha sido afectada por el desmantelamiento a gran escala del bienestar institucional básico, y de la movilización de un rango de políticas que tienen la intención de extender la disciplina del mercado, la competencia y la mercantilización (Brenner y Thedore, 2002).En cada país, estas nuevas ideas confrontaron los sistemas nacionales de bienestar existentes y las coaliciones de vivienda.

En ninguna parte el cambio ha sido mayor que en las políticas residenciales y urbanas.Los gobiernos de todo el mundo pronto endosaron las prioridades neoliberales, tales como la restricción fiscal, el libre comercio, la reducción en los gastos de bienestar y la disminuciónde los gravámenes. En los países post-socialistas, en los Estados Unidos y la mayoría de los países europeos, la privatización de los complejos de vivienda pública, los drásticos cortes de las inversiones y fondospara vivienda más las reducciones de los programas de bienestar yde los subsidios al arriendo, estuvieron acompañados por la desregulación de los mercados financieros y de una nueva estrategia urbana para permitir la movilización del capital doméstico y el reciclaje del capital internacional.Estas nuevas tendencias también golpearon a los países menos desarrollados, donde los sistemas de bienestar residencial,o nunca han existido o fueron débiles y marginales en comparacióncon las necesidades de vivienda.La imposición del neoliberalismo ha sido altamente dispar,tanto social como geográficamente, y sus formas institucionales y sus consecuencias sociopolíticashan variado significativamente en todo el mundo, dependiendo de interacciones contextualmente específicas entre los paisajes regulatorios heredados y los proyectos re-estructurantes emergentesde orientación mercantil (Brenner y Thedore, 2002).Tomando el manifiesto del Banco Mundial (1993), como un punto de partida, y la crisis del *suprime* como suprimer granpunto de ignición internacional, este ensayorastrea algunos elementos claves de la aproximación neoliberal a la vivienda y su impacto en el disfrute del derecho a la vivienda en diferentes contextos y tiempos, discutiendo,en conclusión, la presente crisis y sus perspectivas.

El desmantelamiento de los sistemas de bienestar residencial en Occidente

Cuando la aguda miseria de los pobres urbanos empezó a ser reconocida por reformadoresdel siglo XXI en Europa y los Estados Unidos, los gobiernos activaron la asistencia a individuos y hogares a través de la provisión directa de vivienda (Harloe, 1995).Este tipo de intervención requirió de grandes instituciones burocráticas y grandes fondos públicos.En los Estados Unidos, por ejemplo, como resultado de la Gran Depresión, muchos propietarios de vivienda no pudieron costear sus pagos hipotecarios mensuales;esto provocó una ejecución hipotecaria a gran escala y el colapso de toda la industria de la vivienda.En respuesta, la administración Roosevelt estableció programas e instituciones que "pavimentaron el camino para el destacable aumento nacional de la propiedad sobre la vivienda desde los años 1940 a los de 1960 y estableció un nuevo sistema estable para la financiación de vivienda que se mantuvo sólido por más de cuarenta años" (Schwartz, 2006:19). Generosas suspensiones de gravámenes para los propietarios de vivienda representaronun subsidio declase para los más pudientes.Al mismo tiempo,el enfoque "New Deal" para la vivienda también incluyó la construcción de vivienda pública asequible para los pobres, y la creación de una autoridad de vivienda que subsidióbajos alquileres para las familias de bajos ingresos, y préstamos de largo plazo a las agencias locales que asumieron parte del costo de la construcción de la vivienda pública y su mantenimiento (Russo,2000).

Al final de la Segunda Guerra Mundial, un grandísimo número de personas en toda Europa quedaron sin techo.La reconstrucción de las ciudades y la construcción de la vivienda social generó un rápido crecimiento constante,por más de dos décadas,sostenido por una coalición política, en la cual las clases trabajadoras tuvieronun rol pivotante (Vroelant y Tutin, 2010).Para el final de los años setenta, la demanda por vivienda, en los países de Occidente, estaba relativamente establey los costos de los principales programas de vivienda pública continuaron su incremento.Con la desaceleración de la economía, al inicio de esta mismadécada, el costo del Estado de bienestar se vio como un excesivo drenaje de las finanzas públicas (Dodson, 2006). Convencidos de que debían disminuir su inversión social en bienes, los gobiernos empezaron a adaptar sus presupuestos y a disminuir la financiación de vivienda pública y de subsidios.Desde los años ochenta, Estados Unidos y muchos países europeos cortaron subsidios y fondos para la construcción yel mantenimiento de la vivienda pública/social,dirigiéndose(así) al deterioro físico del *stock* de la vivienda pública yde una provisión alternativa para los recién llegados al sistema (Czischke y Pittini, 2007; Rolnik, 2009;2010a).

La reducción del *stock* de la vivienda pública afectó adversamente la disponibilidad devivienda para los pobres, como también afectó la geografía social de las ciudades.Los vecindarios, con alta concentración de vivienda social, fueron discriminados, vistos como "dependientes" "perdedores" en una sociedad de emprendedores y consumidores. Predominaron entonces los proyectos para hogares de migrantes no blancos y aquellosde ingresos bajos se estigmatizaron, siendo asociados, frecuentemente, con tráfico de drogas, violencia y robo.Estas áreas y sus vecindades hicieron parte un mapa de *redlining*,una imaginaria cartografía de áreas "indeseables" compartida por agentes inmobiliarios, gobiernos locales y los medios, preparandoel camino paraque siguieran más tarde, legítimas intervenciones radicales (Aalbers, 2011). El deterioro y la consiguiente demolición de los apartamentos públicos produjeron una población todavía más vulnerable, la cual ya era, por lo demás, una población en desventaja; y entraban en una larga lista de espera mientras se hacinaban en condiciones de vivienda inadecuada, viendo afectados sus gastos en otras áreas, tales como alimento, ropa y salud (Rolnik, 2009).Esta fue una situación particularmente difícil si consideramos que: el crecimiento de la movilidad del capital,la intensificación de la competencia interlocal yel asalto al trabajo organizado–todo parte de una nueva agenda política– habíaincrementado el desempleo y reducidolos trabajos socialmente protegidos, especialmente en localidadesde tradición industrial. La reducción de la financiación y la estigmatización de la vivienda pública, como también la legislación adoptada para desregularlos mercados rentables, fueron esenciales en constituir la demanda material y simbólica por el nuevo producto a la espera de su lanzamiento: créditos para todos promoviendo la propiedad de la vivienda, un elemento central de una sociedad crecientemente individualizada y basada en el consumo (Saunders, 1990).La geografía del *redlining*se tradujoa un lenguaje de puntuación crediticia, generando lo que en el mercado hipotecario de los Estados Unidos se conoció como el préstamo *subprime* (Aalbers, 2011).

…y el "resto"

Luego de la crisis de la deuda de principios de los años ochenta, programas de restructuración neoliberal se extendieron globalmente a través de los esfuerzos de los Estados Unidos y otrosestadosmiembros del G7.Las instituciones de Bretton Woods, tales como el Fondo Monetario Internacional (FMI) y el Banco Mundial, entre otras, se movilizaron para extender el dominio de una globalización capitalista deforma política e ideológica del "tercer mundo" a través del ajuste estructural y de programas de austeridad fiscal (Brenner y Theodore,2002).En muchos países en desarrollo, las políticas neoliberales interactuaron con el patrón “tradicional” de entregade vivienda a los pobres –en contextos donde el impacto urbano del desarrollo industrial atraía migrantes de las áreas rurales a las ciudades, generando una fuerte demanda de vivienda–. La ausencia de políticas urbanas y de vivienda para afrontar tal demanda, combinada con la falta de políticas de suelo urbanizado para acoger esta nueva (mayormente pobre) población urbana, condujo a esquemas de vivienda muy precarios, generalmente marcados por una severa falta de infraestructura y de servicios básicos, y por un ambivalente estatus de la tenencia.

En la mayoría de los países en desarrollo, especialmente aquellos que sufrieronintensos procesos de urbanización, en los años sesenta y setenta (como Brasil y otros países latinoamericanos), los cortes en los gastos del Estado interrumpieron frágiles intentos de establecer sistemas de bienestar.En Latinoamérica, la construcción de vivienda pública fue impactada por severos cortes de gastos del Estado.Por ejemplo, entre 1990 y 2000, el déficit de vivienda en la región aumento de 38 millones a 52 millones de unidades de vivienda.El resultado en la mayoría de los casos fue un aumento de la pobreza y de arreglos informales, empeorando los estándares de vida de los pobres (MINURVI, 2005).Aunque los asentamientos informales han sido la solución de vivienda de la mayoría de la clase trabajadora durante décadas de rápida urbanización, fue en los años de 1990 y los primeros de la década del 2000, que las *favelas* condensaron la perversa convergencia de las precarias condiciones de vida y la violencia, generando distritos *redlined*en las ciudades del sur.Como se argumentó luego en este ensayo, la retórica–y la práctica– de la “regeneración” se dirigió hacia proyectos de vivienda social y hacia sus moradores en Occidente y a pobladores informalesen el resto.[3]

Países desarrollados y no desarrollados han representado un papel prominente en la creación y promoción de una habilitación del ambiente para atraer capital internacional e inversión extranjera (también para retener excedente doméstico).Este nuevo papel está lejos de ser uno pasivo; es un papel activo que crea condiciones, instituciones y regulaciones apuntadas a apoyar actividades financieras, así como también moviliza e invierte una gran cantidad de fondos públicos.Dada la importancia que la vivienda y el mercado inmobiliario tienen en el desarrollo del sector financiero, y el papel de las ciudades como la arena geográfica en donde

[3]Rolnik hace un juego de palabras con the West and therest [N. del T.].

tales estrategias se materializan y articulan, las siguientes secciones examinan algunas de estas estrategias.

Propiedad de la vivienda: primer paso– privatización

La transferencia de la responsabilidad de la provisión de vivienda al mercado ha estado acompañada dela visión de que la propiedad sobre la vivienda es la mejor opción para todos, y consecuentemente esta forma de tenencia ha ocupado un lugar central para casi todas las políticas de vivienda.En algunos países, el vender vivienda de propiedad pública a moradores se ha visto como una manera de aumentar el número de propietarios,mientras se disminuye el gasto del Estado (especialmente en los costos de mantenimiento).La privatización de la vivienda pública/social ha tomado varias formas, incluida la de venta de vivienda pública alquilada a través de las políticas de derecho a la compra por los moradores (en el Reino Unido), transferencias de propiedad a actores sin ánimo de lucro (en los Países Bajos y en el Reino Unido) y en algunos casos a actores maximizadores de utilidades (Alemania) (Murie*et al*., 2005 [s. d. e.];CzischkeyPittini, 2007).La privatización a gran escalade la vivienda pública también ha tenido lugar en países de transición de sus economías planificadas a economías de mercado.De acuerdo con el Banco Mundial, una considerable cantidad de propiedad residencialcambió de manos públicas aprivadas en tales países en transición (Buckley y Kalarickal, 2005).

Paralelamente a la reducción de la vivienda pública,la legislación sobre protección a moradores se revisó en algunos países desarrollados y en desarrollo.En Canadá, por ejemplo,en 1998 se rescindieron las leyes deprotección a moradores en Ontario, llevando esto a un aumento en los desahucios (WellesleyInstitute, 2008).En España, la liberalización de los contratos de arriendo iniciados en 1985 por el llamado Decreto Boyer continuó en 1994 con la Ley de Arrendamientos Urbanos, buscando facilitar que los propietarios alquilaran casas. De todas maneras, parece que esta medida no ha sido completamente productiva o que haya incentivado el mercado del arrendamiento, y que posiblementehaya afectado negativamente la seguridad de la tenencia (Observatorio Metropolitano, 2007).

Segundo paso - financiación de la propiedad de la vivienda

Los gobiernos promovieron el acceso de hogares con bajos ingresos a la propiedad sobre la vivienda, conun par de ideas: aumentar los activos de estos hogares y reducir su dependencia de la ayuda del gobierno.La liberalización del mercado hipotecario se promovió a través de un rango de desarrollos de políticas y de normativa.La Unión Europea, por ejemplo, decidió abolir los techos de los intereses, decidió relajarse en el control del crédito y acabó con las restriccionesde la entrada al mercado hipotecario (Ball, 2005).En Estados Unidos, la derogaciónen noviembre de 1999 de la Ley Glass-Steagall permitió que los bancos comerciales colaboraran con firmas corredoras de "servicio completo" y que participaran en la banca de inversión.Las finanzas de la vivienda basadas en el mercado se convirtieron en una creciente actividad importante del sector financiero y contribuyeron a la burbuja global del precio de los bienes raíces.La burbuja misma tuvo un gran impacto en la accesibilidad a la vivienda –ya que los bienes raíces y los arriendos subieron y se indexaron a través delas utilidades financieras globales en vez de las locales– así que más hogares tuvieron dificultades para acceder a vivienda adecuada en el mercado.

Por otra parte, los créditos se asignaron, por el sector privado, a hogares que bajo circunstancias normales no serían elegibles, lo cual generó lo que se conoció como préstamos *subprime*.Consecuentemente, no sólo se aumentó el riesgo para las compañías privadas, sino que los hogares con bajos ingresos se tornaron todavía más vulnerables a las fluctuaciones económicas y financieras.Mientras los precios continuaron subiendo, las expectativas de que estos aumentos fueran más grandes que la discrepancia entre los costos de la vivienda y los ingresos mantuvieron a todo el mundo contento. Uno de los efectos de la globalización sobre la vivienda se relaciona con la burbuja del precio, la cual, en 2002 motivó a *TheEconomist* a publicar sus índices globales del precio de la vivienda que cubrióveinte países: el valor total de la propiedad residencial en las economías desarrolladas aumentó en un estimado de US$ 20 billones (a más de US$60 billones) entre 2000 y 2003.Los cálculos de *TheEconomist* (2005) sugerían que los precios de la vivienda alcanzaron niveles record en relación a los ingresos en Australia, Francia, Irlanda, los Países Bajos, Nueva Zelandia, España, el Reino Unido y Estados Unidos. Como se esperaba, las alzas en los precios no podían continuar indefinidamente.La "mayor burbuja de la historia se venía venir, pero poco o nada hicieron los gobiernos para prevenir que se diera la crisis (*TheEconomist*, 2005).Tan pronto como los precios dejaron de subir, los problemas se empezaron a amontonar, resultando en la ejecución hipotecaria y la crisis financiera de la cual todavía somos testigos (Marcuse, 2008).

Este proceso ha sido particularmente grave en los países donde las sofisticadas matemáticas financieras han creado nuevos productos que produjeron una desconexión entre prestamistasy prestatarios, poniendo el mismo paquete de hipotecas y otras modalidades de fianzas.(Aalbers, 2008).En Estados Unidos, especialmente, las hipotecas *subprime*fueron promocionadas como una manera de expandir la propiedad sobre la vivienda a las familias de alto riesgo, a menudo de bajos ingresos.Esto ocurrió en el contexto de la abundancia de liquidez que indujo una rápida expansión del crédito en muchos países desarrollados como también en países emergentes (incluyendo los post-socialistas).Los mercados emergentes como Kazakstán, que extendió el uso de la *securitización*global, fueron severamente afectados por la crisis.En 2010, más de cuarenta mil prestatarios seguían esperando la finalización de sus apartamentos mientras las constructoras entraban en quiebra (Rolnik, 2011).En Estados Unidos,más de tres millones de ejecuciones hipotecarias empezaron en enero de 2011.En España, Estados Unidos y Kazakstán, migrantes y minorías estuvieron entre los más afectados por la crisis y la caída en picada financiera.Sin ninguna otra opción de acceso a vivienda asequible,tuvieron que dirigirse a planes crediticios, quedandoatrapados por hipotecas ejecutables y sin lugar adónde ir.

“Liberando valores del suelo” y las nuevas geografías de las ciudades

En un ambiente definido por los movimientos especulativos del capital financiero, de las estrategias de la implantación global de las corporaciones transnacionales, la competencia interlocal ylas restricciones fiscales, casi todos los gobiernos locales se han visto obligados a comprometerse con la competencia interespacial de corto plazo, movilizando instrumentos como el mercadeo de ciudad, zonas francas y empresariales, alianzas público-privadas y otros experimentos de política urbana (Brenner y Theodore, 2002).Entre estas estrategias, la creaciónde nuevas oportunidades para las inversiones especulativas en los mercados inmobiliarios del centro de la ciudad y la construcción de megaproyectos, con la intención de atraer corporaciones, han afectado inmensamente la asequibilidad a la vivienda en las ciudades. El resultado ha sido la creación de enclaves de clase mundial para los ricos y los turistas, donde aquellos que no pueden vivir en tales áreas son empujados a un tipo de vivienda inadecuada,en sitios con poco o nada de servicios básicos y a distancia de los recursos de subsistencia.En el contexto de esta incongruencia, entre necesidad y disponibilidad, y de la falta de asequibilidad, muchos son incapaces de competir por una vivienda adecuada debido a su ingreso. Más aún, la integración de los mercados financieros de la viviendadentro de los circuitos generalesfinancierossignifica quelos propietarios individuales están compitiendo con corporaciones multinacionales por una localización, generandoconsecuencias predecibles.El efecto centrifugo de la apreciación del suelo en aéreas metropolitanas tan diversas como Madrid, ciudad de Méjico, Estambul y Santiago,han llevado a nuevas formas de discriminaciónbasadas en el estatus económico o clase social (Observatorio Metropolitano, 2007).En Chile y Méjico se han promovidoestrategias de vivienda masiva privada accesible paraaquellos habitantes de menores ingresos, vía crédito subsidiado.En Estambul, un programa de "regeneración" ha desplazadoa la periferia a miles de pobladores informales de los vecindarios centralmente localizados (Özdemir, 2011).Se había pensado queel nuevo stock de vivienda sería parte de los esfuerzos por mejorar el acceso a la vivienda, ya que se diseñaron y justificaron políticas con el objeto de reducir la informalidad, mejorandola calidad de vida de las familias pobres al ayudarlesa trasladarse de asentamientos precarios a vivienda nueva. Sin embargo, estudios desarrollados desde mediados de la década de los noventasen Santiago (donde este tipo de política de vivienda fue pionera) revelan el resultado opuesto: la nueva vivienda social no fue parte de esta solución, y más bien creó un nuevo problema –guetos urbanos en las periferias metropolitanas– (Rodríguez y Sugraynes, 2008).

Otra dimensión de las estrategias urbanas fue el cambio de suelo público bien localizado por bienes de infraestructura, al vender o alincorporar este suelo a alianzas público privadas.En algunos países, el suelo donde se localizaba la vivienda pública se convirtió en un blanco preferido, ofreciendo esto una doble ventaja: la demolición de complejos de vivienda estigmatizados y la vinculación a operaciones rentables (¡para los inversionistas!) (Rolnik,2010a).En el caso de los países menos desarrollados, el blanco preferido fue el de los asentamientos informales localizados en áreas centrales, nuevamente, con una doble agenda:crear un escenario urbano donde los pobres no existen y a la vez, "destrabar" (o liberar) el valor del suelo (Peterson, 2009). En tales casos se dio lugar a masivos desalojos y desplazamiento de hogares y comunidades,escasamente acompañados por alternativas adecuadas de vivienda para los afectados.El *anfitrionazgo*de grandes eventos deportivos ha sido una de las estrategias adoptadas para promover la renovación urbana a gran escala, combinando la movilización de la inversión con el gran apoyo patriótico, habilitandoque las ciudadesy países generen un "estado de emergencia" local capaz de contrarrestar la resistencia y pasar de largo por las reglas y leyes existentes que protegen los derechos (Rolnik, 2010b).

Conclusión

¿La profunda crisis económica que ha barrido al mundo desde 2007 marca el final de los límites del neoliberalismo?Aparentemente (yen especial con relacióna los primeros meses de la debacleprecipitada por la crisis del *subprime*residencial estadounidenseen 2008), la crisis financiera se ha considerado como una expresión de un neoliberalismo "tóxico"como opuesto al teóricamente "saludable" (Smith, 2009:408). ¿Un mercado desreguladoque requiere la intervención del Estado para volverse a levantar, estaría en principio en contra de la doctrina liberal de un mercado completamente libre, verdad? ¡Falso!Tomando el ejemplo de la vivienda está muy claro que no solamente el Estado nunca estuvo ausente, sino, que más que ello, siempre jugó un papel central en el proceso de mercantilización y financialización.Los bancos públicos o semipúblicos en todo el mundo lentamente desviaron sus fondos públicos *desde aide-à-la-pierre*(subsidiando a los constructores de vivienda social pública o semipública)a*aide-à-la-personne*(subsidiando el consumo de vivienda producida por el mercado).A través de los privatizados fondos de pensión de los trabajadores, las IPOs(oferta pública de activos financieros) y la participación privada, el sector financiero tomó el control de la industria de la construcción, sometiendo la vieja lógica ingenieril del emprendimiento inmobiliario a los requerimientos financieros de los inversores (Fix, 2011).Es a través de la intervención de gran escala de los gobiernos centrales y locales que la masiva espoliación de los bienes de los pobres ha tenido lugar, abriendo nuevas fronteras –siendo el suelo hasta ahora parte de lo común (tales como vivienda pública y asentamientos informales tradicionales)– a los inversores financieros.

La respuesta predominante a la crisis fue la de inyectar más fondos públicos a la maquinaria financiera (Aalbers, 2013).Desde salvar bancos y compañías aseguradoras en Europa y Estados Unidos en 2008,hasta la nacionalización del sector de la construcción en quiebra en Kazakstán en 2009 y la masiva movilización de fondos públicos en Brasil en 2010 para subsidiar a las familias de bajos ingresos que compraban vivienda, el heterodoxo neoliberalismo reciente ha combinado doctrinas nuevas y viejas para mantener su ficticio capital andando.Esto no es una nueva crisis o una postcrisis; el caso de China (y otros países asiático orientales) ha mostrado cómo es posible combinar estados fuertes en desarrollo con prácticas e ideologías neoliberales(Park *et al*., 2003)

El simplehecho de que el catalizador de la crisis emergiera del mercado de la vivienda provee soporte para los argumentos expuestos por Brenner y Theodore(2002) y Harvey (2003) de que los espacios construidos no son arenas localizadas donde más amplios proyectos globales de reestructuración neoliberal se despliegan.La reforma a las políticas de vivienda –con todos sus componentes de propiedad de la vivienda, de propiedad privada y la obligatoriedad de los compromisos financieros– han sido centrales en las estrategias políticas e ideológicas a través de las cuales se mantiene el dominio del neoliberalismo.La crucial participación de los fondos de pensiones de los trabajadores en la financialización de la vivienda también fue central, en romper las coaliciones políticas que se soportaban el viejo Estado de Bienestar.

Por otro lado, la crisis y sus orígenes en el mercado de la vivienda reflejan la inhabilidad de los mecanismos de mercado para proveer una vivienda adecuada y asequible para todos.El resultado no es nada ficticio: individuos, familias y comunidadesviven sin techoo en condiciones precarias,y además en el daño real que se inflige a su cotidianidad. Mientras es verdad que los máspobres y que los más vulnerables han sido desposeídos, la crisis actual también ha empeorado los problemas de asequibilidad a la vivienda y al suelo, no solamente para los máspobres sino que también para los grupos de bajos ingresos y los crecientes gruposde medianos ingresos.La discrepancia entre alzas e ingresos y el alza de los precios de la vivienda y el arriendo es crucial en este contexto y lleva a que los hogares constantemente teman perder sus viviendas por incumplir pagos de arrendamientos o de hipoteca.Los temores se exacerban por la promoción de la inseguridad de la tenencia a través de los “imperativos para desarrollar un sistema de financiación de vivienda”, como el de reforzamiento del embargo a prestatarios hipotecarios y la reforma legislativa a la protección a moradores (Chiquier y Lea, 2009).

En el último par de años la reacción de los desposeídos, incluyendo aquellos en peligro de perder sus espacios de vida, ha variado en diferentes partes del mundo.¿Qué tienen en común la plaza Tahrir de El Cairo, el parque Zuccotti de Nueva York (para citar solamente algunos de los movimientos de “ocupación”)?Todos son reapropiaciones simbólicas de los espacios públicos, reafirmando la existencia de lo “público” con respecto a asuntos de gobernanza, justicia social y políticas (Marcuse, 2011).Demuestran los límites de concentrar el poder y la riquezaen manos del “uno porciento”, quienes controlan y se benefician de los flujos financieros.¿Tienen estos movimientos la capacidad de generar nuevas coaliciones políticas para cambiar los regímenes económicos?Aún es muy temprano para decir.

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POLICY GUIDELINE

The True Cost of Financialization: Housing, Human Rights, and Climate Change

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ABSTRACT: Local governments can play a pivotal role in the fight against the housing and climate crisis. Through their actions they can deliver healthy, happy, inclusive, sustainable cities, which ensure the protection of our environment. While this is clearly an essential enterprise, it will be no mean feat. To succeed will require a fundamental reimagination of our current housing system and the investment structures behind it.

Globally, housing has become increasingly financialized. Rather than being treated as a fundamental human right—a place where individuals, families, and communities can live in peace, security, and dignity—housing is often primarily valued as a vehicle for generating wealth (Farha, 2017).

Real estate investment has transformed into an extractive industry (Sassen, 2014). It incentivizes the construction of housing, generating greater levels of greenhouse gas emissions, while increasing rents and housing costs, all as a means of generating profit (Farha et al., 2022). To protect our societies and our planet, governments must create policy frameworks that affirm housing as a fundamental human right and centralize the environment, thereby shifting housing investment toward more regenerative practices that contribute to the provision of decent, affordable, and sustainable housing for all. This Policy Guidelines article explores three ways in which the financialization of housing is negatively impacting both the climate and the right to housing and provides policy recommendations based on The Shift Directives: From Financialized to Human Rights Based Housing, to support governments in developing human rights-based policy that can address the climate and housing crises.

KEYWORDS: climate crisis; financialization; housing; human rights; local governments

SUMMARY FOR POLICYMAKERS

This article provides key recommendations to enable local governments to address some of the ways in which financialization, climate change, and housing intersect to the detriment of their climate targets and human rights obligations.

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Through these recommendations, which are based in human rights, cities can begin to address the financialization of housing and deliver healthy, equitable, and sustainable housing for all. These recommendations include:

- addressing the financialization of housing by implementing a human rights-based housing framework that understands the social function of housing and its impact and dependence on a healthy environment;
- regulating institutional investment in housing and exercising greater control over housing systems to ensure construction, renovations, and refurbishment comply with the right to housing and a healthy environment;
- regulating vacant homes and short-term rentals as a means of optimizing the built environment, ensuring all available space is used to provide adequate housing for all;
- enacting effective tenant protections including for evictions, redevelopment, and participation and addressing housing precarity so vulnerable and marginalized populations experience increased resiliency in the face of climate change induced disasters.

Introduction

The world is in the middle of two existential and inextricably linked crises: the climate crisis, wherein human-driven global temperature increases threaten to make our planet unlivable, and the housing crisis, in which 1.8 billion people globally are living in situations of homelessness or grossly inadequate housing, often lacking basic services like water, sanitation, and electricity, facing unaffordable housing costs and energy poverty, or living in housing precarity (Special Rapporteur on the Right to Adequate Housing, 2020).

Both crises are being exacerbated by the financialization of housing, a deeply rooted economic system that values housing not for its human function—as a place for people to live in peace, security, and dignity—but for its ability to park, hide, grow, and leverage capital, generating vast amounts of wealth for a tiny few (Farha et al., 2022). As of 2020, housing was valued at USD 258.5 trillion, making it the most valuable asset class on earth (Tostevin, 2021).

The financialization of housing is deeply pervasive. It is also contributing to the degradation of the planet, driving the unsustainable construction of housing, sometimes just to be used as an instrument of investment, eating into the global carbon budget.[1] At the same time, financialization is fueling the housing crisis by treating tenants and dwellers as mere vehicles for income, extracting as much profit from their homes and lands as they can, driving unaffordability, evictions, and homelessness in cities across the world (see, for example, Farha, 2017; Hearne, 2017; Madden & Marcuse, 2016).

To start addressing these crises and turn toward regenerative investment structures that serve the common good, the financialization of housing must be challenged. Governments must assert the social function of housing and mitigate housing's impact on the environment by retaking control of their housing systems with the aim of producing human rights outcomes in line with global climate targets. This will require that governments uphold their obligation to realize the human right to housing.[2] This article aims to provide insight into some of the ways in which financialization is impacting the climate and housing crisis and provide concrete policy recommendations for local governments to begin to address these compounding crises.

The following Policy Guidelines article is based on the authors' experience engaging with stakeholders and policymakers on issues related to the financialization of housing, human rights, and climate change, including during Leilani Farha's tenure as United Nations Special Rapporteur on the Right to Adequate Housing. It commences with an overview of financialization and its interactions with the right to housing. This is followed by an exploration of the impact of financialization on the climate and concludes with a set of human rights-based policy recommendations, drawn from The Shift Directives: From Financialized to Human Rights Based Housing (hereafter referred to as The Shift Directives). The Shift Directives were written over the span of two years, receiving substantial input from key stakeholders including tenants, investors, government officials, and human rights experts. The Shift Directives are intended to assist governments to curb the financialization of housing. The recommendations set forth in this article should provide local governments with inspiration and ideas in their efforts to create safe, sustainable, and equitable housing systems that are in keeping with their climate targets and their human rights obligations.

It is impossible to capture the many ways in which financialization contributes to the climate and housing crisis within the confines of a policy article. Therefore, this article takes a macro approach, focusing on the interaction between financialization as a driver of construction increasing the global footprint of housing systems, the way in which it leads to the underuse of the built environment, and the way in which it undermines community resiliency in the face of climate change by weakening tenant protections. There are many other issues related to financialization and climate that have been explored by other authors, including the role that insurers play in high-risk areas (Taylor, 2020), municipal bond market assessments of climate risks and their impact on city finances (Cox, 2022), and the securitization of climate vulnerable home loans (Keenan & Bradt, 2020). It will be vital for decision-makers to also consider this scholarship and construct their policies accordingly.

The right to housing and the financialization of residential real estate

The financialization of housing has been a feature of global housing markets for decades. It was borne from the advent of neoliberalism in the late 1970s and was enabled to thrive through economic policies and market conditions, including the promotion of foreign investment and investment tools like mortgage-backed securities (Farha et al., 2022).[3] Financialization in its current form, however, was born in the wake of the 2008 global financial crisis, when institutional investors used the opportunity presented by predatory lending and the mortgage foreclosure crisis to use and create financial instruments to purchase thousands of distressed homes at deep discounts (Farha, 2017). In the last decade, the reach of investors in housing has grown to an unprecedented level, increasingly affecting housing intended for the most in need, such as social and affordable housing (Farha et al., 2022).

Within the same period, governments moved away from directly providing housing (Organisation for Economic Co-operation and Development [OECD], 2020) and enacted a series of laws and policies to incentivize private investment in housing. These measures, such as low-interest rates, quantitative easing policies, easy access to credit, preferential tax treatment, neighbourhood development schemes, and weak tenant protections, ultimately drove the financialization of housing (Farha et al., 2022). Furthermore, because of their reduced role in the direct provision of housing, governments became structurally dependent on private investors to drive housing systems with limited oversight. As a result, governments have been unable and unwilling to regulate housing investment in a manner that is compliant with human rights and responsive to the housing needs of low-income and marginalized groups (Farha et al., 2022) or to the climate, leading to the global housing crisis experienced today across cities.

The financialization of housing and climate change

To limit global warming to 1.5°C, governments are obliged to halve greenhouse gas emissions in the built environment by 2030 and achieve net zero by 2050 (United Nations Framework Convention on Climate Change [UNFCCC], 2021). However, when efforts are made to implement policies that target the decarbonization of housing they can often only afford to tinker at the margins. For example, despite expenditure in energy efficiency experiencing an unprecedented increase in 2021 to USD 237 billion, the energy savings effects of this additional spending are being far outweighed by increased construction and building intensity that, in the same time period, amounted to USD 5.8 trillion, making the decarbonization of the built environment by 2050 extremely unlikely (United Nations Environment Programme, 2022).

There are several ways in which financialization has had a negative impact on climate change and the right to housing. The following section will focus on three ways in which these forces manifest that, in the authors' experience, present some of the greatest challenges for governments to realize their human rights obligations and meet their climate targets. These include (a) an increase in the carbon footprint of cities; (b) the underuse of the existing built environment; and (c) weakened tenant protections that allow investors to profit from measures designed to protect the environment.

Increased carbon footprint in cities

In cities across the world, the financialization of housing has significantly contributed to the unaffordability of housing by driving rental prices up to generate greater income (Farha, 2017). In turn, this has created greater housing need among low-income populations who are priced out of their units or cannot afford available housing stock (Minton, 2017). Governments often respond to housing need through partnerships with private actors to build more housing on the belief in a trickle-down effect whereby an unregulated increase in supply will invariably meet demand.[4] In fact, what we have seen is that the unregulated creation of new housing supply, more often than not, simply feeds the beast, with investors often opting to construct what is profitable, rather than what is actually needed (Leijten & de Bel, 2020).[5] This simply furthers financialization, rarely addressing the housing needs of low-income communities and doing little to ensure housing affordability in the medium and long term.[6]

This vicious loop not only fuels the housing crisis, but it is contributing to the planet's destruction. The construction of housing carries obvious and significant emissions costs, representing, at times, almost 70% of total emissions for a home with a 60-year life cycle (Architects Climate Action Network, 2021). Embodied carbon emissions, or those emissions resulting from the materials and construction throughout the whole life cycle of a building, from now until 2050 will far outpace operational carbon emissions (Architects Climate Action Network, 2021). In the face of these realities, rather than prompting governments to scale back housing construction to focus on absolute need, governments seem content to support the creation of unnecessary higher-end housing—even if it is to stand vacant or is used to simply leverage more capital.[7]

Construction projects driven by a desire for excessive profits present a net loss for governments, communities, and the planet alike. They eat into the global carbon budget and undermine climate resilience and the right to housing, while failing to address the housing affordability crisis playing out in cities around the world. They push low-income and marginalized groups away from their social networks, into more affordable locations, or into inadequate housing or situations where they are overburdened by housing costs.[8]

Underuse of the built environment

Protecting the planet by limiting carbon emissions requires optimizing the use of existing buildings (C40, 2021). Financialization results in the opposite: the underuse of the built environment. For investors, residential real estate acquisition in global cities is easy and unaccountable (Sassen, 2001). It is possible to sit in an office in New York and electronically purchase residential real estate around the world that algorithms have identified as likely to be profitable (Fields, 2022).[9] When real estate is purchased as an investment, it is too often left underused, abandoned, or held for speculative purposes (Farha, 2017).

Short-term rentals also hinder efforts to maximize the housing stock. Homes that are turned into short-term tourist accommodation are typically entire properties that are withdrawn from the traditional housing stock to take advantage of the greater profitability of tourist accommodation. In some cities, these properties are heavily underutilized. In Toronto, Canada, Airbnb alone accounts for around 18,300 homes pulled from the traditional housing market, with 68% of these being entire properties. On average, each short-term rental in Toronto is utilized for only 69 nights per year (Insideairbnb, n.d.-a). In New York, a total of 41,533 homes have been converted into Airbnb properties, 56.8% of which are entire homes. The average yearly occupancy for these homes is just 78 nights (Insideairbnb, n.d.-b). In Paris, France, 84.9% of the 55,104 total Airbnb properties are entire homes. Average occupancy for homes on Airbnb in the city is only 64 nights per year (Insideairbnb, n.d.-c). In Athens, Greece, an entire low-income neighborhood has been wiped out by Airbnb so that tourists can enjoy uninterrupted views of the Acropolis (Sideris, 2018). Amsterdam found that in some neighborhoods, up to one in nine units were rented on Airbnb (Cox & Har, 2020).

Weak tenant protections, "green" renovations, and increased housing precarity

Weak tenant protections are a fundamental driver of housing financialization (see, for example, August, 2020).[10] Governments often compromise tenant protection to facilitate profit-making for owners of residential real estate (see Fields & Uffer, 2014; Rolnik, 2013), including through legislation or policies that permit: the raising of rents without limits or with tenant turnover[11] and no-fault evictions (see, Lima et al., 2022; Nationwide, 2022).[12] Exploiting weak protections, investors often look for older, undervalued properties that permit evictions or increased rents if substantial renovations are undertaken (see, for example, Farha, 2020). Often, the owners make cosmetic changes that meet the requirements but are unnecessary and are sometimes so disruptive that tenants are driven from their homes (Farha, 2020). Importantly, tenants often report that they are provided with little to no warning on impending improvements to their units, rent increases, or even when the building is to be demolished or sold to another owner (Farha et al., 2022).

Without increased protections, the drive to decarbonize existing housing may be exploited by institutional landlords to undertake green renovations so they can evict tenants and raise rents (United Nations Economic Commission for Europe & UN, 2021). This will drive inequality as high income households will be able to afford to live in healthier, sustainable homes while low-income households are pushed out (see Shokry et al., 2022), sometimes into low-quality housing with high energy costs (Sunderland & Cueto, 2022), adding to their vulnerability in the face of price shocks driven by global energy supplies, as well as extreme temperatures and natural disasters driven by climate change.

Financialization is driving low-income and marginalized tenants into the poorest quality housing or homelessness, while those already experiencing grossly inadequate housing or homelessness have little opportunity to access secure, adequate housing (Farha, 2017). In the face of increasingly severe and frequent climate change induced disasters, housing systems cannot afford to increase precarity.

Policy recommendations

The recommendations within The Shift Directives were created so that all levels of government could adapt and implement them. They have the potential to support local governments in meeting key policy objectives to address financialization and climate change including, inter alia, limiting unnecessary construction, optimizing their existing built environment for the creation of new supply (C40, 2021), and decarbonizing all existing units (World GBC, 2022). They may also provide guidance for effective policies to build resiliency in the face of climate change by safeguarding tenant households from suffering evictions and homelessness.

The Shift Directives seek to transform housing systems from ones that prioritize the extractive systems created by financialization to ones that are more regenerative and can address the twin crises in compliance with human rights, by:

- embracing equality and non-discrimination
- embedding sustainability
- focusing on the well-being of those most likely to suffer socio-economic disadvantage
- offering a universal set of standards
- being legally binding
- providing clarity and guidance on best practices
- holding actors in the housing sector accountable.

Shift to a human rights–based housing framework

Human rights are not lofty aspirations or moral choices. They are legally binding obligations that governments are required to adhere to in all their activities. Consequently, governments must build their housing systems around the right to housing, prioritizing actions that generate human rights outcomes. This requires them to

1. Enact legislation that recognizes and gives effect to the human right to adequate housing as established under international human rights law, thereby recognizing its interdependence and indivisibility with other human rights, in particular, the right to a healthy environment. This legislation should enable governments to hold private actors and investors accountable to the right to housing. All licensing, zoning, planning, and bylaw activity should be assessed and undertaken based on its capacity to realize the right to housing in a manner that is environmentally sustainable.[13]
2. Ensure accountability and coherence by developing and implementing human rights-based housing strategies (Farha, 2018), in consultation with relevant stakeholders, that include measurable goals and timelines for action. These strategies should ensure that any investment in housing contributes to affordable, secure, net zero housing and is meeting actual housing need in each community. They must also lay out a plan for decarbonization of their housing systems by 2030 in a manner that is compliant with human rights and embeds climate resiliency for low-income and marginalized groups.
3. Map housing need in the city, as well as its building stock and available land. Efforts to create supply should match demand, starting with those

experiencing the greatest level of vulnerability. Governments should not fall into the trap of increasing market-rate housing in the hopes that it will trickle-down and solve the affordable housing crisis (Ermgassen, 2022). All high-emission construction for luxury or commodified housing should be strictly avoided and increasing supply should be carried out, first and foremost, by utilizing and optimizing the existing built environment. New builds should be limited to net zero affordable and adequate housing.

Regulate institutional investment in housing to comply with the right to housing and a healthy environment

Institutional investment is impacting local governments' capacity to shape their housing systems due to their significant competitive advantage and access to large pools of long-term capital. Often, institutional investors benefit from tax policies that include exemptions or favorable rates for municipal property taxes, capital gains, and corporate income tax (Gabor & Kohl, 2022), with no conditionalities to ensure that their activity is compliant with human rights obligations and climate targets and results in better access to low-carbon or affordable housing.

While intergovernmental cooperation will be necessary to properly regulate institutional investment in housing, local governments should consider pursuing, or advocating to higher levels of government for, the following policy measures:

1. Requiring institutional investors to recognize and implement their human rights responsibilities consistent with the UN Guiding Principles on Business and Human Rights,[14] including as they relate to climate change and the right to a healthy environment.
2. Requiring a human rights and environmental impact assessment to be carried out for all licensing, permitting, or zoning agreements. These assessments must be made available for public scrutiny. Affected parties should have access to recourse mechanisms in cases where negative outcomes are indicated.
3. Reviewing and reforming all public benefits, licensing arrangements, and policies geared to providing preferential treatment to housing investors so that they benefit those actors who substantially contribute to the affordable housing stock in compliance with human rights affordability standards and climate targets.
4. Developing new funding models in partnership with housing agencies and institutional investors that are based in human rights principles and intended for the development of affordable, adequate, and sustainable housing.[15]
5. Strengthening the powers of local governments to take ownership of financialized housing that is not contributing to the affordable housing stock, particularly where it is left empty as a speculative investment. Such powers might include the power to expropriate property or the right of first refusal.

Regulate vacant homes and short-term rentals

Investment in properties as a form of speculation contributes to unaffordability and exclusionary housing markets, particularly when these are left empty. Similarly, investment in properties so they may be converted into short-term rentals has resulted in increased evictions, increased unaffordability, and decreased availability, as some developers focus on building units to attract investors in short-term rentals rather than those who could accommodate long-term tenants.

City governments must be given legislative and policy competence over vacant homes and short-term rentals within their jurisdiction, and should consider:

- imposing taxes on vacant homes or introducing mechanisms to render these homes part of their affordable housing stock. Taxes should be set at a rate that will prohibit speculation, while ensuring that any revenue generated be used to create a greater supply of social, affordable, sustainable housing;[16]
- adopting and enforcing legislation to only allow short-term rentals in principle residences and owner-occupied secondary residencies, like family vacation homes, rented for a period of less than 28 consecutive days in exchange for payment. Registration systems and fines must be in place to ensure compliance;
- declaring local bans on short-term rentals in over-touristed zones where local populations are being displaced;
- using incentives or expropriation to convert short-term units or vacant properties so that they may be converted into long-term, affordable housing.[17]

Enact effective tenant protections including for evictions, redevelopment, and participation

Increasing tenant protections are crucial to embed resiliency in the face of climate change, particularly for marginalized and vulnerable groups.

As a result, local governments should consider implementing or advocating for:

- increased tenant protections that, inter alia: prohibit no-fault evictions, as well as any eviction that will result in homelessness and prohibit the displacement of tenants where possible, and where impossible, ensure that tenants have the option to reacquire a similarly sized rental unit at the original site at a rent consistent with their original rental agreement;
- a policy to monitor and prohibit spurious upgrades, including those purportedly undertaken to mitigate climate change, which result in tenant evictions and relocations. With respect to general renovations, local governments should set percentage limits regarding costs that landlords can pass on to tenants through rent increases so that they are in accordance with the human rights definition of affordability;
- measures to prevent climate profiteering, wherein investors purchase non-resilient housing, undertake upgrades, and increase rents. These measures could take the form of subsidies, grants, and low-cost loans directly to residents to enable them to undertake climate upgrading works themselves.

- financial support for climate-change mitigation measures to prevent costs being passed down to tenants in cases where failure to act would result in unaffordability;
- the establishment of participatory processes to ensure tenants can meaningfully engage and influence decisions that affect them, including with respect to the sale or purchase of the property and modifications to the property, including to meet climate-related targets;
- the establishment of accountability mechanisms to ensure access to justice for breaches of tenant protections.

Conclusion

The impacts of the financialization of housing on climate change have, to date, not been widely explored through a human rights lens. However, it is a necessary endeavour to understand the forces preventing fulsome government action in addressing the existential crises of housing and climate. This article is a first step, but more innovative policies must be explored for all levels of government so that they may ensure a future for the planet that is sustainable, equitable, and just, and where the right to housing is enjoyed by all.

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Notes

1. Residential real estate affects biodiversity and nature in terms of land conversion and materials use, which can often contribute to climate change. Aside from the buildings themselves, the placement of homes, as well as the infrastructure that supports them, has implications for biodiversity loss, transportation, and water and waste management, all of which are inextricably linked with climate change. Moreover, in 2020, construction emissions were responsible for 10% of total global energy-related carbon dioxide emissions (United Nations Environment Programme, 2021, p. 41).
2. Housing is considered a fundamental human right because of the role it plays in human well-being and the foundation it provides for all other rights. The right to housing is found in the Universal Declaration of Human Rights, Article 11.1 of the International Covenants on Economic, Social, and Cultural Rights, and in many other international human rights treaties that have been ratified by most governments around the world. Through the Sustainable Development Goals, Target 11.1, governments have committed to ensuring adequate housing for all by 2030. Governments have also committed to limiting global warming by 1.5°C, according to the Paris Agreement. In order to reach this target, governments must decarbonize the built environment by 2050 (IPCC, 2019).
3. For a comprehensive history of the financialization of housing, see Madden and Marcuse (2016).
4. Examples of such policies are commonplace. In the United Kingdom (UK), the Conservative government was elected on a manifesto pledge to construct 300,000 new homes per year by the mid-2020s, with the private sector being seen as central to this plan (see Barton et al., 2022). In New Zealand, new builds are excluded from certain taxes and the government has set aside NZ$3.8 billion for infrastructure to promote house building (Labour, 2020). And in South Korea, the government has rolled back restrictions on speculation to increase supply ("Moon Vows," 2021).
5. In London, UK, developers must set aside units to be provided at affordable rates within their new developments. However, they often skirt these requirements by paying off their obligations or in some cases stating that affordable construction is no longer viable. In the Battersea Power Station development, 636 affordable homes were planned, accounting for around 15% of the 4,239 homes in the development. However, having commenced the project, the development company slashed the number of affordable homes it would deliver to just 386, stating that keeping the original number would have made the project financially unviable. It has been reported that at the time the decision was made to cut the number of affordable units being made available, the project was on course to make £1.8 billion in profit (see Lillywhite,

2022; Quinn & Turner, 2017). It should be noted that, since the development of the London Plan 2021, by Mayor Sadiq Khan, many developers now only pay off their affordable housing requirements in exceptional circumstances. The plan has led to affordable housing delivery as a percentage of total housing starts increasing and staying at record levels. This was triggered by the setting of a target for at least half of new homes in the city to be genuinely affordable, accompanying this with specific measures requiring, for example, using grants to boost affordable housing delivery, and requiring affordable housing providers with agreements with the Mayor to have at least 50% affordable housing across their stock (see https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf, p. 172).

6. In Canada, for example, the Bank of Canada stated in a report that home purchases by investors increased more during the pandemic than those by other homebuyers (Bank of Canada, 2022). The Bank of Montreal similarly shows that because condominiums are the preferred purchasing choice of investors, construction for condominiums has boomed despite a grave need for purpose-built rentals in many of the major Canadian cities (Maclean & Mathur, 2018).
7. In the United States (U.S.), in 2017, "Luxury, upscale buildings accounted for between 75 and 80 percent of the new supply" in the 150 largest cities (Olick, 2018). Due to restrictive zoning, developers are opting to use the limited space available in cities to build profitable, luxury units, rather than not so profitable affordable units. In 2020, across the U.S., only 65,000 units that were smaller than 1,400 square feet were constructed, compared to 400,000 units constructed annually in the 1970s (Levitz, 2021).
8. In Philadelphia, U.S., private equity firms and developers have set out plans to build a new sports stadium one block away from Chinatown. Residents, many of whom are from the Asian American community, have noted they feel they are likely to be displaced by the development due to the gentrification it will bring to the area (see Li, 2023). In London, UK, the construction of luxury housing around the city's Brick Lane has led to the displacement of lower-income members of the local Bangladeshi community who have long lived in the area (Peek, 2015). In Guadalajara, Mexico, many luxury apartment blocks are being constructed in lower-income areas, only to be left uninhabited. These speculative investments, designed to act as safety-deposit boxes for their owners, have the effect of increasing local housing costs as landlords raise rents and displace current tenants to attract those on higher incomes to the newly gentrified area (de la Peña et al., 2022).
9. Fields (2022) notes, "Underwriting algorithms widen the scope of potential acquisitions while reducing the time needed to evaluate and purchase properties. They give investment funds 'a way for our guys, our buying guys, to not have to drive to every house,' instead managing a queue from their desktop and making the acquisition process faster" (p. 169).
10. "The absence of rent controls, which are set by provincial legislation, appears to be strongly related to real estate investment trust (REIT) activity. In Manitoba, Quebec, and British Columbia—three of five provinces with rent control (Prince Edward Island and Ontario also have it)—the share of Canada's REIT-owned suites is lower than would be expected, given each province's proportional share of the country's total stock. Manitoba's rent control is especially strong, as it is tied to apartment units and not to tenants, preventing the increases enabled elsewhere by vacancy decontrol. By comparison, Manitoba's prairie neighbour Saskatchewan, which scrapped rent control in 1992, has half the suites but 70 times more REIT ownership" (August, 2020).

11. With regards to the UK: "Since the deregulation of the private rented sector, landlords have been incentivised to invest by the prospect of making large capital gains and maximising their returns due to the freedom they have to increase rents and even evict tenants if that would suit their interests" (Bentley, 2015).
12. No fault evictions are heavily relied upon by landlords in many countries and are regarded as a key tool that landlords have at their disposal. In Ireland, between Quarter 3 of 2019 and Quarter 3 of 2021, 90% of eviction notices were "no fault" (Lima et at, 2022: 11). In the UK, no-fault evictions may soon be scrapped; however, data drawn from the consultation process regarding this reform highlights that nearly a quarter of landlords in the UK would consider selling some or all of their properties should the ban be enacted (Nationwide, 2022).
13. To properly make any zoning, planning, and bylaw activity, governments should conduct a housing and climate vulnerability analysis and accompanying strategy to create awareness and address these vulnerabilities where they arise.
14. Principle 2 of the Guiding Principles on Business and Human Rights says that "states should set out clearly the expectation that all business enterprises domiciled in their territory and/or jurisdiction respect human rights throughout their operations" (Office of the High Commissioner for Human Rights [OHCHR], 2011).
15. See, for example, Nightingale Housing in Melbourne, Australia, which is working to ensure sustainability and community, and addressing financialization in the wider community through its protections around resale and investment (Nightingale Housing, n.d.).
16. Many cities have had success with such measures, including the City of Vancouver, whose Empty Home Tax, for example, reduced the amount of vacant properties by 36% between 2017 and 2021, while earning the municipality a net revenue of CAD 115.3 million as of November 2022. This policy alone has not helped ensure affordability in the City of Vancouver, highlighting the need for governments to take more comprehensive approaches where possible (City of Vancouver, 2022).
17. Lisbon, in 2020, incentivized owners of short-term rentals to rent their units to the city so that it may rent them out at a subsidized rent (Kassam, 2020).

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Chapter 6
The Financialization of Urban Infrastructure

Abstract The chapter is one of the most important passages of the book. Without financialization, even the full concept of urban infrastructure as it is treated in the volume would not be possible. Financialization is a central point in understanding the specificity of urban infrastructure and the potential for growth and transformation that the concept of urban infrastructure assumes. Financialization also represents a formidable symmetry between the growth of the global city and the urban infrastructure in an evolution that cannot be broken down. This explains, especially within global cities, the progressive replacement of the state by finance in the assembly and management of urban infrastructures. This replacement is not comparable with what happens in other parts of the national territory. The transformation of the Real Estate and urban infrastructures is therefore a phenomenon that mostly involves global cities. The question is: at what stage of the process we are and what are the margins for development. The data tell us that we are only at the beginning with enormous contradictions and complexities that must find a solution to evolve. Some application examples (micro cases) highlight some difficulties which is also the difficult transition between the before and the after, between the old and the new driven by competitive advantage. Other difficulties mentioned in Chap. 1 concern the gap between large cities and the rest of the national territory and the difficulties of territorial integration that arise.

How is it possible to define new management formulas if at the same time we do not operate with a perimeter on categories of urban infrastructures? The question is even more pertinent if, as indicated by Pike et al. (2019), general categories are inserted within these infrastructures that concern the individual from the standpoint of connection, communication, in-depth analysis of consumer goods, movement, recreation, and more.

Below is an analysis of economic infrastructures (one of the components of urban infrastructure) to define their perimeter, characteristics, and evolution. Economic infrastructures represent the 'core' of urban infrastructure and are also those that, traditionally, allow us to return to the original term of urban infrastructure.

R. Dalla Longa, *Urban Infrastructure*,
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In addition to economic infrastructures and the perimeter that constitutes them, there are others, which are further analyzed in the following chapters: social infrastructures, infrastructures deriving from real estate, ubiquitous infrastructures, green and technological infrastructures, and other infrastructures.

Economic infrastructures include: roads and bridges, electricity, railways, telecommunications, water, ports and airports. These types of works have an estimated weight of about 3% of GDP of the various nations considered to be developed countries and emerging countries, with a growth requirement of 3.5% (GIH, 2020; Oxford Economics, 2017). If all types of infrastructures were to be considered, the weight on GDP would be much greater.

In the relationship with GDP, it is also necessary to consider the supply chains, and ancillary activities, that pertain to infrastructures and the economic benefits they produce. The reference would be close to 20–25% of GDP, moving it more to developed countries.

The same is true if we were to consider the entire supply chain (quarries, foundries, materials factories, stocking, marketing and transport of materials to construction sites, machinery, ingenuity, etc.). Economic infrastructures also represent the more traditional hard infrastructures which, as already indicated, constitute the primary 'backbone' of urban infrastructures.

Economic infrastructures, and others even more so, have both a different impact on global GDP and a different impact also within the different nations considered (Global Infrastructure Hub, 2020; Oxford Economics, 2017).[1]

If we consider two opposite models (the US and China), this type of infrastructure in the USA varies from about 1.6% of GDP (2009) to a minimum of 1.35% (2015). In China, it goes from a maximum of about 8.7% of GDP (2009) to a minimum of 7% (2015). This can be interpreted as different levels of investment in greenfield and brownfield infrastructures and different impacts on infrastructure in the globalization processes of the world's two main nations. The reference is to economic infrastructures in the 2007–2015 period, such as ports (in China 1–2% of GDP per year; in the US 0.03% of GDP per year) and railways (in China 2–2.5% of GDP per year; in the US 0.07% of GDP per year). So if we consider the GDP of each country to be 100, China invested 40 times more than the US in just ports and railways, a sign of a great expansion of globalization driven by (economic) infrastructures. China therefore invested annually from 50 times more (ports) to 30 times more (railways) than the US compared to respective GDP in the period 2007–2015. This data contains all the information on globalization, greenfield and brownfield infrastructure, global cities, the growth of new types of cities, and urban infrastructures, starting with the two largest players.

There are also differences between China and the US on energy—3% of GDP in China and 0.6% in the US—and on roads—2% of GDP in China and 0.6% of GDP in the US (Oxford Economics, OECD, Belladonna & Gili, 2020).

[1] Economic infrastructures: % of GDP (Asia, 4%; Americas, 1.7%; Europe, 2.3%; Africa, 4.3%; Oceania, 3.5%). *Source* Oxford Economics (2017, p. 6).

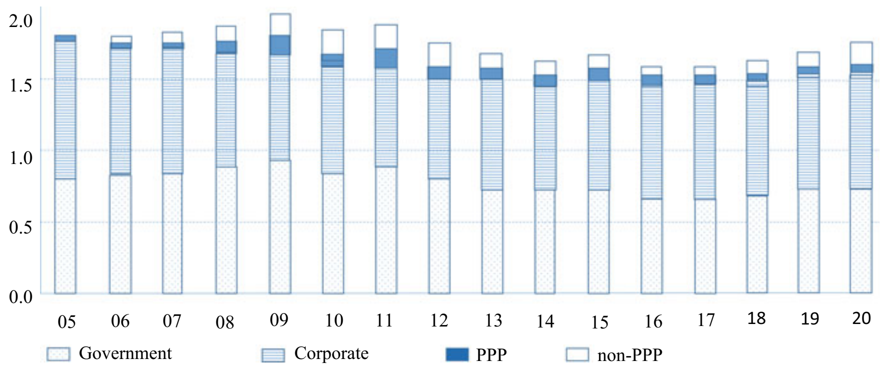


Fig. 6.1 Infrastructure investment (% GDP; different years). *Source* EIB Infrastructure Database (IJ Global EPEC, Eurostat)

The thesis already proposed is that these types of works also have a strong impact with complex urban systems as they connect and facilitate exchange among major urban systems (roads and railways, ports and airports). Electricity consumption and investments occupy a position where the consumption and intertwining with other infrastructures take place. The water cycle, when there is no direct relationship with agriculture, is the circulation and treatment of water within urban systems.

The financing of urban infrastructure comes from:

- Government
- Corporate
- PPP (Public-Private Partnership)
- non-PPP (e.g. non-profit)

Funding comes mainly from the state and public administrations (as seen significantly in China), from private or publicly-controlled banks (e.g. CDP—*Cassa Depositi e Prestiti*, in Italy; CDC—*Caisse de Dépôts and Consignations* in France; KfW—*Kreditanstalt für Wiederaufbau* in Germany), international institutions (e.g. World Bank and other regional institutions), private or public funds, and from corporate or risk capital (equity). Over time there has been an evolution and division of these financing components and institutions. As a summary for Europe (EU) what is indicated in Fig. 6.1.

Therefore, there is no single model of infrastructure financing. The birth of the PPP represents an innovative formula that is underestimated by the data, as it often consists of public (government) and private funding. The PPP model, although not very recent, was born for various reasons, including the fiscal crisis of the state that has made it impossible to finance infrastructure growth needs. Depending on the country, the PPP model takes on a different conformation and a different evolutionary form to consider in order to better classify different types of infrastructures. It is precisely the widespread presence of the 'corporate' financing, PPP and non-PPP that is contributing to changing the DNA of infrastructure and transforming it from public works into urban infrastructures. This is not the only cause, but certainly one of the most important.

GIH (2020) estimates that the significant future infrastructure needs, especially economic ones, will end up being paid for and managed mainly, or almost exclusively, by the economic operator. Figure 6.1 seems to penalize the PPP, other data indicate a more central role in the PPP (Dalla Longa, 2017). The presence, albeit decreasing, of the Government is due not only to the presence of economic infrastructures (utilities, transport, communication), but also from health and education which alone absorb 0.6 of the GDP.

6.1 Financing of Infrastructure and PPP

Financing of infrastructure can be divided into:

Traditional public: managed by and under the responsibility of the state, using debt to finance public works. The lender is a bank or other lender. The state is required to pay principal installments and financial charges for a set period, especially over the medium to long term. The risk involved is mainly procurement risk.

Private financing: managed with a significant presence of the private sector and with a economic calculus centered primarily on the user/consumer. There may be funding of various kinds, including from public sources, but the levels of responsibility change. The management areas concern, in a non-prevalent form (or in a different form from the traditional one) government, corporate, PPP, and non-PPP. The lender provides debt capital (Kd, cost of debt). The lender is a bank or another institution. To this we added risk capital (Ke, Equity) in which various lenders participate, including investment and pension funds. The former is extinguished with repayment of principal installments and financial charges in the traditional way, and the latter repayment of principal installments and returns. This mode is characterized principally by operational risk.

For urban infrastructures, the data tell us (GIH, 2020) that debt financing is mainly extended in high-income countries (75%), while equity is lower. This figure is diametrically opposite for low-income countries (73% equity and 27% debt).

The traditional infrastructure financing model is in decline. The second, more complex model (private financing) is driven by growing needs and is linked to the development of urban infrastructure, and has been an important push factor. There is no urban infrastructure without private financing. This financing consists mainly of debt, but often, or almost always, equity is also present (greater or lesser risk of being solvent on debt). The formula proves to be modular according to the degree of development and guarantees offered by the nation. For nations with fewer guarantees (low-income), there is a greater share of risk capital in the relationship with the investment, with a consequent greater increase in the cost of the investment.

6.1.1 *Financing of the PPP Alone*

Globally, PPP is worth nearly 60 billion dollars in 2010 to 30 billion in 2019, or 36% to 28% as a share of total investment in private infrastructure (GIH, 2020). Actually in Fig. 6.1 it is estimated with a lower share than the data indicated, albeit low, by GIH even if the reference in Fig. 6.1 mainly concerns economic infrastructures (utilities, transport, communications and to a lesser extent healthcare and education). Other data from IJ Global (differents years) indicate that PPP is around 310 billion dollars worldwide and around 70 billion dollars in Europe (Dalla Longa, 2017), but the reference does not distinguish the different types of infrastructures. Kappeler (2012) indicates in Europe a PPP funding of 25 billion dollars, even if the sectors involved are: general public services, defense, public order and security, environment, health, research and education, not really economic infrastructure. To these is added the economic infrastructure such as transport with a weight that is anything but secondary. Other data (Dalla Longa, 2017) estimate the private capital of social infrastructure alone in Europe at around 20 billion dollars. The result, beyond the different angles, is a non-uniformity of the data on which the PPP is based and above all its weight within the private financing of urban infrastructures.

6.2 Private Financing of Economic Infrastructures

Let us leave out the important public funding source (government) that characterized the infrastructure of the last century. The shift from the terms of public works to assets, or from public procurement to urban infrastructure, is due also to the increasing importance of private financing of infrastructure, primarily economic infrastructure.

The growth of private financing for economic infrastructure and its evolution, in accordance with the logic of the market, is an important step in understanding the evolution of urban infrastructure, globalization, and global cities.

It is not only the financing, but also the public choice of the state (e.g. EU) to gradually consider these infrastructures as special sectors or "excluded sectors" or semi-excluded, from the direct intervention of the state. In Europe, economic infrastructures are included in the excluded sectors in the European Directive of 1993 (Dir. 93/38) where there is a step towards liberalization compared to the 1970s (Dir. 71/305 and Dir. 77/62) after the White Paper of 1985 on the "completion of the internal market," and at the same time as the multilateral negotiations of the Uruguay Round which saw a further correction of Dir. 93/38 in 1996. With the new century, in the EU directives of 2004 (04/17) and 2014 (14/25) water, energy and major transport infrastructures (ports, airports, rail) are treated separately from public procurement in a 'hybrid' private-public field, while starting from 2004 a significant part of telecommunications were brought into the private sphere, whereas in 1996 (correction of Dir. 93/38) outsourcing had already begun for voice telephony services, telex, and mobile radiotelephony. Thus, in the last twenty-five years, in a gradual form, there has been a process of outsourcing of economic infrastructures towards the private-public perimeter in which competition and market rules are accepted, with innovative access to private financing. The new EU directive of 2014 on concession contracts (Dir. 14/23) can be included in this context, introducing one of the best known and most used PPP formulas into EU law for the first time, accompanying it with the also important concept of operational risk. A closer relationship is established between the user, competition, and the business economy in the provision of the service.

However, this transition did not take place in a linear form, and complex constellations still remain in the private-public financing relationship that affect the management formulas of economic infrastructures and the type of financing used for them.

Private financing of economic infrastructures therefore has deep and constantly evolving roots and is also a basis for transformation and in part a peculiarity of this type of (urban) infrastructure.

Some macro data allows us to better define types of financing of economic infrastructures in the evolution between public and private; even though the data presented is partial and some gaps remain due to the complex private-public constellations (Fig. 6.2).

Private financing for economic infrastructures prevails, representing approximately 91% of financing against 9% coming from public contributions or participation. The type of financing that has grown considerably is that from secondary markets, i.e. the exchange of shares, in many cases also with the participation of retail. On the other hand, private investment in the primary, institutional market, has remained fairly stable. The largest share of public participation concerns primary private financing. A strong relationship is established between users and investors, in several cases leading to shares being widely-held. Within this logic, the concept

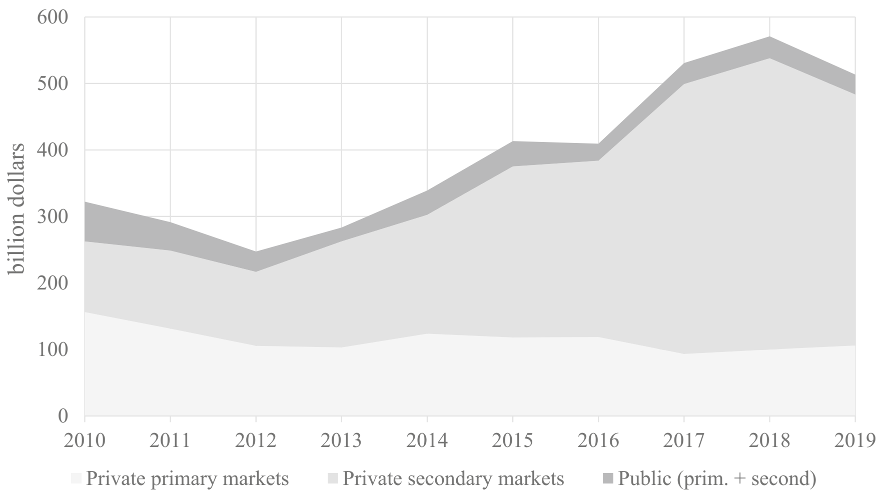


Fig. 6.2 Financing of economic infrastructures. *Source* Global Infrastructure Hub, October, 2020

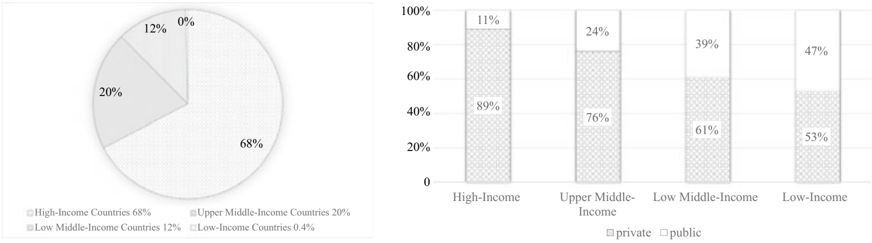


Fig. 6.3 Economic infrastructures: share of private infrastructure investment (average 2010–2019)—by country income. *Note* World Bank Income Group classifications 2010. *Source* IJ Global and Global Infrastructure Hub, October, 2020

of 'operational risk' applied to economic infrastructures becomes clear, such as the activation of concessions, which, for example, becomes much more problematic for social infrastructure.

Another element of economic infrastructures is that the contribution, or public participation, is much more limited for economic infrastructures located in higher-income countries (high-income: 11%), while it rises to almost 50% in low-income countries. This appears in line with the concept of greenfield and brownfield infrastructure (new construction or management and adaptation of the infrastructure) and with the concept of urban infrastructure connected to the model indicated in the book (see chapter 3) (Fig. 6.3).

A breakdown of private financing by geographic area shows that it is largely concentrated in high-income countries with a greater impact on brownfield urban infrastructure and the ability to interconnect with globalization, global cities, and other types of infrastructures.

There is some asymmetry in the data on public contributions, corporate, and PPP with regard to urban infrastructure. This also comes from the plurality of management formulas, already present in the phase of the Uruguay Round (1986–1994), that led to the next period of liberalization in which there were companies that managed economic infrastructure services and were fully publicly-owned, and have remained so even today. In this area, the analysis of the financing by private capital has never been significantly posed and therefore does not belong to the calculation of the data considered; therefore there is no such type of calculation on public funding. This is the case, for example, of Rheinenergie of Cologne in Germany (Leitheiser & Follmann, 2020), but the same could be reconstructed for several other realities.

The city of Cologne (Germany) with its own public capital (Fig. 6.4), controls 100% of a holding (the Stadwerke GmbH) company which manages various economic infrastructures through various utilities. One of these is GEW AG, which controls 90%, while the other subsidiaries of Stadwerke GmbH are KVB AG (urban transport) HGK AG (port operations and industrial railways) AWB GmbH (waste collection) and others, thus representing a large part of the city's economic infrastructure. GEW Cologne AG controls Rheinenergie AG with a capital stake of 80%, which in turn deals with energy and water and is not listed on the stock exchange.

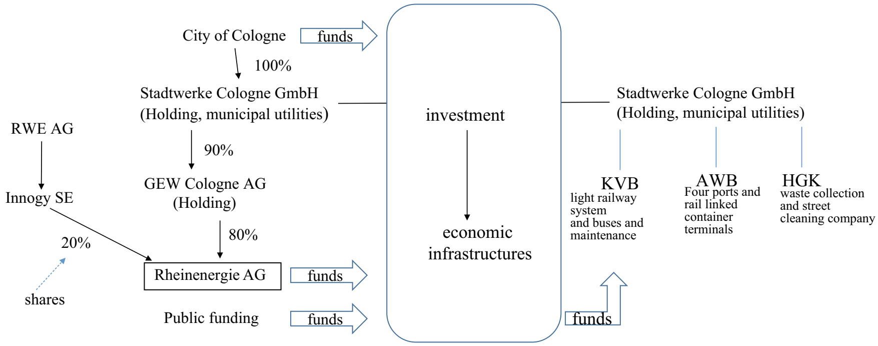


Fig. 6.4 City of Cologne (D) and urban infrastructures (utilities: transport, waste collection, energy and water) and relationship between public and private market and investments. *Source* Our processing on: Leitheiser and Follmann (2020, p. 902)

A share of 20% of Rheinenergie AG is owned by Innogy SE, which in turn was created in 2016 by the second-largest, publicly-traded German multinational energy producer (RWE AG) while Innogy was subsequently acquired at the end of 2019 by the top German multinational energy producer (E.ON) that is also listed on the stock exchange. In turn, RWE AG often created several special purpose companies with German local authorities for the production and supply of energy. Within this configuration we have capital and public investment, which is the majority with respect to primary financing and private secondary financing relating to 20% of E.ON. In Germany and also in Cologne, positive energy balances have in the recent past helped to balance the decline in the city's tax revenues, or to use its own budget to finance the (public or private) of KVB AG (urban transport) (Leitheiser & Follmann, 2020). It is also necessary to note that this type of action has been increasingly opposed in Europe by the European directives that have been issued since the second half of the 90s (starting with Dir. 93/38) with the restructuring of government and public administrations, through liberalization and direct organizational comparison with the market[2] and with the transformation of economic infrastructures from public administrations into autonomous companies (Bulkeley & Kern, 2006).

Local authorities that relied on the profit of their companies to divert financing/investments have over time, and with corporatization, dented the natural competitive advantage for these companies. That means, expansion, possible market shares, revenue and profits (Richter, 2013).

The other element is whether this financing is classified or falls within the private, public, or corporate sectors; then there are PPP projects, which are separate. There has been a very heated debate in Europe over the years on the concept of *in house providing*, which indicated a clear separation between the public control body and the

[2] *p. 3 of the European Commission Green Paper—COM(2004)327 final; p. 4 of COM(2005)569 final.*

autonomy of the companies operating within the economic infrastructures. The European Court of Justice has often intervened with sanctions, still identifying too much mixing between the public budget and that of economic infrastructure companies.

Different formulas of infrastructure assemblies are added together: most of them refer to different PPPs, with different management formulas, referring to different types of urban infrastructures, with a different inflow of private capital, and they are also different types of infrastructures (social, and especially economic). This demonstrates the strong evolution of infrastructures and the new relationship formulas between public and private and the strong cultural deficit of the public sector in governing complex processes linked to new forms of private financing.

If we consider the various Italian cases analyzed, what emerges is:

- a stratification of times
- a stratification of culture
- a stratification and differentiation of financialization and 'assetization'
- an impact of different cultures, that in many cases tend to canceling each other out
- the feeling is that there are multiple incremental strategies and stratifications that are difficult to trace back to a single strategy.

New themes are activated regarding infrastructure that were unthinkable only a decade or two ago.

Then there can be a traditional PPP with the creation of an SPV and the presence of a public contribution; in this case the public contribution is counted. And there can be public financing that pertains to the primary market (public share capital) or public holding of own shares in the secondary market of economic infrastructures. Since the beginning of the twenty-first century, there has been particular attention paid to the evolution of management and the structure of investments in economic infrastructures (Guy et al., 2001; Moss, 2011; Pike et al., 2019).

However, the tables and figures above clearly represent the type of private (and public) funding for economic infrastructure that especially after 1986–1994 (Uruguay round) have been required to deal more closely with the market, to varying degrees.

6.3 The Detailed Financing of Economic Infrastructure

We have already mentioned the difference between the USA and China in the two different development models, that can also be reconstructed in brownfield and greenfield infrastructures. There is also a substantial difference in investment in infrastructure between developed countries and emerging countries (Fig. 6.5); in Europe investment is 2% of GDP, in Japan 2.6%, and in low and lower income emerging countries in African investment in economic infrastructure reaches peaks of over 6% (Kenya and Senegal), 9% (Morocco), and 11% Ethiopia. Once again, this is a sign that urbanization and globalization push for greenfield infrastructures. High-income developed countries, on the other hand, invest more in the consolidation of existing infrastructures (brownfield).

Box 6.1 Sequential number of nations: decoding

The countries included within Fig. 6.5 are:

EUROPE: (1) France, (2) Germany, (3) Italy, (4) Spain, (5) United Kingdom, (6) Poland, (7) (1 + 2 + 3 + 4 + 5 + 6) *Europe*.

RUSSIA: (8) Russia, (9) *Russia + Europe*;

NORTH AMERICA: (10) US, (11) Canada. (12) (10 + 11) *North America*:

OTHER AMERICA: (13) Argentina, (14) Brazil, (15) Colombia, (16) Mexico, (17) Peru, (18) Chile, (19) (13 + 14 + 15 + 16 + 17 + 18) *other America*;

ASIA: (20) China, (21) Japan, (22) South Korea, (23) India, (24) (20 + 21 + 22 + 23) *Asia*.

OTHER ASIA: (25) Indonesia, (26) Philippines, (27) Vietnam, (28) Malaysia, (29) Thailand, (30) Turkey, (31) Saudi Arabia, (32) Singapore, (33) (25 + 26 + 27 + 28 + 29 + 30 + 31 + 32) *other Asia*:

OCEANIA: (34) Australia, (35) New Zealand, (36) (34 + 35) *Oceania*.

AFRICA: (37) South Africa, (38), Nigeria, (39) Egypt, (40) Ethiopia, (41) Kenya, (42) Morocco, (43) Senegal, (44) (38 + 39 + 40 + 41 + 42 + 43 +

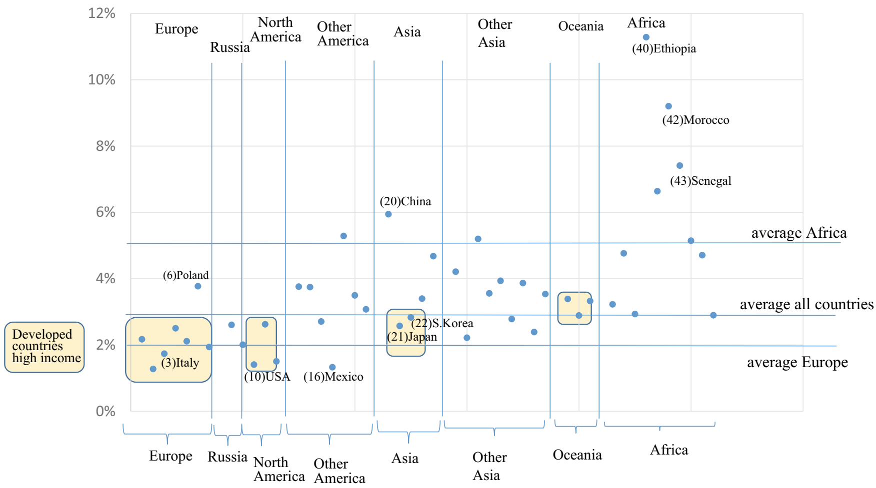


Fig. 6.5 Investments in economic infrastructure, percentage on GDP. *Note* Investments mainly refer to economic infrastructures such as: telecommunications, energy, water, roads, railways, ports and airports. This type of investment also concerns PPP. *Source* Our processing on date of GIU-Global Infrastructure Hub; GIU Outlook, 2017 and other different years

44) Africa without South Africa, (45) (44 + 37) Africa with South Africa, (46) Total all the countries (excluding the continental aggregations: 7, 9, 12, 19, 24, 33, 36, 44, 45).

	(a)	(b)	(a)/(b)	(c)	(c)/(a)		% of growth by 2030
	Investments	GDP	%	PPP	%	Popul. 2019	
Developed countries (hight income)	719,777	38,514,421	1.9%	96,248	13.4%	934,876,190	2.5%
China	652,729	10,982,800	5.9%	2,007	0.3%	1,431,906,615	2.3%
Emerging countries (upper middle income)	253,425	8,237,251	3.1%	32,592	12.9%	912,202,704	6.7%
Emerging countries (low and lower middle income)	178,197	4,493,688	4.0%	23,210	13.0%	2,349,620,049	14.4%

Note "Developed countries (hight income)" = (7), (12), (21), (22), (36); China = (20); Emerging country (upper middle income) = (19), (28), (29), (30), (31), (32), (37); Emerging country (hight income) = (23), (25), (26), (27), (44)

The table shows how the developed countries have stabilized investment in economic infrastructure, which instead appear as the driving force for urbanization and globalization for China and for emerging countries. In China, investments in economic infrastructure are three times greater than those of developed countries.

If the reference includes the projected population growth as of 2030, the growth of infrastructure investment is accompanied by strong urbanization precisely in emerging countries, and in particular in those with low and lower middle income.

There are some elements of differentiation within this data, which are useful to note.

The African nations considered show economic development mainly driven by urban infrastructure, which contributes to accelerating population and urbanization growth. Among all nations China is the one that invests most in both its globalization-infrastructure and internal urbanization and is massively present with its models in the economic infrastructure of Africa. This also allows us to explain the nexus between infrastructure-development-population growth-urbanization and the new urban configuration.

This strong dichotomy at a global level between a greenfield infrastructure model (urbanization) in emerging countries and the brownfield model in developed countries (consolidation of existing infrastructures) will be the subject of in-depth analysis in the subsequent discussion, especially with regard to brownfield infrastructures.

One aspect that emerges in investments in economic infrastructure is that developed countries operating within brownfield infrastructure have a different model of infrastructure assembly. It is useful to segment urban infrastructure in a different way.

There is also a different way to finance infrastructure. Particular weight is assigned to the PPP (Fig. 6.6), which assumes different characteristics depending on the type of country in which it is applied. The models are the same, while the way to apply them to the object change.

The PPP model, due to its complexity and the new implications for the state and the market, and the consequent transformation of the state's role from welfare to an intertwining of public and private interests, will be an important point in this book.

The PPP model represents a structurally new form of financing that changes the way of understanding urban infrastructure. The formula can be extended to all PPPs, but these have different characteristics. Several models can be identified, including a European one. The main aspect remains the transfer of risk from the public to the economic operator.

The PPP is a recent component of the financing of economic infrastructure (and other projects) and also involves a share of public contributions and fees. It can also be expressed in different forms through the PPPI model, which in addition to investment, also consists of the creation of mixed public-private companies particularly suitable for economic infrastructure. In general, private capital will be particularly important

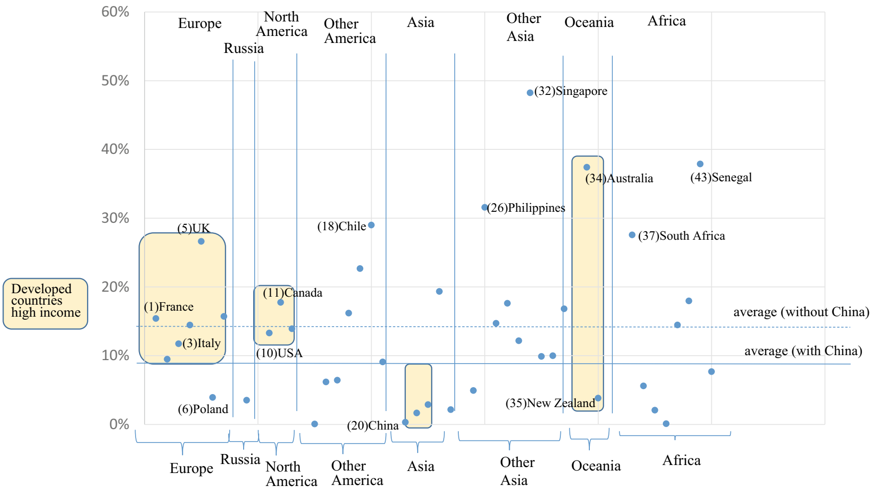


Fig. 6.6 Percentage of investment in PPP over traditional investment (public works). *Source* See Fig. 6.5 and Box 6.1

in the next decade given the fiscal challenges and the high indebtedness of states after Covid-19.

The data in the figure and table indicate, for economic infrastructures, an apparent percentage balance with respect to investments. However, if we look at the data more carefully, some peculiarities emerge which become important to note.

Not all nations have a balanced relationship that regards 'development' in regard to the PPP model. In developed countries, PPP is almost not present in Japan (1.7% of investments) and in South Korea (2.9%); while in Europe, for different reasons, it is not very present in Poland (3.9%) and in Germany (9.5%). The latter has a strong budget surplus, and generating public debt through government investment is not a problem. At the EU level, other countries hope that Germany makes strong investment in infrastructure (government investment) to favor the development of the European economy more than paying attention to the budget deficit.

On the other side, there are nations such as Italy, France, and Spain (the South of Europe)—and Italy in particular—with significant public debt, that with the PPP model, could have this debt signed up in private accounts, since private debt is in Italy much lower than it is singularly for Spain, France, and even Germany.

Thus there are different interests, sensitivities, and opportunities in regard to using PPPs in the European and euro area context.

This is one of the reasons we are facing a consolidation and possible revival of the PPP model in Europe. PPPs were born in the UK (27% of investments in economic infrastructure) and spread to France, Spain, Italy, and other smaller nations, exceeding 15–20% of the amount of investments in infrastructure.

The model also has a strong presence in relation to infrastructure investments in other Anglo-Saxon countries (Australia 37%, and Canada 18%).

The PPP model is not present in Russia (3.5%) and even less in China (0.3%). Due to its characteristics, China shows a significant peculiarity, that of having high investments in economic infrastructure compared to GDP, but all made with public funds (Government) in line with its political 'regime' and development planning and the relationship with production, the market, and globalization.

There are also some South American countries where the PPP model is poorly developed (e.g. Argentina and Brazil) and others like Turkey where PPPs represent half of the investments in economic infrastructure made in that country (more than 48% of all investments in economic infrastructure carried out there).

These differences do not prevent the PPP model from representing 13% of the total investments concerning economic infrastructure. This data is underestimated in general statistics, because together with private capital there is often a public contribution of about one-half compared to the private capital, and then an Operation and Maintenance (O&M) fee follows (or it is created autonomously) that is rarely counted correctly.

Modification of financing and creation of the PPP at a general level—A few decades ago, in developed countries we were faced with the issue of the unsustainability of state intervention in financing infrastructure.

Today the state has significantly reduced its role as a lender. Furthermore, new forms of infrastructure have appeared, as have new actors and financiers, and new procedures, in which the state is no longer the main actor. The Public-Private Partnership was born and developed. Therefore, for infrastructure, from procurement to concession and to PPP more in general, direct intervention by the private sector is also growing.

Furthermore, the term urban infrastructure is a new term that has changed its meaning compared to its use a few decades ago.

The PPP model currently assumes a broad perimeter and concerns not only economic infrastructures, those that gave rise to the PPP, but also social infrastructures and complex urban interventions (Dalla Longa, 2011), as well as other types of interventions (Dalla Longa, 2017). Between stop and go, it is constantly changing in terms of assembly and types of infrastructures.

It is not possible to deal with urban infrastructure without fully considering the essence and importance of the PPP within different global contexts.

The criticalities and potential of PPPs compared to traditional interventions—The problems and potential of PPPs are almost never absolute, but they must be contextualized and in several cases they can be mitigated or developed. The following problem can be present:

– An undeniable higher cost of PPP infrastructure compared to traditional procurement interventions;
– A possible cultural asymmetry between the procuring authority and the project company;
– Risk management within a Long Term Contract (LTC). It is already complicated to manage risk in a contract; it grows exponentially in an LTC;
– The control and verification systems of the public operator within an LTC appear to be inadequate to date. There are no automatic market mechanisms, and an LTC often has a longer life cycle than an individual's working life.
– The growth of new forms of social exclusion, that can, however, be mitigated with other interventions that are currently little known.

PPP is potentially positive, instead, when:

– It can enhance operations and integrate the different parts of an infrastructure project;
– It creates collective benefits by allowing for the circulation of citizens' savings in a virtuous circle. But this does not always occur within the same nation; to ensure that this happens, several virtuous circles must be activated simultaneously (e.g. attractiveness of investment, large amounts of savings in the nation);
– There may be greater efficiency of the private sector in managing infrastructure considering the fragmentation of public action;
– It can favor a greater spread of culture and standard forms of rates, fees, output, quality, and satisfaction;
– It can be an epochal form of modernization and innovation of services and infrastructures.

Regardless of its problems or potentialities, the PPP absolutely requires interdisciplinarity and new organizational forms that are not simple for either the state or the market. The boundary between criticality and potential remains weak and not completely resolved.

The PPP model at the global level—After the advent of the modern PPP and its recent evolution, there are now different components that distinguish it and it may seem simplistic to provide a single view. If we focus on the more traditional and consolidated part of PPPs, that of economic infrastructure,[3] more representations emerge globally.

Both developed countries (13.4%) and emerging countries (12.8%) indicate on average 15% of infrastructure in PPPs. China, as already indicated, has its own trajectory.

More traces can be identified: (a) English-speaking nations have a figure clearly higher than 15% as concerns PPPs with respect to the rest of investments in infrastructure: below the average are the USA (13.3%), while Australia is at 37.4%, Soud Africa at 27.6%, the United Kingdom at 26.6% and Canada at 17.7%; (b) they are followed by the historical European Community countries: below the average we find Germany (9.5%), while above the average there are France at 15.4%, Spain at 14.5%, and Italy at 11.7%; and (c) the countries of South America and Africa are below the average.

There are also some important variables that must be taken into account:

- The uncertainty of data on infrastructure, and even more on PPPs: this is a serious problem that will remain such for some time[4] (Dalla Longa, 2017). There is also the belief, when crossing more data, that there is a general underestimation of PPPs.
- The economic and geopolitical differences among different nations and geographical areas, that implement PPPs in different ways. For all PPP formulas, the basic element is represented by the relationship between the procuring and project companies through a contract. However, this formula was valid until a decade ago, but is not anymore. For some countries (e.g. European Community) we are within a new generation of PPPs, in which (B) is clearly added to (A) (see Fig. 6.7).
- The difference in infrastructures, if they can be classified as greenfield or brownfield, which is very marked in relation to the economic and geopolitical positions of the various nations.

Initial macro differentiation of PPPs globally—Emerging countries[5] show the following profile:

- They are countries with strong infrastructure needs (and recent investments represent a substantial part of fixed investments);
- These are mainly investments better defined as economic and greenfield infrastructures;

[3] The economic infrastructures referred to here and in the next two paragraphs are: energy, telecommunications, airport, ports, rail, road, water the source is mainly GIH/Oxford Economics (several years).

[4] The reference is to data from GIH, OCDE, Eurostat, EIB/Epec, IJ Global (several years).

[5] See Box 6.1.

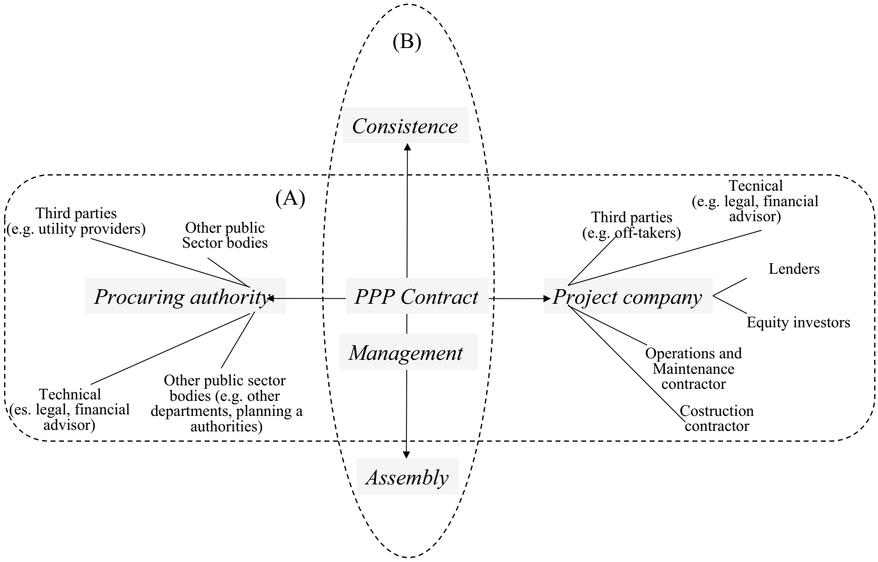


Fig. 6.7 Evolution of PPP models (A) (B). *Source* Dalla Longa (2020), our elaboration on GIH (2018)

- They are countries with forecasts of growth (GDP) and this type of infrastructure can be the push factor for growth;
- The important thing for these nations remains a correct balance between the procuring authority and the project company sanctioned by a PPP contract.
- The partial and imperfect transmission of risks from the public sector to the economic operator can be covered by the growth of GDP, which overshadows the management asymmetries and incomplete knowledge of consistency and assembly management within the LTC (Fig. 6.7, point A).
- Furthermore, both emerging African countries, Asian countries, and in part American countries, are those for which the projections indicate significant urban growth and therefore the need for urban infrastructure more compatible with new forms of PPPs.

European developed countries (and some others)[6] show the following profile:

- They have a developed infrastructure system;
- In the future, investments will impact brownfield infrastructures, that already exist; it will be a question of modernizing them or contaminating them with other types (new technologies, green, etc.);
- They are countries with the lowest GDP growth. The weight of investments in infrastructure is more limited compared to fixed investments in the various countries;

[6] Ibidem.

- They are countries with significant public debt. It is useful to remember that at the EU level, before the Covid-19 pandemic, the Stability Pacts (Maastricht) and the Fiscal Compact were in force; they were suspended during the fight against the pandemic, but will return to normal again;
- For these countries, the correct balance between the procuring authority and the project company is no longer relevant. It becomes important to immediately define a correct balance between hard consistence (object), PPP contract, and management in the PPP assembly throughout the LTC (Fig. 6.7, point B).
- The correct and permanent transmission of risk from the public sector to the economic operator becomes the central point of the PPP, around which the feasibility and legitimacy of the formula revolves;
- Developed European countries are those with greater urbanization (more than 70% of the population living in urban areas against 40–50% of countries such as Asia and Africa). The expected increase in urbanization in the future is the most limited compared to all other parts of the world. This is confirmation that for these countries PPPs will concern the infrastructural reconversion of large numbers of brownfield urban infrastructures.

Growth in infrastructure investment needs and PPP prospects—An analysis carried out for the 52 most developed countries worldwide indicated 2.3 trillion dollars of investments in economic infrastructure in 2015, with a natural trend that will reach 3.8 trillion in twenty years (2040). To meet the growing needs, however, an additional level of 1.2 trillion dollars (+1/3) is foreseen compared to the growth trend considered to be natural.

Only with the growth of private capital, through PPPs, is it possible to cover the growing need for infrastructures, considering that public spending on contracts in developed countries, and in particular in the EU, has been declining for several years (Dalla Longa, 2017).

The greatest need for growth in the natural trend of investment in infrastructure concerns the countries in the Americas (47%) and Africa (39%) countries, followed by Europe (16%) while the world requirement is estimated at 19%. Within EU countries, the greatest need is in Italy, which in recent years has had to restrict investments due to the Stability Pact, due to its enormous public debt. The reference to the need for the off balance sheet investments thus becomes a central additional element for some countries, and the correct use of PPPs would respond to this need.

The data indicates that PPPs will grow and tend to be differentiated a lot over the years. The perimeters of PPPs will increase and PPP models will also change for different types of infrastructures, while the management component, interdisciplinary knowledge, organizational culture, and risk management will be fundamental in the diversification of the models themselves and in the symmetrical development of PPPs.

The European PPP model—There are multiple versions of PPPs in Europe, which is one of the reasons it cannot be enclosed within the economic infrastructure. The birth of the PPP for economic infrastructure is the oldest and it is also the one that is easiest to compare worldwide. In addition to this, there is the discussion of social

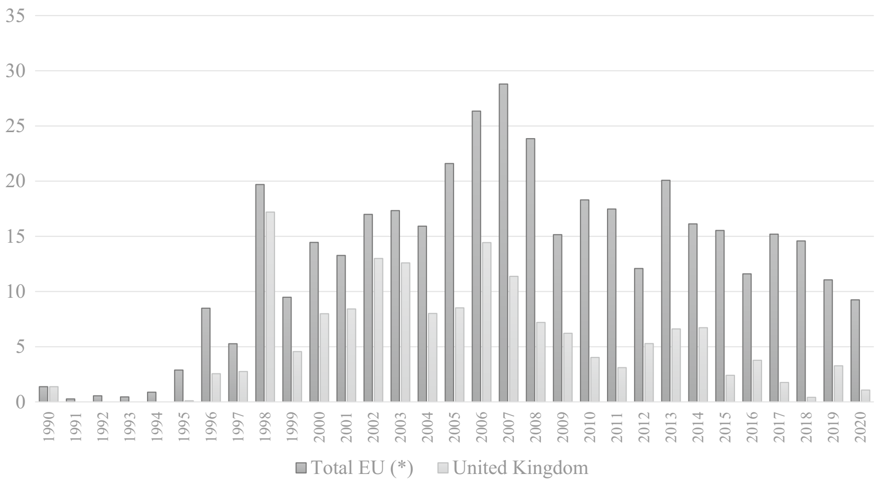


Fig. 6.8 Trend PPP in Europe (EU) and in United Kingdom (more years, billion euro). *Source* Our processing on EPEC data, different years, https://data.eib.org/epec, EPEC (2022), Market Update: Review of the European PPP Market in 2021, EIB, Luxembourg. See with the same title several years (2015–2021 and so on 2010–2015)

infrastructure, and energy efficiency (EPC and creation of the ESCo: Energy Service Company), and there are others, some of which are related to real estate.

The most structured are the first two (economic and social infrastructure) which have also been reflected in the relevant European legislation. The PPP for economic infrastructure is the oldest and most consolidated model. Its matrix is that of project finance, and it represents the backbone of the EU directive of 2014, which for the first time introduced the granting of project financing into EU law, with the corollary of operational risk and market risk in a direct relationship between the user and the economic operator. The beginning of application of the PPP model to economic infrastructure dates back structurally to the end of the nineteenth century, with the first railways in England, France, Germany, Belgium, and Italy, in which more than 20,000 km of railways were built with project finance techniques (Dalla Longa, 2020) and then consolidated over time.

The PPP model applied to social infrastructure, on the other hand, is more recent and can be traced back to the United Kingdom at the end of the last century (Fig. 6.8).

Box 6.2 Contents that feed the chart

The PPP project data covers: (a) transactions that have reached financial close in EU-27 countries; (b) transactions structured as design-build-finance-operate (DBFO); (c) transactions, design-build-finance-maintain (DBFM); (d) transactions or concession arrangements that feature a construction element, the

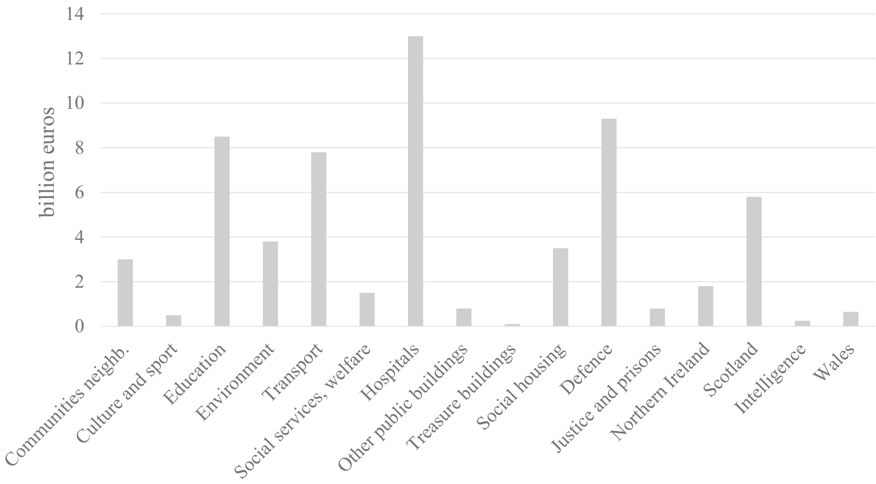


Fig. 6.9 United Kingdom—Breakdown of PPP (social infrastructure) interventions by type. *Note* 715 projects (entered and canceled depending on the termination of the LTC); period: 1995–2017. The reference here is social infrastructure projects, those with a public fee. Tariff infrastructures (economic infrastructures: concessions) are not considered in PFI and PF2. *Source* Our elaboration based on: "HM Treasury & Infrastructure and Project Authority" (2018) *Private Finance Initiative and Private Finance 2 Projects: 2017 summary data*

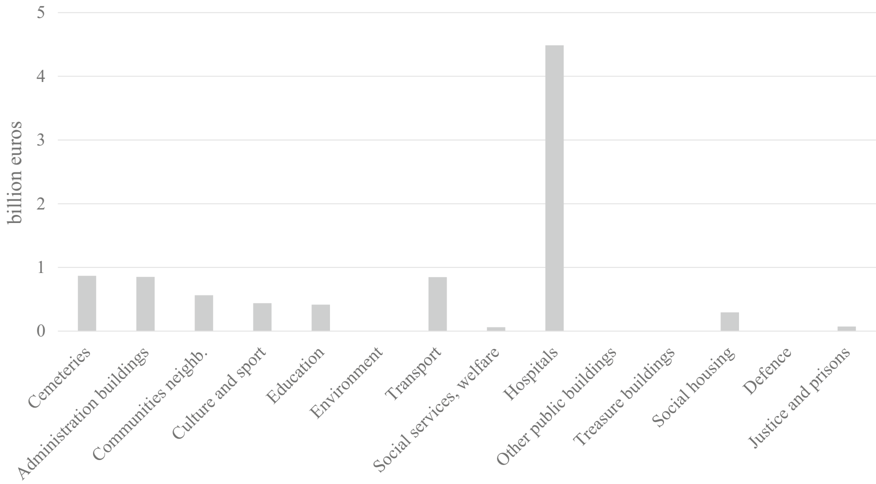


Fig. 6.10 Italy—Breakdown of PPP (social infrastructure) interventions by type. *Note* 135 projects, period: 2001–2013. The reference is to social infrastructures, those with a public fee. Tariff infrastructures (economic infrastructures: concessions) are not considered. *Source* Our processing on PREM Lab (SDA Bocconi) data

provision of a public service and genuine risk sharing between the public and the private sector; (e) transactions financed through project financing; (f) transactions of a project value (defined as the external financing requirements for projects at the time of financial close—i.e. the sum of debt and equity, excluding public capital contributions) of at least 10 million of euro.

The data coming from EPEC and elaborated by us indicate that in the last 25 years the funds used, by the private sector alone, for PPP investments have been 403.2 billion euros, this against almost 2,000 projects. Public contributions to PPPs are excluded from the calculation, while the infrastructures concerned are mainly social and civil ones. From the EPEC data it emerges that, from the comparison with the European Community (EU), the Union Kingdom (UK) in the same period affects with 55% of the funds (more than 1,000 billion euros) and 41% of the projects (165) for PPPs. In Fig. 6.8, the inclusion of the UK in the direct comparison with the total EU data is due to the fact that the Private Finance Initiative (PFI) was born in the UK and only subsequently expanded to other European countries. In the last decade (see Fig. 6.8) the decline in the amount of PPP and projects coincides in part with the decline in the trend in the UK. This with the transition from PFI to PFI2, as the British themselves called it, criticizing the previous PFI system, considering it not very controllable and imperfect. The countries of the EU considered are: in addition to the UK, exit with Brexit from the EU in 2020, France, Spain, Netherlands, Germany, Czech Republic, Hungary, Portugal, Cyprus, Sweden, Greece, Italy, Finland, Romania, Slovenia, Poland, Ireland. Figure 6.8 mainly deals with data relating to the PFI (i.e. social infrastructures in which it is the State that pays all or a large part of the fee and not the user called to pay the rate as is the case with economic infrastructures). Social infrastructures are to be considered: Healthcare, Education, Housing and Community Services, Recreation and Culture. Also included as fee-based infrastructures: General Public Services, Environment, Defense, Public Order and Safety. All these items in the EPEC data represent, for the EU, 77% of the PPPs indicated in Fig. 6.8 and for the UK alone 93%. Economic infrastructures such as transport appear only marginally. The reference of the data mentioned above is that of the last thirty years (see Fig. 6.8; 1990–2020). In the last decade, there has been a marked decline in PPPs in the UK offset in part by an increase in France which shows an opposite trend in PPP growth over the last decade. Partly more limited growth also occurs for Germany. This is a little less true for Spain and Portugal. From the EPEC data we have elaborated it emerges that PPP projects with more than 10 million euros are taken into consideration, and from these are excluded public contributions that can reach up to 50%, but up to a few years ago (less than ten years ago) there was no specific limit on the public contribution within a PPP. In Fig. 6.8 there are also the tariff economic infrastructures such as Transports, Telcos RDI which in the EPEC data of Fig. 6.8 do not exceed 23% of the projects reported and in the UK do not exceed

7% of the total UK PPPs. In these data (see Fig. 6.8) the genesis of the PFI and its evolution prevails, unlike the previous figures of this chapter in which economic infrastructures prevailed. In the data shown in Fig. 6.8 medium-small interventions are excluded, very present for example in the municipalities in Italy (sports and swimming facilities, school buildings, many urban renovations). Energy efficiency PPPs such as public lighting and many others are also excluded as shown in Figs. 6.9 and 6.10. Furthermore, with the establishment of ad hoc monitoring systems (e.g. NAO—National Audit Office), the UK has much more structured and efficient data collection and transmission systems than other EU nations, this partly explains the possible disproportion between EU and UK present in Fig. 6.8.

The data on Europe shows that the PPP model (understood as social infrastructure) has a precise origin, and the reference is to England under Tony Blair (1997–2007). The term used is Project Finance Initiative (PFI) which differs from economic infrastructure better known as Project Finance (PF). The initial orientation began with the government of John Major, but there is no doubt that the development of the PPP (PFI) took place at the beginning of the 2000s (Kappeler & Nemoz, 2010). The Fig. 6.8 highlights the entire phase of introduction and development of the PPP (social infrastructure) in which the English model always had a significant presence in driving and determining the structure of the instrument. Only in recent years has growth of this PPP (social infrastructures) affected other European nations, including Italy.

The PFI model grew over time and changed after having encountered errors in the assembly phase, present in widespread form also in the Italian model that was 'contaminated' by the Anglo-Saxon one, in which the assembly formula is implemented but little is done on its supervision, as a split remains between the conceptual capacity to connect the D&C typical of public works (design & construction) with the O&M integration required with PPP (operation & maintenance). In December 2012, England passed from the model of PFI (Private Finance Initiative) to that of PF2 (Private Finance 2). The changes concern several aspects: (a) the British PA acts as a minority co-investor; (b) contract times are reduced and some 'operation' services that cannot be amalgamated with others are removed (e.g. cleaning and safety) (c) greater transparency is introduced on the EFP assembly data (Economic and Financial Plan). The transition from PFI to PF2 took place after a rigorous analysis and diagnosis of all PFI projects arranged up to that moment. As of March 31, 2017, there were 715 PFI and PF2 projects based on LTC contracts (Fig. 6.9), 16 of which were under construction, for a value of 67 billion euros with an average of 83 million each. Every six months, the projects that exit the LTC due to the end of the term of the Long Term Contract (20–25–30 years) are removed from the total, and return to being "government" infrastructures. Of the 16 under construction, there is an investment program for education in Yorkshire and a hospital pavilion in Birmingham, of 138 and 48 million euros, respectively. The UK has an effective PPP monitoring system which a country such as Italy does not have.

In Italy, the first generation of PPPs (social infrastructures, the equivalent of PFIs) saw the active intervention of three Regions: Lombardy—through *Infrastrutture lombarde*—Veneto and Tuscany. In the first of the three regions there were seven hospitals to be built prior to the enactment of Legislative Decree 50/2016 (national Italian law which implements the European Directives and introduces PPPs in a structural manner—social infrastructures and more); two actually remain to be completed (including the "Health City[7]"). The value of the investment is 1.2 billion euros, with construction beginning between 2004 and 2010. For all seven hospitals the tender was conducted with the system prior to Legislative Decree 50/2016 following more or less the same procedural model. The Veneto Region, still the pre-LD 50/2016 phase, completed four hospitals for 0.6 billion euros, and Tuscany four hospitals within a single structure of 0.4 billion euros. In Italy as a whole, if we take overall PPP interventions exceeding 20 million euros as a reference, the construction of hospitals represents 50% of PPPs. In the United Kingdom, the hospitals in PFI and PF2 projects represent 22%, with 130 interventions compared to 40 in Italy, with an average investment which is the same for the two countries, equivalent to 120 million euros per intervention.

The lower number of PPPs in Italy—which has tried to resume all the interventions carried out—should not be interpreted as indicating partial data (regarding Italian) but as an absolute lower intervention of PPPs compared to the situation in the United Kingdom (Fig. 6.10). If anything, for Italy we must recognize the lack of systematic collection of data on PPPs, which instead takes place in the United Kingdom, with the addition also that for Italy, the data collected reveals a conceptual lack of culture with respect to the instrument of PPPs. Different types of data are combined: economic infrastructures with fees and social infrastructures with fees; concession of services not distinct from those of works; or the term concession is improperly used (Dalla Longa, 2017). In Figs. 6.9 and 6.10 an attempt was made—to the extent possible—to carry out a coherent count of the data with the verification of each individual project and its trend. Small PPP interventions are missing from the count.

The current situation reflects Brexit, and thus with Great Britain, that more than others had pushed PPP (PFI) conceptually and operationally, now located outside of the EU perimeter. A series of actions and guidelines (EU, 2004) were adopted by the EU Commission to integrate the UK model developed by the Tony Blair government within the EU system. In the next few years, this issue could produce unpredictable developments for Europe itself.

Economic and social infrastructure in the European model—Economic infrastructure, as discussed here, is only one of the components of the PPP model and the matching of urban infrastructure to the brownfield, but perhaps in the specific case the term to be used is '*browngreefield*'. Often the PPP, especially in social infrastructures (e.g. decommissioning of old hospitals and construction of new ones), is the construction of the new in often different places with an indirect link with the old.

[7] See further on—Sect. 6.6, *Case (1b): Infracapital.*

In Europe (EU) economic and social infrastructure have differed since 2014 and it is useful to consider them separate.

In 2014 in Europe (EU) the state formally assumed a secondary role for the first time as regards economic infrastructures. This happens with the introduction of the 'operational risk' introduced with the EU directive of 2014/23.

The primary relationship is that between economic operator and user. That means, it is the economic operator who must evaluate the demand for use of the service over time and organize the offer around this. The principle is very similar to what happens with activation and investment for any other economic asset. The main relationship remains between the lender (credit institution or fund) who is asked to provide the loan, and the economic operator who requests it, to organize the offer based on the analysis of demand. The two economic subjects, each from their own point of view, will evaluate the advisability and sustainability of the proposal. The state and the public administration will evaluate the service in terms of benefits for the community, utility, sustainability, and environmental and economic impact. They can also make an initial contribution not exceeding 50% of the value of the work, but they cannot substitute market risk, that is to say, the relationship between the user and the consumer required to pay the rate and the resulting revenues.

This means that revenue and costs are regulated by supply and demand between the user and the economic operator. In the absence of profitability, the state (and the public administration) cannot intervene in support of the economic operator, on pain of generating a form of illegitimacy, that is reprimanded and sanctioned by the EU due to conflict with the EU directive.

This principle of operational risk and market risk represents an epochal transition in the relationship between the state and economic infrastructure and between the state and the market. Operational risk must remain constant throughout the Long Term Contract and does not belong only to the first phase of the contract between the state and the economic operator.

Social infrastructure (Hospitals, Healthcare, Assistance, Education and Universities, Social in general, Civil buildings, Prisons, etc.) when it is part of a PPP, instead responds to other principles. It is the state and the public administration that organize the demand: the economic operator organizes the offer.

In organizing the demand, the public operator must replace the user and must be able to evaluate the evolution of the demand over time. It is not so much the operational risk that is transferred, as the construction risk (D&C) and the availability risk (O&M). Once the construction is finished, it will be a question of supplying the offer on the basis of the demand established in the planning and contract phase. An offer that is not able to respond over time to its initial assumptions leads to a reduction of the fee, that represents nothing more than the synthesis of the demand of the user, represented by the state that deviates from the offer. Therefore, indirectly, that market imbalance ('*vagaries of the market*') inherent in the economic infrastructure would arise. With the difference that while the market automatically activates the invisible hand, the state must instead be able to determine the non-payment of the fee with tangible and effective actions. In this case as well, there are strict rules to keep the construction risk and the availability risk within the economic operator's perimeter.

In this case, the state maintains a central role in the choice of a PPP and in the initial planning, which must verify the choice of procedure (traditional procurement, or PPP). At the heart of the choice and the rigor that must be implemented throughout the LTC there is the possibility of recording the investment off-balance sheet, that is to say, that the private debt for the construction of the infrastructure—never less than 50%—remains in the 'belly' of the project company (SPV) and is not entered in the public budget as a tender contract (public work) is. This is a fundamental step for states with high public debt that are required to respect the Maastricht parameters: in the European model, organizing the assembly of a social infrastructure through a PPP, if combined with off-balance sheet accounting, requires a strong increase in public management.

The complexity and failure of the traditional PPP in Italy and in Europe—Urban infrastructure evolution needs PPP development (Boardman & Hellowell, 2017) and for this tools are put in place to demonstrate ex ante, regardless and questionably (Winch & Onishi, 2012) the convenience of PPPs. There is no doubt that we are living in an era of PPP (Hodge & Greve, 2019; Wegrich et al., 2017) however, in Europe there is a partial failure, or slowdown, of its first phase of the cycle (Winch, 2012) also for the delayed evidence of rising costs compared to those planned (Boardman et al., 2016). This does not mean that the PPP is dead, but that it is evolving and behind it, despite the revision of the contracts, it leaves failures or findings that no longer correspond (Posner et al., 2009). It is not the PPP that is in question, but its balance. We are in a complexity that continuously shapes the PPP in which financialization is an accelerator and a new dimension. There is a dynamic, complex and not obvious intertwining with the urban infrastructure. This is a different view from those who look at the PPP as an entirely neo-liberal evolution of the city (Hackworth, 2006). The greatest criticality lies in the complexity and difficult connection between the state and the market in the assembly of a PPP. It is the connection between profit and equity that is weak within a Long Term Contract. It is this evolutionary phase and within this the element of criticality must be found.

The transition from public work to LTC of PPP draws a highly critical path in many segments of the assembly. Technicality, specialism and conjunction of specificity of the State and the market are confused. In many cases, a symmetry that is difficult to synthesize is created. The paradigms of an economic operator are different from those of a public operator who is the political decision-maker called to govern public affairs for an extremely limited period compared to the assembly of an LTC or public officials or managers who are measured on efficiency criteria effectiveness not comparable to that of the economic operator. In the first case, the individual, even if replaced, responds to precise rules, as does the organization that promotes him. For the public operator, the criteria pass through knowledge and individual value criteria not linked to strong general rules and the organization itself that supports its action often experiences randomness and non-structurality.

The comparison between the assembly of the public work and the PPP, shown in the Fig. 6.11, is significant.

In the public works (Fig. 6.11-1) the essential steps of the assembly are: (a) programming, in some countries such as Italy, which is not widely practiced (Wegrich

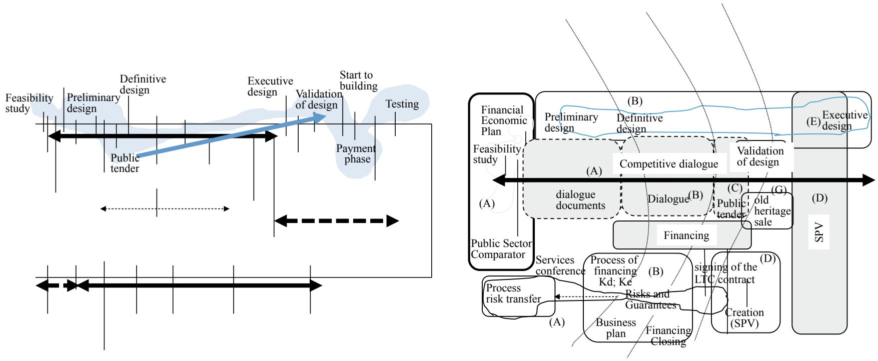


Fig. 6.11 Difference between a traditional public works assembly process and another of PPP (DBFOM)

et al., 2017, p. 7); (b) the design carried out often, and increasingly, by external designers recruited through a public tender; (c) carrying out the works with an engagement of the executing economic operator through a tender managed by the public operator, in some cases the economic operator completes the design at this stage; (d) the delivery of the work created to the public body and use of this; (e) subsequent maintenance interventions through other economic operators always found through a public tender. All the economic operators intervening in the assembly are strictly, almost always, not connected to each other. The choice of actors is random, the connection hinge are represented by the competitions often performed by different people or organizations. The PPP, on the other hand, presents an integration of interests, budgets, actors, long and intertwined processes, professions and organizations that are structured for a long time in the assembly of an infrastructure. For the resulting assembly, the infrastructure resembles a company, albeit quite particular. The integration of this plurality of subjects, tools, interests and organization is almost never accidental.

The passage in Fig. 6.12 from (a) to (b) requires that all phases and sub-phases are in sync and controllable, during the project phase, under penalty of slowdowns and sub-phases of the assembly with serious results on the dynamics of completion of the infrastructure urban.

The assembly—The term "assembly" (*assembling*) is the one that perhaps lends itself best to the phase that goes from the conception to the end of the cycle of a PPP. This also implies the transition from *design* to *project for assembling*.

We must first define the term montage; it is used in different ways: McKeen-Edwards and Porter (2013) use it in reference to the montage of value and power within the governance of "global finance". In an archaic sense and with a specific dimension with art, editing is defined by Seitz (1961) as bringing out disparate elements without relationships with others; DeLanda (2006) and Wise (2011) define montage as a set of elements that enter into a new relationship with an agreement or with a distinctive meaning or purpose. The terms "relationship", "agreement" and

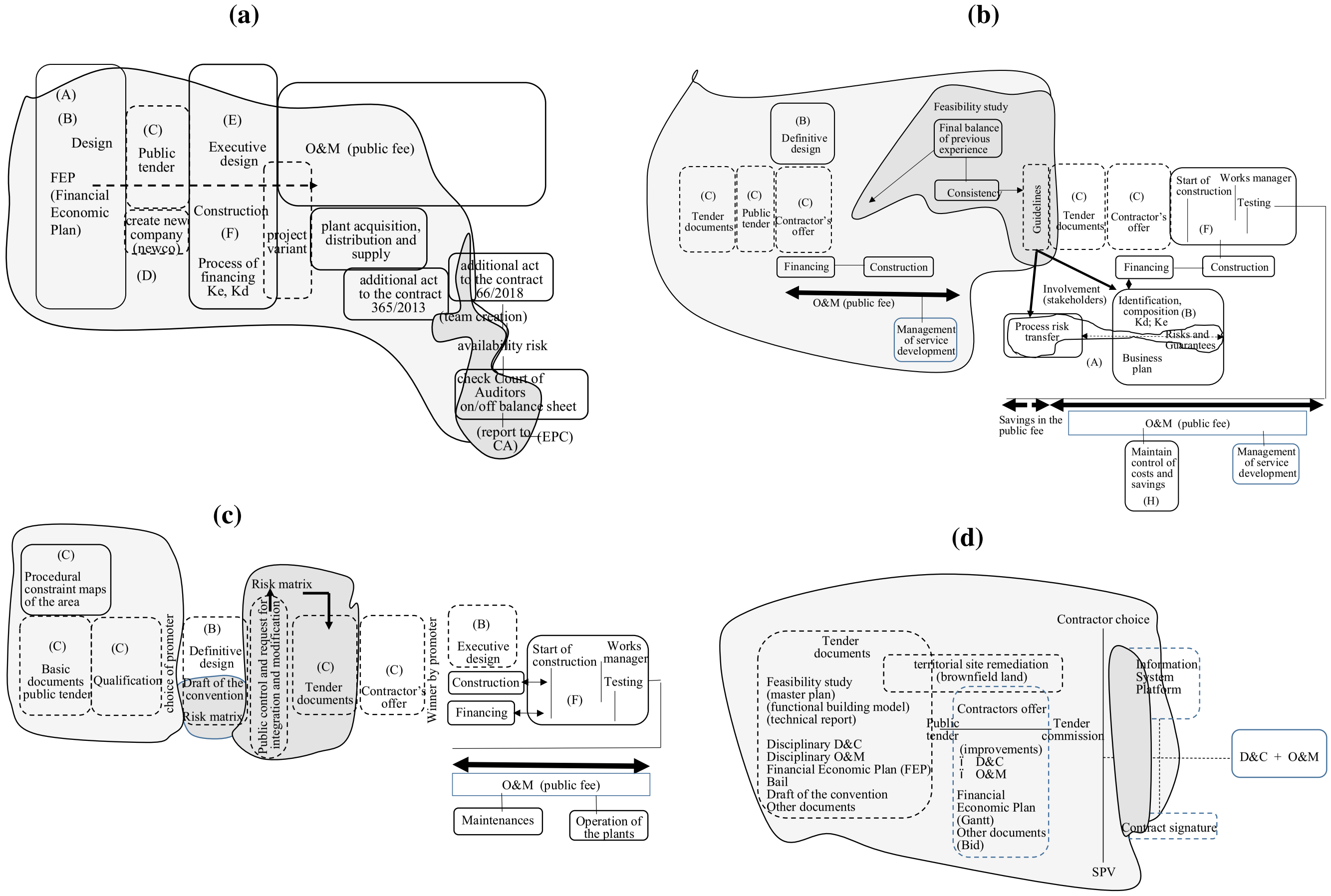


Fig. 6.12 Different criticalities in the assembly phase of different PPPs referred to complex EPC (a), (b), or more traditional formulas of DBFM (c), or DBFOM (d). *Notes* Phases in which PREM Lab is involved (dark gray) to remove the criticalities of a complex assembly, such as that of a PPP. In all four cases (a), (b), (c), (d) the assembly is not yet concluded

"purpose" give the montage a structurality. From a social point of view, Deleuze and Guattari (1988) indicate montage as the putting together of often conflicting elements; for this reason it can amalgamate hybrid elements concerning knowledge, feelings, emotions. It is in the production that we find the main indications on the concept of assembly starting from the physical place (the factory) in which all this takes place. Warnecke and Hueser (1994) define the industrial product as the assembly of finished products into several individual parts, which have been produced at different times and separate places. The editing evolved according to the two authors and the sum of different sessions, of problems within a whole of production and engineering. The reference is to the automobile, in which robotics is the assembly of everything that can be separated into simple step-by-step operations and that include everything. Pham et al. (2016) indicate assembly as a product that circulates and is assembled not in one place but in several countries; the reference is to high technology and the different nations are linked together by a network. And this is the evolution of the assembly of the "factory".

Even in design, or in the construction of machines, there is an idea of assembly that well highlights the evolution of this concept over time. Boothroyd et al. (2011) explain the transition from manufacturing without design (or with a low presence) to one of DFM (*design for manufacture*) and DFA (*design for assembling*) growth and an integration of these into the DFMA (*design for manufacture and assembly*), as well as using the DFA as DFX knowledge The final 'X' indicates the specific property of technical products or more often their related professionalism (Dynybyl et al., 2016; Hosnedl et al., 2016).

If we reduce the field to construction, assembly is interpreted in a different way. Winch (2010) considers the editing as the reference perimeter and the place of production (as in part, and in another form, took place in Warnecke, Hueser 1994, and in Pham et al., 2016), that is to say as "standardization" or "pre-assembly", with the use of standard or mobile components, i.e. prefabricated, pre-assembled, assembled on the construction site: structured inside the "factory", near the factory or on the construction site. This whole issue is destined to grow with BIM (*building information modeling*) (Ciribini, Dalla Longa, 2014).

The temporal change of the montage is implicit in the reference to production. We must ask ourselves whether the subject "montage" or the object "as happens in the specific case of montage" is more important. The answer is that both are important: in the short the object of the montage, in the medium-long the subject. Pratt (2011) instead considers assembly as the component that consists in starting the construction project and for this reason it is a part of the work that can be considered separate from the others; at the metaphor level and the "concrete in the wall". It is also compared to the identification of "work packages": the sequential bricks that make up the building. In both cases (Pratt, 2011; Winch, 2010) we are inside the construction process: in the first case the problem arises with the assembly of the production perimeter (Winch, 2010), in the second case (Pratt, 2011) the assembly represents the homogeneous sequence of the project.

The concept of assembly (*assembly*) expressed is that of "applied management". Lotter (1989) states that the assembly is based on a large number of single parts, produced at different times and by various production processes; the objective of the assembly is, on average, to compose a highly complex part with specific functions in a specific period of time starting from individual parts. Nicholas and Steyn (2012) indicate that the assembly is an assembly system of parts where the parts are influenced by being in the system and for this reason the reference remains project management. The assembly proposed here requires that the concept of process be clear; with the long-term contract (LTC) the assembly does not coincide with a short time but with a continuous assembly, where disciplines change and integrate and, at the same time, the individual parts risk being asymmetrical if not thought of as integrated.

The culture of integration must be all the more consistent the longer the life cycle of an assembly is extended. Both the need for integration and the life cycle change over time, as does the type of assembly.

What has been described concerns the assembly of a complex output that belongs to a production process. The assembly of a PPP is something different, it concerns at all stages different interests and paradigms that can create continuous asymmetries beyond the technicalities. There is a different language that must tend, amidst disparate difficulties, to be unified.

In the assembly of a PPP of the DBFOM model, 60 variables are indicated here to describe its complexity, all the parts must be broken down even if within a single wp (work package), others must also be removed based on the kit to be given to the "assembly" of the PPP.

Assembling an intervention as a sum of non-communicating disciplines could make sense in a prototype phase of the PPP (t1); it can no longer be so in a phase of risk maturity, nor does the evolution and globalization of the urban infrastructure require it.

What has been indicated can no longer be the sum of different cultures, skills and specialisms. Without this sharing, the PPP is destined to run aground and not come to a conclusion, or to turn into a pathology. Knowing how to converge around risks becomes fundamental in a phase of risk maturity. Lack of awareness and lack of measurement is now no longer possible.

However, for a PPP the greatest difficulty does not concern the integration of different disciplines and skills (Fig. 6.13), but rather the connection of interests, times, organizations, sensitivity, actions responding to different needs in which the contract alone, unlike a public work, no longer represents the relationship between public entity and economic operator.

The main criticalities that can be found concern:

(a) *The setting and programming phase*, which is strategic to correctly set up the assembly process. There is a substantial asymmetry between political decision maker and editing (Wegrich et al., 2017).
(b) *The reunification of planning*, in which it is clear what the PA wants and how it wants it. A total delegation to the private on this aspect is intended to reify the problems in the phase of the process that follows.

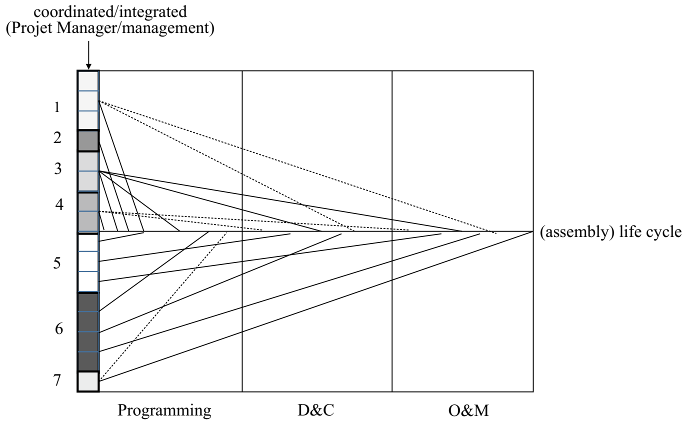


Fig. 6.13 (Assembly) life cycle: specialism and Interdisciplinary relationship within a PPP. *Note* The numbering corresponds to: (1) european and national law; (2) administrative procedure; (3) accounting; (4) finance; (5) risk; (6) other specialisms; (7) facility management, all these specialisms coordinated/integrated by the project manager. *Source* Dalla Longa (2017)

(c) *The correct activation of the competitive dialogue in all its phases* and the possibility of interrupting it if deemed not convenient for the participating subjects, including the PA.

(d) *The phase of selecting the contractor and the contract*. The underestimation of this phase, which is very frequent, is due to the lack of importance given to planning and to considering the tender as a separate component from the process with a settling culture, specialized and not very communicating with the other components of the process.

(e) *The financing phase.* This is by far one of the most critical components of PPP development (and concessions).

Hall (2015) and others (Chan & Worth, 2016) input to this phase and its problematic nature the reduction of the number of PPP projects in the implementation or investment reformulation phase; or an extension of the time between the end of the tender and the financial close, with an increase in costs (Voordijk et al., 2016). Others (Dalla Longa, 2017) attribute the reduction of the PPP in the most critical period of the crisis to the internal stability pact (inability of local authorities to provide public contributions to private capital).

(f) *The phase of constitution of the SPV*: it must take place in a phase in which all the part of the loan has been resolved and the PA is aware of the "real" implications on cash flow.

(g) *The construction phase*, in which a rift is not created between those who are called to build quickly and those who will then be called to use the asset. It has been found in some researches carried out (Dalla Longa, 2017) as many errors projects are downloaded *ex post* with variants in the O&M phase, or fees are paid that correspond to plants built but not used.

(h) *The O&M phase*, in which the major problems, unsolved questions and pathologies not dealt with correctly in the previous phases are poured out with some main actors who have now exited the process leaving to others the management of pathologies that in a phase of maturity risk are no longer manageable.

Each of these macro phases contain different outputs that must find a synenrgic integration between them.

Looking for a new PPP—The Future of PPPs and initial conclusions.

The future of PPPs and the use of private capital will be mandatory and necessarily continue to grow. In 2020, the International Monetary Fund estimated that in July 2020, states, through new debt, or near-term direct fiscal commitments, had used 11 trillion dollars in response to Covid-19*,* and that the amount would double or triple by the end of 2021. Given this situation, others (Oxford Economics, 2017) have foreseen investment in infrastructure of 94 trillion from 2017 to 2040 (23 years). Furthermore, to cover needs, following the trend, there would have to be an additional 15 trillion dollars, with an increase from 3% to 3.5% of investment as a percentage of GDP. The reference is to trend forecasts made three years before the Covid-19 pandemic. With the new scenario, the trend can be guaranteed only through a revision of the composition of infrastructure financing and PPPs, perhaps reformulated. This will inevitably lead to a strong genetic mutation of urban infrastructures.

The PPP model cannot be unique on a global level; while techniques (e.g. project finance, leasing) formulas (e.g. DBFOM, EPC, but there are many others—Dalla Longa, 2014) and management and organizational purpose companies (e.g. SPV: Special PurposeVehicle, ESCo: Energy Service Companies; and AMC: Asset Management Company) are. The difference consists of types of infrastructure and the organization of the public administration, and for developed countries the ability to create a new integrated culture. Often there are barriers that prevent the rapid development of the PPP model.

PPPs represent an important line of global development which can however be combined with the segmentation and different nature of states. An acceleration on the old PPP model can still be seen in some states (emerging countries) but there is a blockage or slowdown in others (developed countries). In summary:

A PPP is presented as a possible area (perimeter) from which to draw broad and in many ways unexplored development, an instrument able to channel the enormous mass of unused financial resources to produce collective benefits in the 'saver-user-consumer' chain. However, there are also very critical issues to be addressed and reconciled.

6.4 Theoretical and Operational Elements of Financialization

The use of the term financialization (or financialization)—there is a prevalence in the academic field for the use of the first term over the second, due to the prevalence of the US rather than UK spelling of the concept (Aalbers, 2019)—began to have a strong impact in the last decade (Mader et al., 2020). Its use began earlier, but it is in the last decade that the term took on substance and different meanings.

One of these is the financial services revolution and the rise of non-bank financial institutions (Aalbers, 2019) which have always represented the traditional financing of public works. Another, related to the first, is financialization as assetization, that is the transformation not only of real estate (Aalbers, 2017), but also of infrastructures as assets and of another range of commodities and goods transformed into marketable financial assets (Aalbers, 2019) which, however, for infrastructures ends up taking on a completely new character given the traditional relationship of the latter with users and the state.

One of the effects of financialization is the reduction of bank financing to production companies (real economy) to the advantage of the assets that best attract financing. The relationship between banks and enterprises has changed in favor of financial assets (Lapavitsas & Powell, 2013). According to Krippner (2005) it follows "an accumulation model in which profits accrue mainly through financial channels rather than through trade and the production of raw materials."

It is ultimately in this century that clarity was reached on the financing mechanism through financial assets (including real estate first and then infrastructure) and then assetization and financialization. Assetization saw pension funds enter the field (Clark, 2000) as well as other financial institutions whose criterion for funding takes on new, not always rational characteristics (Chohan, 2018) and new risk categories and a different way of dealing with risk arise (Birch, 2017; Clark et al., 2006). Pension and insurance funds and those involved in real estate as developers therefore establish a strong attraction of financial funds with large cities and global cities.

In the last 10 years, starting from 2011, there has been an exponential opening and growth of academic and literature contributions on financialization with content that is interdisciplinary, regards economics and geography, and is more separated in terms of the amount of business and finance and political science involved (Mader et al., 2020). This is also a sign of a phenomenon that is beginning to present itself with a strong structural trend, even if this growth leads to gaps (Christophers, 2015a, 2015b) and to passages not fully demonstrated by scientific evidence that would require more rigor (Krippner, 2011). For example Lapavitsas (2011) identifies several more or less radical approaches to financialization, while Davis and Walsh (2017) intervene in the differentiation between financialization and neoliberalism. Ultimately, three types of risk are identified regarding the term financialization used in an extended form. That is to say, the term was diluted following the spread of the financialization narrative, and therefore by the extensive movement outside of its disciplinary boundaries (Christophers, 2015a); or, that there is a conceptual extension (Engelen, 2008) to the point of becoming a meaningless 'meme' (Mader et al., 2020). Contrary to these two considerations, the term financialization could be considered within a closed concept and system in which the causes are linear and an artifice and detachment is created with the change of the object (finance) especially if there has been a simplification of the cause and effect (Aalbers, 2019) of financialization. In any event, the change in the present and the post-Covid-19 phase will be disruptive. On the one hand, there is a strong attraction towards the new term financialization and assetization, with all this entails for the impact it has on global cities, real estate, and brownfield infrastructures; on the other, though, caution is needed for the use of the term as a whole. As regards real estate, Wijburg et al. (2018) indicate the passage from 1.0 to 2.0, from a phase where the financialization carried out by funds was mainly speculation, to another, more advanced phase. The shift is from the method of buying at a low cost to then sell at a higher price, defined in a fairly short timeframe, which produced gentrification (Brown-Saracino, 2013; Smith, 2017), to a phase 2.0 of financialization in which times lengthen and become a central feature of the urban structure where asset management has a longer life cycle. Another role is taken on by private equity funds (Beswick et al., 2016) such as Blackstone (the second-largest real estate fund in the world in terms of turnover and in the top twenty-five as an infrastructure investment fund) and Colony Capital (one of the top thirty-five worldwide in real estate and among the top thirteen in infrastructure investment). these funds act as 'Global Corporate Landlords' (GCL) in London and in large global cities, helping to coin phase 2.0 of real estate financialization (Beswick et al., 2016); the same has been documented for large global cities including New York and Berlin (Fields, 2015; Fields & Uffer, 2016).

It is in the last decade that financialization has been combined with infrastructure (O'Neill, 2013, 2019; O'Brien & Pike, 2017; Pike et al., 2019). There is no consideration that leads directly to global cities, or to large urban centers; but it is a particular attention to the evolution of the state (O'Brien & Prike, 2017; O'Neill, 2019) and to the specific fiscal crisis of the state that creates the conditions for financialization (O'Neill, 2019). With financialization applied to infrastructure, we are witnessing an assetization of infrastructure without a clear distinction between economic and social infrastructure. In many cases, the infrastructure considered is brownfield, especially by pension funds, such as the Australian Macquarie, and therefore, from the more general analyses of O'Brien et al. (2019), financialization is indirectly part of urban infrastructure.

In the works cited above there is a reference to financialization and urban infrastructure, but not to global infrastructure, which is found in Torrance (2009) and which can ideally summarize the beginning of some correlations with assetization, infrastructure financialization, and global infrastructure market.

In the summer of 2006, Britain's largest water management company (Thames Water), serving 13 million users in London and much of Southeast England through 31,000 km of aqueducts and 67,000 km of sewer systems, was the source of a bidding war among various investment banks, infrastructure managers, investment funds, and private equity firms. The Macquarie fund won the tender with an offer of 8 billion pounds (16 billion dollars), moving the water utility into institutional investors. Sixteen institutional investors from around the world, including pension funds from Canada, the Netherlands, and Australia supported the offer made by of Macquarie. They are now co-owners of the London water network and these same institutional investors look to the water network for recovery of interest and return on invested capital, just like any investment in any other asset.

In terms of academic publications and literature before 2009, the number of articles with the title infrastructure had grown, but not exponentially, as happened subsequently (Pike et al., 2019) just as, in the same period, articles having the word financialization as a reference 'topic' increased five-fold (Mader et al., 2020).

In his analysis, Torrance (2009) does not combine global infrastructure with global cities as the action is 'defocused'. In the 25 cases reported globally, pension funds, in the decade prior to 2009 (especially in the years 2004–2006), often acquired corporate control of economic infrastructures that are not localized necessarily in the context of the global city. Or better, such infrastructures are indirectly located within global cities, or large cities, but cities are not the point. The issue is the assetization of infrastructure on a global level by pension funds that are starting to enter the finance scene, in which the Australian Macquarie fund alone has purchased and acquired control, a stronger position, and a presence in nine economic infrastructure companies (water, electricity, gas, airports, and rail transport) in seen different countries among Northern Europe, North America, and Australia.

These are purchases of brownfield infrastructure located in high income developed countries for a few hundred billion dollars. The same happens with the Canadian pension fund, or to a lesser extent Morgan Stanley (e.g. parking lots) or Goldman Sachs (ports).

The major contributions on financialization before the last decade had a reference to the city (Pike et al., 2019), but not to the global city. Or there was a reference to globalization and infrastructure as an asset, but no reference to financialization (Torrance, 2009), partly because the literature on financialization came later. It is these elements that must be composed. O'Brien and Prike (2017) analyze the UK, US, and Australia and indicate how financialization is a negotiated and disorderly process and takes place in different geographical contexts. To activate financialization it is necessary for there to be some preconditions: the transformation of the state and a change of regulations. The main object of analysis is not the city, although it is present (Pike et al., 2019) but the different relationship between the state and the market (economic operator). O'Neill (2019) indicates a three-component relationship that characterizes the relationship between infrastructure and financialization: organization, capital structure, and regulations. In the first of the three (organization) there is the emergence of several infrastructure financing entities with different economic interests such as direct investors, closed funds, open funds, platforms vertically integrated corporations, merchant banks, sovereign wealth funds, pension funds, and insurance funds. Lenders, their organizations and funding lines, have a different way of considering assets: (a) (*direct investors*) in terms of autonomous and sufficient equity management able to control the operation of the infrastructure; (b) (*closed funds*) holding a portfolio of selected assets with fixed return expectations before repayment of capital; (c) (*open funds*) with a dynamic portfolio and more inclined to speculation, without a specific closing date, in evolution and with different investment times; (d) (*pension and insurance funds*) in a more prudent way linking it to a safe inflation recovery and reduction risk. Among those listed there are also lenders and more complex credit lines.

In the discussion of financialization and assetization, we arrive at the global city or urban infrastructure because they dovetail, not necessarily due to a strategy on the part of the players, but by functional induction linked to the sum of several filters or matrices. According to O'Neill (2019) capital structure means a mix of finance assembled to satisfy credit by creating new needs for the asset within its Long Term Contract. There may be a sum and often divergence of interests; on the one hand the interest of the traditional component of users, and on the other, that of the return for the saver, retiree, speculator, investor, or other various interests incorporated in the asset class.

With 'assetization', in the transition from public work to urban infrastructure, some important aspects change: the state-user-voter relationship and the financial mix that enters the infrastructure. Furthermore, the nature of the infrastructure itself changes with the Long-Term Contract. It is worth remembering that this is a non-negligible evolution induced by financialization.

Tensions are growing in the amalgamation of finance within the process of assembling an infrastructure, and the additions to the contract increase, effectively shifting the axis of the relationship of the infrastructure with users and the state. There is nevertheless a further structural aspect, to involve those who invest to 'park' financial capital in infrastructure. Global cities are those that, due above all to their shape and characteristics, attract investments and those who invest. Attracting and being attracted also requires high planning skills on several fronts. For this reason as well, investments are placed within defined areas in which the language of globalization is often a formidable landing point.

Due to its high density of infrastructures and its high capital intensity, the city is able to sustain investments in infrastructures in the long term, better and more than other areas.

Although according to Halbert and Attuyer (2016) these investments, as with many infrastructures, remain invisible to most. Except, such as infrastructures, when they collapse (e.g. the Morandi bridge in Genoa, see page) and in cases of more on less comparable inconvenience (e.g. the subprime crisis which revealed the interconnection between household mortgages and the capital market), they become highly visibles.

This may be one of the reasons for a disconnect between assetization, financialization, urban infrastructure, and global cities. The proposal made by Halbert and Attuyer (2016), without touching these different categories, is to consider financialization as a new form of urban production.

Other authors such as Langley (2018, 2020) place financialization in relation to assetization with a reference to urban infrastructure, but with a weak reference to globalization, especially with reference to global investors (Langley, 2018) and to the global financial crisis (Langley, 2020). However, there is no specific reference to globalization as such and to global cities; just as the reference to cities is weak, the only link is with urban infrastructure. This also concerns other contributions where there is a high reference to infrastructure (and not to urban infrastructure) and to assetization and marketization, but none to globalization, financialization, or global cities (Birch & Siemiatycki, 2016). The term financialization, however, overlaps with assetization. It is the term financialization added to assets, the market, and urban infrastructure using Bryson et al. (2018) without ever referring to globalization and the city or urban infrastructure. Cities, urban infrastructure and financialization are the references made by Kirkpatrick and Smith (2011) yet in this case as well, almost without referring to globalization.

The setting of this book has as its center of gravity financialization, urban infrastructure, globalization, and more specifically the global city and assetization, aggregations which are not very present, all together, in the previously mentioned contributions. Here the question is to verify financialization with respect to the center of gravity indicated (Fig. 6.14). There are not many studies that place the center of reflection within the center of gravity. There is a trace of this in the evolution of the works of O'Brien and Pike (2015), O'Brien, Pike, et al. (2019), partly in O'Neill (2009, 2019) and to a lesser extent in Jonas et al. (2019) who, without using the term financialization, introduce the global infrastructure PPP, or Farmer and Poulos (2019) who having as a reference the now known case of Chicago in which many funds are involved in an experimental form (Farmer, 2014), without going through the term financialization (which instead he used in 2014), but using that of financializing, indicate in addition to the global city also global infrastructure, finance, and investment.

In 2015 and 2018, O'Brien and Pike (2015) and O'Brien, Pike, et al. (2019) addressed London not as a global city as such, but as a global city-region; there is also an attempt to mark a difference between (global) city region (Scott, 2002, 2008) and global city (Sassen, 1991, 2010). However, precisely the analysis of London and indirectly of some major world cities, make it clear how the needs of urban infrastructure are differentiated, and evolve, in global cities or city regions. It is not to be forgotten that in the ranking of global-cities, according to the Comparative

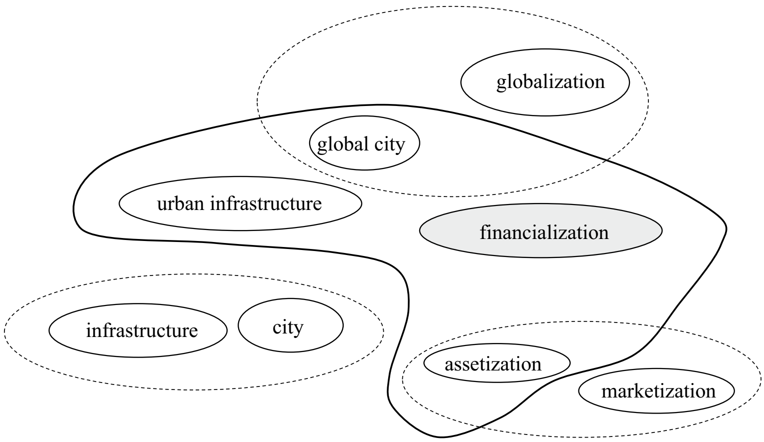


Fig. 6.14 Breakdown of the technical-operational elements of financialization

Business Connectivity (GNC Global Network Connectivity), London is in first place (Sassen, 2019; Taylor & Derudder, 2016).

In terms of demand for urban infrastructure, several peculiarities emerge in regard to Greater London:

- It grew by 5% from 1996 to 2012 in terms of GDP, considering the entire United Kingdom as 100%. All other UK Regions cede percentages in favor of Greater London (Travers, 2015). Greater London alone accounts for 1/5 of the entire UK GDP.
- 2014 data elaborated and compared by Berry et al. (2015) showed that for London investments in infrastructure were at a per capita level (equal to 5,305 pounds per person) 12.8 times higher than those of the North East (the New Castle upon Tyne area); 8.6 more than the East Region; 8.7 more than the West Midland Region (the Birmingham area) and 2.7 more than the North West Region of Liverpool and Greater Manchester. The concept of urban infrastructure and global city is clearly explained by the relationship of these data. There is also a correspondence with annual GDP production present in these regions (Travers, 2015).
- The London Infrastructure Plan 50 (LIP, 2015) indicated infrastructure investment requirements for London of 1.324 trillion pounds from 2016 to 2050. However, the amount reported as available was significantly less than 1/5 of the possible public resources. The calculation mainly considers traditional infrastructures, albeit largely brownfield ones (public buildings, transport, energy, schools, water, waste, etc.). An example is public transport, with a requirement of 466 billion pounds and public resources available in the same period of 89 billion pounds (19%). The evolution of urban infrastructure was not considered in the calculation.

In the last decade, London has launched a detailed policy of financialization of urban infrastructures (e.g. public water with Macquarie; Allen & Pryke, 2013; Pryke & Allen, 2019), but it is above all with the subways that there has been a massive policy of creating an interconnection between PPPs and real estate (pension funds and sovereign funds, e.g. the Malaysian Sovereign Wealth Fund for the Northern Line Extension), experimenting with different formulas, including innovative ones for those years, so much so that the mayor at the time, Ken Livingstone, claimed that the proposed PPP was too complex (O'Brien & Pike, 2015) to be managed. The same view was expressed by TfL (Transport for London) which stressed that PPP contracts were "by far the most complex contractual arrangements that had ever been attempted to apply to an urban mass transit system" (TfL, 2002, p. 2). Some financialization policies failed (Metronet in 2007; or in 2010, Tube Lines, a private entity, which had won a 30-year contract for the Jubilee, Northern, and Piccadilly lines; O'Brien, Pike, et al., 2019). In the late 1990s, the London Underground was in dire need of new investment, and repairs and maintenance were at risk. These are the elements that for global cities, led urban infrastructure, financialization and assetization to take shape within brownfield infrastructures. Recently (2016) new joint ventures (the Property Partnership Framework) were born for London, led by TfL, with urban developers (13 of the major London and global developers) with the aim of connecting real estate (including a share of social housing) and transport infrastructures (TfL, 2016). These are new forms of evolution and financialization of urban infrastructure in a global city.

The relationship of financialization with infrastructure can take various forms. From the purchase and management of the infrastructures then changing the nature of the infrastructures themselves, to interventions through joint inventions, the creation of special purpose companies (SPV, ESCo, etc.), to direct intervention through the management of debt or equity (different lines of financing), determining part of the trajectories or strategies of the infrastructures. The change of nature with financialization does not only concern urban infrastructures, but also largely concerns real estate (Botzem & Dobusch, 2017). In financialization, there is also the interconnection between the urban infrastructure (brownfield) and real estate.

One of the theses that leads to financialization is the increasingly important and growing weight of finance within the assembly of infrastructures. There is a change of interests, logic, and stakeholders that have an increasingly massive impact on the assembly processes of an infrastructure and this is greater where the infrastructures are located, in large urban centers. Financialization is combined with globalization and this is an element that is added to other considerations, in part because the financial actors are often the same and operate on a global level. There are also significant implications with modifying the assembly. The complexity of the assembly is growing, along with the complexity of governance, there are new forms of accountability, the nature of the state and the shape of cities are changing, and the concept of financialization is merging with globalization. There are also new forms of inclusion/exclusion and there is a need to think quickly about new interdisciplinary skills.

One of the expressions of financialization is the rapid growth and the presence of new financial actors that enter the financing of infrastructure and that join forces with real estate in global cities and large urban centers.

In recent decades, finance has acquired an ever-increasing weight compared to traditional production tools. It is both the cause and effect of other transformations. One of these is the transformation of the state, which in turn is the result of other transformations. Even if the term cause-effect is poorly demonstrated, there are contributing causes of transformations including the relationship between the state and the market, and the globalization that follows is one of the pre-eminent transformations that drive the transition from public works to urban infrastructure.

This weight is combined with globalization and large urban centers and global cities.

What is part of financialization effectively sanctions the change of nature of urban infrastructure towards the growth of greater complexity and the change of actors, scale (prevalently from national to global) languages, professions, and accountability. All of this takes place in an inorganic form and with differentiated and heterogeneous logics, more concentrated in large cities. The use of the term financialization indicates a change underway rather than driving it. It is significant that there are different categories and specializations that use the term financialization to explain the changes, even going so far as to define the risk of making the term financialization useless due to the excessive number of meanings.

Financialization enters the obsolescence and replacement of significant parts of the city on a large scale.

Financialization enters first into real estate and then into urban infrastructures.

An growing role is played by dedicated funds or loans in the form of debt, equity, joint ventures, or corporate financing for urban infrastructures.

The ordinary financing from the Italian State for public works in infrastructure (tenders) amounted to 27 billion dollars in the year 2020. In the same year, the fund managed by the top fifty funds was equal to 257 billion dollars, almost ten times more than the traditional intervention of the Italian state. However, the territorial references are different, even though most of the investment from funds is located in Europe and the US.

The top three funds related to infrastructure (Macquarie infrastructure, Brookfield, and M&G) invested in infrastructure 123 billion dollars in 2020 compared to 2019.

The allocation of funds' resources to real estate began earlier and is much greater than that allocated by the same funds to infrastructure, although in recent years the percentage of resources has tended to be inverted, with the passage of non-marginal shares from real estate to infrastructures (Fig. 6.15a, b).

An analysis of the nature of the top 100 funds shows that for infrastructure, the top funds with the most resources to be assigned and managed are those of a global nature with a global profile; they are also those that manage most of the resources to be transferred in different forms to urban infrastructure. In an equal comparison with the funds relating to real estate, a greater concentration in the management of funds by the relative few players emerges for infrastructure.

The top three funds investing in infrastructure financing account for 42% with respect to the other 95 main funds, compared to less than 20% for rea estate; this if the same metric were to be applied. It follows that those who intervene through funds in infrastructure financing are more concentrated in the tip of the pyramid (a few large funds), for real estate, on the other hand, a greater distribution from top to down prevails (Fig. 6.16).

Figure 6.15a, b show how the allocation of funds and institutional financing (f & ii) have grown in recent years for both Real Estate and infrastructures. We are witnessing a rapid and progressive growth of the 'assetization' and in particular a greater growth in infrastructure financing compared to Real Estate. The phenomenon did not stop even in the face of the 2020 pandemic. Where there has been a slowdown in Real Estate this has been replaced by infrastructure financing. It is a long and structured trend that is difficult to break.

The different weight of a few (f & ii) on the total considered as regards the financing of infrastructures represents today a characterizing datum.

A sign (as shown in Fig. 6.16) that the (f & ii) at the tip of the pyramid on Real Estate are more traditional and conservative and mainly have other financing within the portfolio with a substantial share of Real Estate. On the other hand, the large funds involved in the financing of the infrastructure are more focused on the highest part of the pyramid, both in absolute values compared to other investments and in relation to the remaining forty-five out of fifty (f & ii). Although in the last year (Fig. 6.16) there is a slight rebalancing of the funds paid by the remaining forty-five funds out

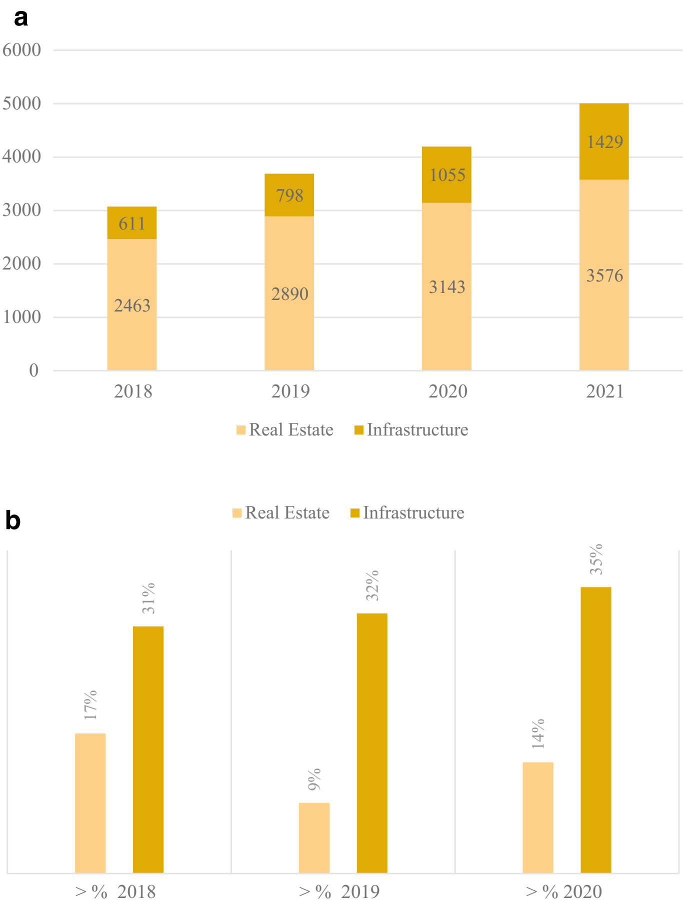


Fig. 6.15 **a** Infrastructure and Real Estate: funds and private institutional investors (f & ii—the world's 50 largest infrastructure and real estate investors; billions of dollars invested by (f & ii); different years; absolute values); **b** Infrastructure and Real Estate: funds and private institutional investors (f & ii—the world's 50 largest infrastructure and real estate investors; % increase in each year from 2019 to 2021 in dollars invested by (f & ii). *Source* Our processing on *IPE Real Assets (Magazine—International Publishers): Research and data*, The top 100 global investors, different years (2017–2022)

of the fifty as regards the financing of infrastructures, a sign of a progressive level of maturity and more widespread sharing of financing of (f & ii) on infrastructures.

The Real Estate financing of the major funds extends over several continents and in particular within global cities. It is evident that different funds are intervening globally in all regions of the world.

Table 6.1 also shows how there is a strong growing intertwining between the financing of Real Estate and that of infrastructures.

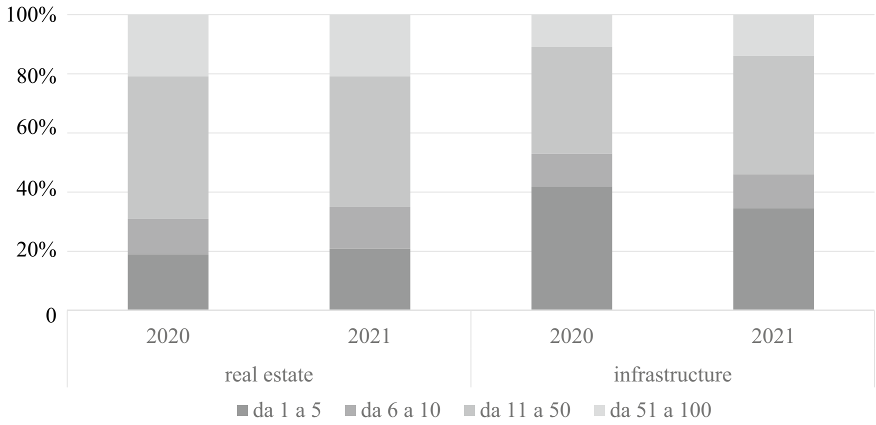


Fig. 6.16 Infrastructure and Real Estate: funds and private institutional investors (f & ii—ranking of the 100 largest infrastructure and real estate investors in the world). The reference is the % distribution of—f & ii (top 5, from sixth to tenth and so on) and the results of the funding by ranking, 2020, 2021. *Source* Our processing on *IPE Real Assets (Magazine—International Publishers): Research and data*, The top 100 global investors, different years (2021–2022). Infrastructure = 100. How much do the top 5 largest funds contribute (2020, significant data: 19% for Real Estate and 42% for infrastructure); how much the second 5 funds contribute (from 6 to 10th place in the ranking), how much contribute the 40 intermediate funds ranging from 11 to 50th, finally how much the remaining 50 funds that covering the positions ranging from 51 to 100th

Table 6.1 Infrastructure and Real Estate: private funds and institutional investors (f & ii—ranking of the 50 largest infrastructure and real estate investors in the world). For each (f & ii) it was considered whether the financing referred only to Real Estate (a2) or only to Infrastructures (b2) and if it referred to both, how much of (f & ii) was recorded in Real Estate (a1) and how much instead in infrastructure (b1); 2020

Real estate		Infrastructure		Total		References (a)	References (b)
(a)		(b)		(c)		%(a1; a2/tot)	%(b1; b2/tot)
a1	1,551	b1	656	(a1+b1)	2,207	49%	62%
a2	1,593	b2	399	(a2+b2)	1,992	51%	38%
tot	**3,143**	tot	**1,055**	tot	**4,198**	**100%**	**100%**

Billions dollars; a1 (f & ii) presente sul Real Estate ma anche sulle Infrastrutture; a2 (f & ii) presente solo su Real Estate; b1 (f & ii) presente sulle Infrastrutture ma anche sul Real Estate; b2 (f & ii) presente solo su Infrastrutture

Source Our processing on *IPE Real Assets (Magazine—International Publishers): Research and data*, The top 100 global investors; see Fig. 6.15, year 2020

In part this is due to a particular phenomenon, that of infrastructure financing, which is more recent after all, and in which the first players quickly took the position in the ranking and began to shape infrastructure financing. Among the five funds are those analyzed in Table 6.2. These are actors, which compared to the first five involved in the financing of Real Estate, have almost the same weight despite different proportions in the financing of the two sectors (Real Estate and Infrastructure). It almost does not mean the same weight today, but a tendency towards a possible alignment. Many (f & ii) that invest in infrastructure are also involved in the real estate sector, so there is an intertwined strategy between investing in infrastructure and real estate.

Box 6.3 Data comment

The comparison should be made with Fig. 6.15a, year 2020 in which the financing of (f & ii) for Real Estate was equal to 3,143 billion dollars, while the financing for infrastructures was equal to 1,055 billion dollars for a total total of 3,143 + 1,055 = 4,198 billion dollars. Of the 4,198 billion dollars, the component of each (f & ii) that added a share of financing on Real Estate (a1) to the Infrastructure (b1) was 1,551 (a1) + 656 (b1) = 2,207 billions dollars; while the component that concerned only Real Estate (a2) or only Infrastructure (b2) was 1,593 (a2) + 399 (b2) = 1,992 billions dollars. They are considered only the top 50 (f & ii) if we had extended them to the top 100 (f & ii) it could happen that some (f & ii) with a ranking among the top 50 (f & ii) would had either a financing share in the top 50 (Real Estate) and a share among the remaining 50 (from 51 to 100) for Infrastructure and vice versa for Real Estate. However, this count that takes us away from Fig. 6.15a is marginal and does not exceed the 87 billion dollars so it is omitted from the calculation of Table 6.1.

Table 6.1 shows how for the top 50 institutional (f & ii) funds and lenders, those with a prevalence of real estate, historically more structured, in 2020 divided their interest between a prevalence of real estate, but with an investment also in infrastructure, a sign of a new contiguity and expansion of its business with infrastructures. It is an expansion of the concept of 'assetization'. This is also present with predominantly infrastructure funds (62%), a sign of a double intertwining between Real Estate and infrastructures, but there is a share of institutional funds and lenders (f & ii) that intervene exclusively on infrastructure (38%). This is further proof of the phenomenon of global cities and urban infrastructures seen as one and the same integration.

Figure 6.17a, b further highlight how the (f & ii) that finance infrastructures and real estate are globally branched and at least the major funds intervene in all geographical areas with some peculiarities:

(a) The financing of (f & ii) on infrastructures appears with much more intertwining, ramifications and globalization than in Real Estate. For infrastructures, the relationship between Europe and North America and in general between all regional areas appears to be more structured and interdependent, a sign of uniformity of financing on infrastructures compared to Real Estate. For infrastructures, a nodal point is constituted by the Europe area where the brownfield on which the (f & ii) seems to concentrate more the interest and financing of the (f &

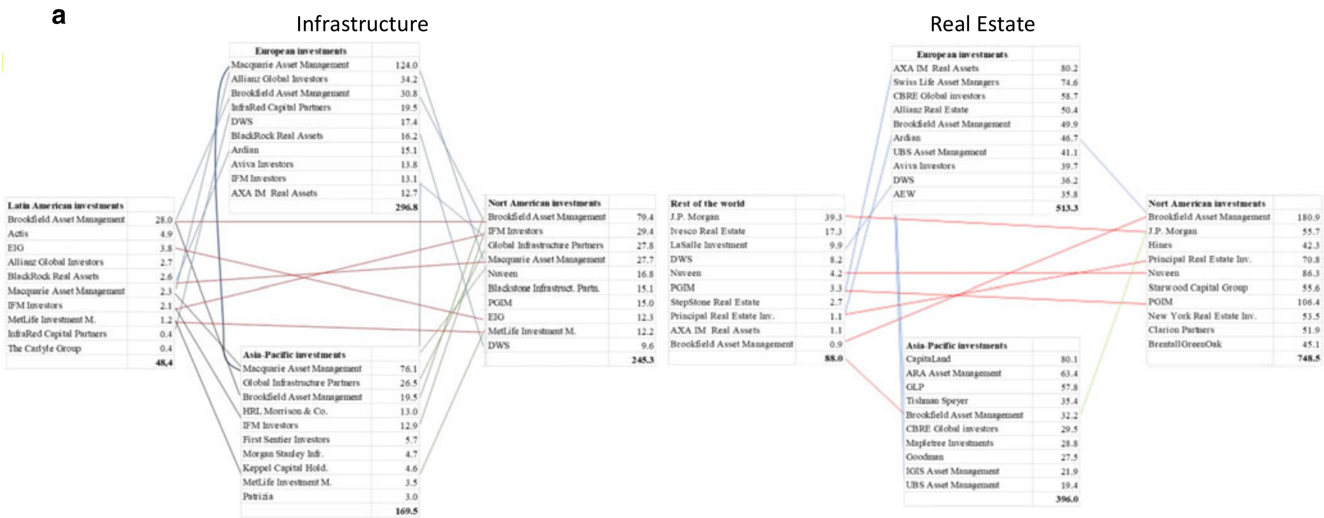


Fig. 6.17 **a** Top 10 financing in Infrastructure and Real Estate taken from the ranking (f & ii) splited in European investments; North American investments; Asia-Pacific investments; other investments (Infrastructures: Latin American; Real Estate: Rest of world). Global presence (link) of the same (f & ii) within this subdivision, 2021; **b** Top 10 financing (f & ii) in Infrastructure in European investments and the relationship (link) of (f & ii) with the Real Estate financing spliting; North American investments; Asia-Pacific investments; Latin American investments. *Source* Our processing on *IPE Real Assets (Magazine—International Publishers): Research and data*; November/December 2021 IPE Real Asset, July/August 2022, IPE Real Asset

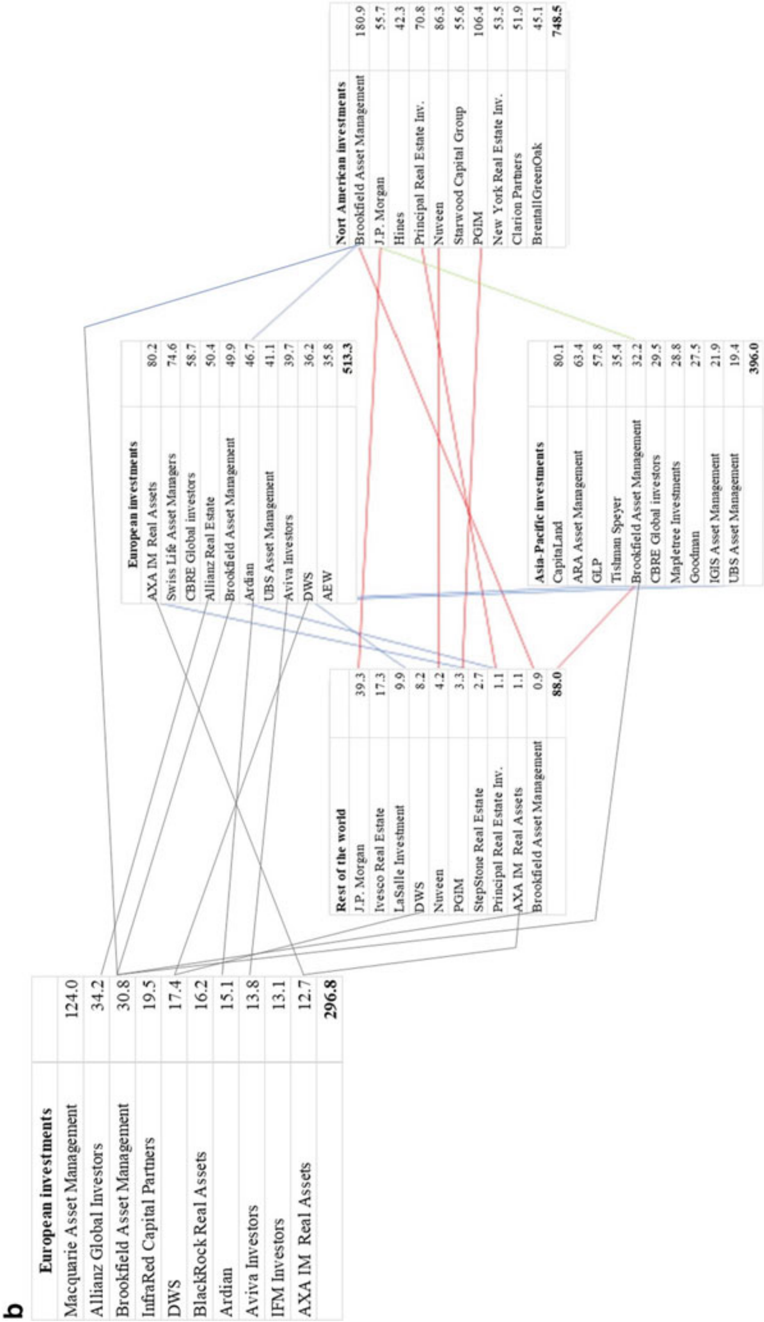


Fig. 6.17 (continued)

ii) in favor of infrastructures so as to exceed the financing in favor of Real Estate, which has always been bigger but which from now on redesign a new phenomenon driven by (f & ii).

(b) All the main ones (f & ii) that finance the infrastructures, including the first ten those taken into consideration (see Figs. 6.17a), intervene in several geographical areas with three (f & ii) that intervene in all the world regions.

(c) Most of the main ones (f & ii) intervene both on the financing of infrastructures and on that of Real Estate (see Fig. 6.17b).

(d) The major (f & ii) financer of infrastructure are North Americans and Austalians compared to (f & ii) Europeans, but they mobilize funds without considering their initial national membership, a sign of a logic that mainly responds to globalization.

(e) There remains a strong interconnection between financing of (f & ii) to infrastructures and Real Estate, so much so that it appears to be the result of a single growth strategy that can be inscribed within a crescendo of 'assetization' and rapid transformation of the global cities within which these investments tend to settle. There is no doubt that a growth in the financing of (f & ii) in favor of infrastructures is destined to change the nature of the infrastructures themselves towards a consolidation of the concept of urban infrastructure and the strong integration between financing of (f & ii) in favor of infrastructures and Real Estate within a single design for the production of value. All this leads to an acceleration of global cities and globalization in general.

Below is an incidence.

Brookfield Asset Management is the second largest fund that intervenes in infrastructure financing (see Table 6.2) with 158 billion dollars tied up in infrastructure, versus much less than double that of real estate (264 billion dollars).

In infrastructure, since 2012, acting through its subsidiary (Enwave) through its investments the fund has increased its presence throughout North America, acquiring networks in 11 cities in the United States and Canada. Each asset is located in a central business district that provides essential services with high entry barriers for other competitors. Enwave has the great advantage of being able to use the enormous financial resources provided by Brookfield for its innovative strategies. Additionally, a key feature of the Enwave Toronto acquisition was the opportunity to leverage Brookfield's real estate presence, knowledge base, and operational experience.

In Real Estate in 2014 the fund began a huge redevelopment of an area called 'Manhattan West.' This is an area of 2.5 hectares in the heart of Manhattan, an area glued to one of the most important subway stations in Manhattan (Penn station) and Madison Square Garden. Several buildings were built in that area under the direction of the fund, effectively tripling the marketable land area (65,000 square meters) through the verticality of the build, in terms of square meters, with buildings of 67 floors and a skyline (height) of 303 m. The entire installation has led to the construction of state of the art offices for a 'global company,' luxury apartments, boutique hotels, shops, and restaurants, while of the initial two and a half hectares, less than one is destined to open space. The area had been purchased in 1985 by

Table 6.2 Matrix of relationship and breakdown between (f & ii) and financing of Infrastructure and real Estate

	Macquarie infrastructure (*)	Brookfield asset	M&G investments	(Total)
Year of intervention on infrastructures	The year 2000 coincides with the creation of pension funds in Australia to which all Australians had to contribute and also coincides with the privatization of Australian public assets, in 2004 the Macquarie Infrastructure Company was founded	In 2005 the current Brookfield was born, there is a transition from Brascan Corporation to Brookfield Asset Management, and from 2005 to 2021 the assets managed by Brookfield increased by more than 14 times	In 1999 M&G became part of the Prudential Plc Group, one of the largest global providers of financial services. Since 2001 M&G has opened offices in continental Europe and has talked on a global dimension. In 2001 M&C founded Infracapital one of the leading European infrastructure investor	
Country	Australia	Canada	UK	Total
(a) Managed capital (*)	251.3	459.5	371.3	1,082.1
(a1) (a) − (a2) other financing	19.2	37.7	288.3	345.2
(a2) = (b) + (c)	232.1	421.8	83	736.9
(b) Financing Infrastructures	**230.2**	**157.9**	**43.3**	431.4
(European investments)	*(124)*	*(31)*		
(North American investment)	*(28)*	*(79)*		
(Asia Pacific investment)	*(76)*	*(20)*		
(Others)	*(2)*	*(28)*		
(c) Financing Real Estate	**1.9**	**263.9**	**39.7**	**305.5**
(European investments)	*(0.9)*	*(50)*	*(30)*	80.9
(North American investment)	*(1)*	*(181)*	*(3)*	185.0
(Asia Pacific investment)		*(0.9)*	*(7)*	7.9

(continued)

Table 6.2 (continued)

	Macquarie infrastructure (*)	Brookfield asset	M&G investments	(Total)
(Others)		*(32)*		32.0
Employees around the world	13,800 employees and 25 representations around the world	18,700	2,250 employees and 28 representations around the world	
Integration between Infrastructure and Real Estate	Yes	Yes	Yes	
Is Debt or Equity privileged on infrastructures?	Equity (59%); debt (41%)	Equity (99%)	Equity (8%); debt (92%)	

Note On how the individual fund and institutional investors (f & ii) intervene on infrastructures there is a first reference literature for ex. on Macquarie Infrastructure: Allen and Pryke (2013), Ashton et al. (2012), de Lemosa et al. (2004), and Deruytter and Derudder (2019)
Source Our processing on different date incluse *IPE Real Assets (Magazine—International Publishers): Research and data*; novembre/december 2021 IPE Real Asset, yuly/august 2022, IPE Real Asset

Olympia & York when Brookfield was not yet there; in 2006, Brookfield bought a second lot, which in 2011 was then integrated with another portion of adjacent assets purchased. The full 'Manhattan West Project (MWP)' began to take shape when the Bloomberg administration added incentives for the development and reorganization of the area. Michael Bloomberg was mayor of New York from 2001 to 2013 and is also founder in 1981 of the financial information giant Bloomberg LP. Amazon and Fintech companies were interlocutors for the concurrent sales and rentals of the MWP buildings Fintech. The original area was home to old warehouses under the influence of the river port (Pier 76) and above all a number of railways and terminals due to the underground crossing of the Hudson River (Penn station). Brookfield made an investment of nearly 5 billion dollars for the entire purchase, followed by construction and development for a final commercial value of 8.6 billion at the end of 2019. The investment was also characterized by an innovative construction intervention above the railway and subway junctions, with a strong interconnection and conversion of infrastructures, given Penn station's role as a landing place for those who cross the Hudson River tunnel. The fact that Brookfield Asset Management is a real estate and infrastructure investment fund was fundamental in managing the entire operation, that began in 2014 and ended in 2019. With integrated elements between real estate and infrastructure and through this operation, there was a replacement of obsolete functions (brownfield) with a merger between real estate and infrastructure.

Real estate/infrastructure. A PPP proposed by the Brookfield Asset Management fund was accepted by the State of New York with the involvement of public bodies (Empire State Development and the Port Authority, with the same designers as the 'Manhattan West Project') for a readaptation and connection of Moynihan Station (an expansion of Penn station) with the port (Pier 76) and through this a wider connection with the rest of the existing High Line, with the aim of connecting and strengthening transport hubs, sports and cultural facilities with an initial cost of the PPP operation of 60 million dollars, that can be increased. It involves remodeling and expanding brownfield infrastructure in relation to the Brookfield fund's recently completed 'Manhattan West Project.' The PPP intervention also brings undoubted value to 'MWP' which is crossed by the extension of the infrastructure and allows it to be connected to Penn station and the port (Pier 76) as well as to take advantage of the innovative High Lines, considered one of the most innovative reconversions of brownfield infrastructure in Manhattan in the last 10 years (Fig. 6.18).

In addition to the adaptation/extension of the High Line, there is another PPP of a different nature concerning the Moynihan Train Hall. It is a major part of Penn Station, which alone is used by over 700,000 passengers per day, more than LaGuardia, John F. Kennedy, and Newark international airports combined. It is one of the busiest passenger stations in America. The total investment is 1.6 billion dollars, of which 967 million from public sources (NY State, Amtrak, MTA, federal grants) and being a PPP/joint venture, 630 million dollars come from the private operator. The private team is made up of a Swedish construction company, one of the largest in the world (Shanska); a real estate developer, not a fund but a field operator with a small to medium turnover (Vornado Realty Trust); and a company that provides management services (WSP USA).

Each financialization of the three projects and assemblies in a 'synchronous' way has a different governance. In the 'Manhattan West Project (MWP)' the Brookfield fund largely remains the owner of the assets created, that through the project contributed to the change of functions and the inclusion/exclusion of economic operators and social groups. The Moynihan Train Hall PPP/joint venture is instead a readjustment of a brownfield urban infrastructure in which the economic operator partly uses the revolver account which serves to cover the range of costs between construction and sale and rent, while the ownership of the infrastructure remains almost exclusively with the public operator.

The PPP on the High Line Extension in which Brookfield Asset Management is directly involved has another, different PPP formula.

Major parts of cities city blend real estate and brownfield urban infrastructure. This combination involves funds, developers, and builders, while the PPP that is developed is also different depending on whether it concerns the Moynihan Train Hall or the High Line. The assembly, private financing, role of governance, and interests at stake are different. At the operational level, the maps are colored by interventions and infrastructures constructed, showing a rapidity of intervention from 2014 to 2020. The two main operations have been concluded ('Manhattan West Project' and Moynihan Train Hall). In the narrative there is the clear vision of urban infrastructure, brownfield infrastructure, the birth and strengthening of new subjects, the representation of global cities, and partly what is meant by financing applied to infrastructure.

Among the funds, the use of equity prevails over the debt, which by far modifies the 'governance' models of an infrastructure assembly and often directs the conversion

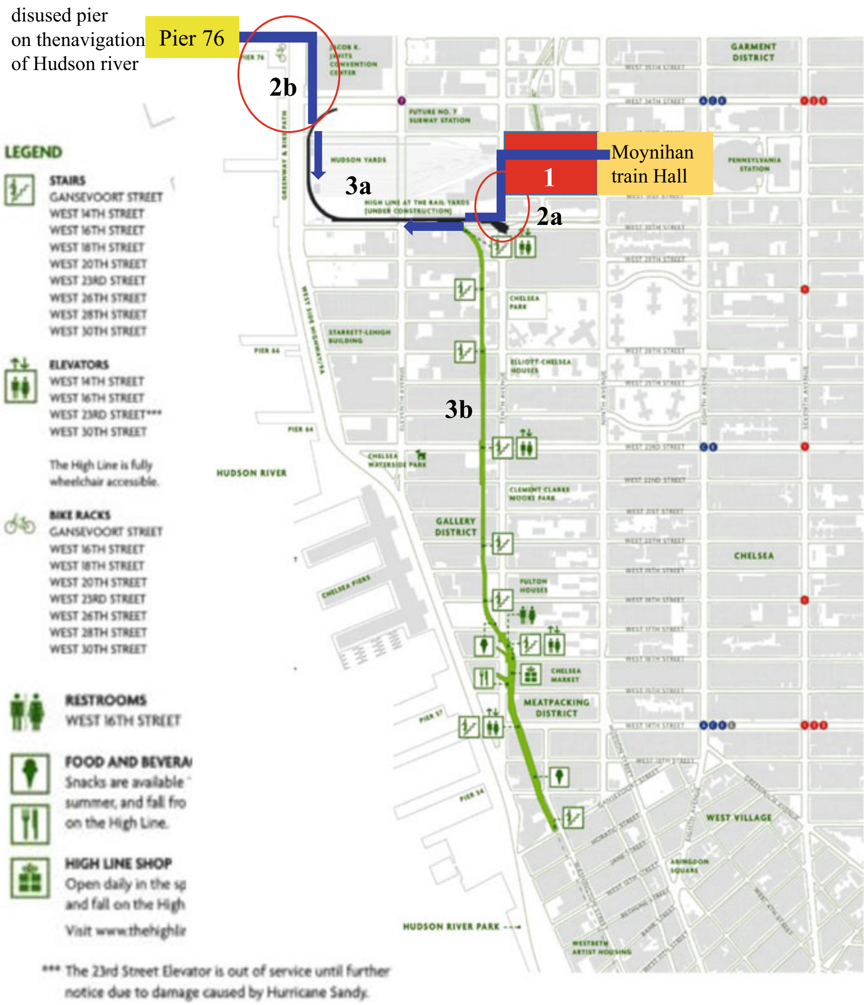


Fig. 6.18 Example of the intervention of a fund (Brookfield Asset) which integrates Real Estate financing and urban infrastructures into a global city. Manhattan—(1) 'Manhattan West Project (MWP)' built and owned by 'Brookfield Asset Management'; (2) PPP: High Line, 2a (phase 1) High Line East Connection, 2b (phase 2) High Line North Connection; (3) Existing High Line, 3a readjustment, 3b existing and usable. Yellow: PPP Moynihan train Hall

of brownfields in which it is necessary to have a greater vision than for investment in greenfield infrastructure, and risk management also grows. Given the greater vision, there are also higher levels of return on investment.

Another element of interest is the strong interconnection between of the fund managers of real estate and infrastructure financing. This interconnection is one of the elements that create a strong synergy between real estate, which is a fundamental component of global cities (its business is decidedly inside these situations) and interventions on urban infrastructures and in particular on brownfields or smart cities.

The growing weight of these lenders (Table 6.2) has rapidly contributed to changing the logic of assembling infrastructures, to better position them within the areas of greatest transformation, to favor brownfields over greenfields, and to create new languages and interests that until recently were unpredictable. Public works, the previous stage of urban infrastructure, involved all national actors. The debate and discussion was mostly national. With urban infrastructure and financing, urban infrastructure, in addition to being interconnected with real estate which has its business in large urban cities, ends up being no longer a national but a global landing place, as the bearers of assembly and financing rules are global entities that often make global cities their landing point for concentrating investments and the new rules of assembly and growth of the complexity of governance. With urban infrastructure, we move from big cities to global cities, in which there is a strong interconnection and interests of global stakeholders who make globalization their business. Most of their gyms remain global cities, and within these brownfield areas and infrastructures, and this makes global cities even more strategic within globalization. Strategic visions also come together around this form.

Thus there is an increasing interaction between the development of finance, globalization, spatial displacement, and urban hierarchy within individual states.

6.4.1 *Financing, Funds and Equity*

The financialization of urban infrastructure is an important element that should not be overlooked, comparable to real estate within global cities, and impossible to diminish; indeed there will be further evolution of this process. It is however reductive to trace the centrality assumed by the concept of urban infrastructure to this variable alone.

O'Neill (2019) summarizes how the optimization and innovation of services, no longer achievable by the public administration, requires a new vision. The result is, more than an absolute and unique pre-eminence of finance, a framework capable of managing all this hybridity. All without being trapped by the political intransigence that comes when the debate is framed in the dualism of the public/private sector as a binary factor.

In fact, there is an intertwining of variables with the need to increase governance so as to prevent interventions from running aground, a sign of an interaction of variables that interact and gradually transform urban infrastructure. It is certainly difficult to think of a single variable capable of pushing change in a single direction. These are contributing and interacting causes within a complexity that puts urban infrastructures at the center, and among these, financialization has a significant weight.

Financialization lies above all in the numbers. Infrastructure is not, as in the past, financed only by the public sector through public works, but there is a mix between debt financed through bank flows (Kd), but to a limited, but growing extent, also through funds, and risk capital (Ke) which comes mainly, although not exclusively, from funds in the form of risk capital. Kd is returned in the form of capital and financial charges that must comply with the Basel II and III criteria in order not to generate problems (pre-default and a consequent increase in the cost of money requested by the banks to cover the flows), while risk capital, coming partly from the funds, is expressed in terms of yield and apportionment of profits among the lenders. Consequently, new innovative elements emerge with respect to the phase in which there was a quasi-monopoly of public works. Funds themselves undergo an evolution of their own; often they have shifted from investment in bonds to investment in equity, to the point of establishing complex infrastructure financing platforms.

– Multi-year Long Term Contracts are used to allow the lender to recover the invested capital. Funds themselves mostly declare that they favor interventions in infrastructure assets by keeping them in their portfolio for more than ten years (81% state this preference)
– Special purpose companies (e.g. SPV) are created to manage D&C (Design & Construction) and O&M (Operation & Maintenance) in which funds are present, although there is no guarantee this will happen immediately in the D&C phase; they may enter later, in the O&M phase. This extends the time of the investment and the possible profitability of the return.
– Often the difference with the real estate sector is that the latter, compared to infrastructure, has a much shorter cycle referring only to D&C.
– In many funds, more and more teams are created which, in addition to dealing with brownfields (financing in the context of something that has already been built; O&M), also deal with greenfields (financing that organizes the D&C and O&M assembly of the infrastructure from the start).
– Once the fund enters to provide financing for a long period, there is a tendency to control the management of the infrastructure. In some cases "we try to lead the special purpose company. We like to direct where our money goes, and so we push to try to be in control" of the SPV. This quote is from Ron Boots (Head of Infrastructure Europe at APG) who then adds: "this required an increase in internal staff." Ron Boots was the first on the infrastructure team in 2005; now APG has 35 people in this segment looking at the asset class spread across its offices in Amsterdam, Hong Kong, and New York. As your investment grows, "you need skills, experience, team, and ability," says Boots.
– With financialization, there is a higher cost of money for the financing of the infrastructure, deriving from financial charges and above all higher yields than those of public works. However, this requires a recovery of efficiency/efficacy within the assembly of the D&C and O&M of the infrastructure.
– The Public Administration must increase the capacity of management and control and verification with objective systems and tools, under penalty of the creation of enormous vicious circles for the state coffers, that are already in deep crisis (fiscal crisis of the state);

- This also represents one of the major critical points summarized in the question: is the state, with its internal mechanisms and bureaucracy, able to evolve in equilibrium with the economic operator to prevent the private value created with the PPP from being fed by destroying public value, generating a sum of the model whose result is not the creation but the destruction of value?
- The complexity and the different levels of integration of infrastructures are growing; in other words the need for governance is growing;
- Knowledge requires time, cost, and quality control.
- The new term assembly is born, and the infrastructures de facto become large and medium-sized hybrid companies with a remarkable ability to adapt over time. The differentiated interests of the public and private sectors often do not allow this.
- Global cities cannot be fully understood if one does not understand the merger that has taken place between the evolution of the infrastructures, capital and finance that have taken the place of the state. The statement by Brice Flatt (CEO of Brookfield Asset) may appear significant when he says: 'We're in a 50-year transformation of the infrastructure world. We're 10 years in; we have 40 left to go. By the end of that 50 years most infrastructure in the world will be transferred to private hands' (Evans & Smith, 2018; Garrett et al., 2020).

Likewise, the new concept of urban infrastructure cannot be understood if it is not combined with other interconnected transformations. Evolution has inevitably contributed to globalizing its assembly, interconnections, fluidity, language, interests, and the new partial knowledge still in the development and consolidation phase. This helped create the new business and the emergence of new and deep-rooted global interests around this transformation. Nothing is therefore the same with respect to the models known until a decade ago or at the end of the last century (Fig. 6.19).

6.4.2 Some Data

In recent years (decade), infrastructure financing funds have grown a lot, often replacing other products to be financed. There has been a growth in the financing of real estate considered more risky.

Over the last ten years (2010–2019), financing of unlisted infrastructures has proved to be more profitable and less risky than investing in global equities. This is an important element in explaining the orientation of funds (Fig. 6.20).

However, it should be added that the period of the pandemic caused the performance of unlisted infrastructures to slow down in favor of global equities.

Box 6.4 Funds and infrastructure investment

The data explain the expansion of investments in infrastructure of funds and institutional investors (f & ii) in the last ten years, also driven by the lower

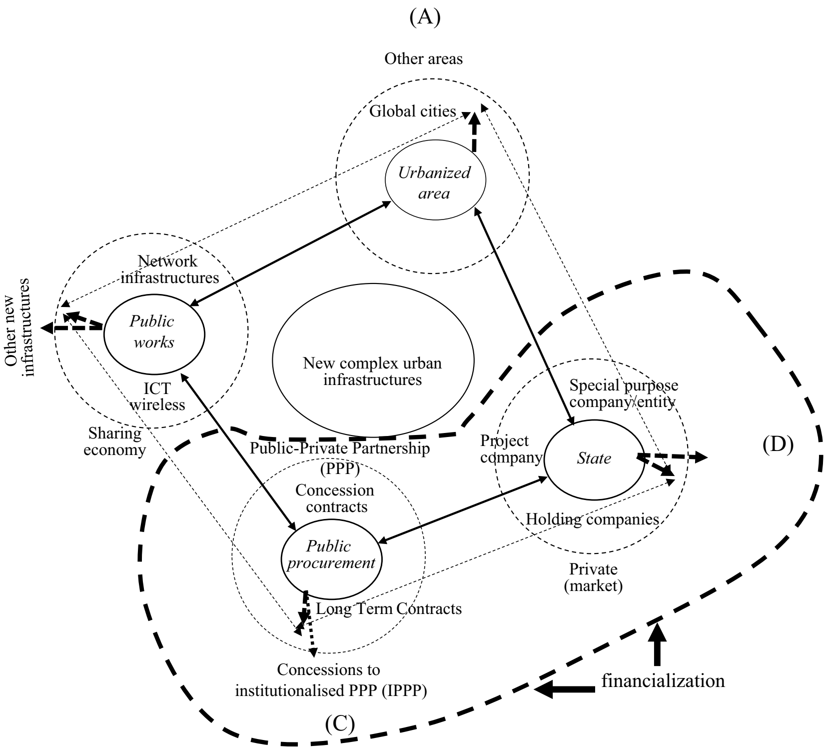


Fig. 6.19 Area of the model in which financialization has the greatest impact in the transformation of urban infrastructure, the components on which the infrastructure tradition rested are modified

risk and higher return performance of infrastructures compared to the more general global equities. The same comparison is also true with US Treasury bonds (long term). "Historically unlisted infrastructure provide higher returns and less risk than global equities. Over the past decade, yields on listed and unlisted infrastructure have risen sharply. High dividend yields, lower trading prices and lower volatility are one of the key factors driving the attractiveness of unlisted infrastructure".

A traditional barrier State centered entirely on the bureaucratic model would not have allowed the entrance of private funds into infrastructure. The growing need for urban infrastructure to foster competitive advantage, the rising cost of D&C and O&M, and the fiscal crisis of the state have acted as accelerators towards this integration.

However, it cannot be taken for granted that the risk capital of funds earmarked for infrastructure will be directed to urban infrastructure.

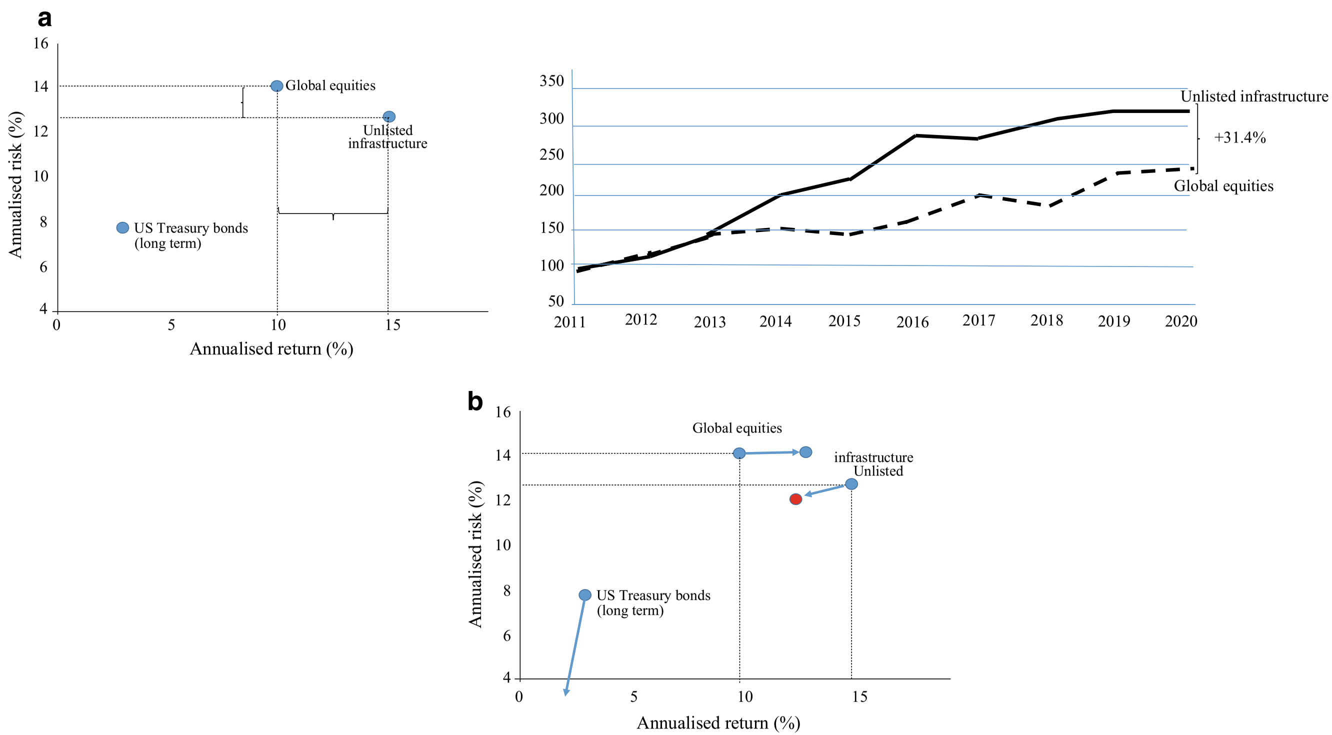


Fig. 6.20 **a** Global equities and unlisted infrastructures (and US Treasury bonds): relationship between risk and return (different years in the return: 2011–2020 years performance; dollars); **b** 2021 changes in returns and risks: the Covid-19 pandemic has temporarily halted the trend. *Source* Our processing MSCI Gross Return. EDHECinfra. Damodaran NYU (US T bonds), GIH-Global Infrastructure Hub: *Infrastructure Monitor 2020 and December 2021*

A survey of 100 funds that invest in infrastructure (Lowe, 2020) did indicate in 2019 that in the next 18 months there would be a willingness to invest in infrastructure in Europe and North America relating to renewable energy, telecommunications, the water cycle, airports, ports and urban waste but also social housing and hospitals. These are all areas with a strong impact on the city. The survey was conducted before the Covid-19. There were 19 other questions asked of the world's 100 largest funds in the survey. Here are only the aspects that are of greatest interest for our analysis.

– Most of the funds (63%) claimed to invest in infrastructure;
– The majority (51%) claimed that such investments would grow over the next 18 months;
– The return on investment oscillates between 5–15%, making the Ke yield higher than the traditional return on public works, which have always been found to operate within the Kd debt investments from traditional infrastructures. This aspect implies a new factor in the infrastructure assembly scenario. Pike et al. (2019) indicate an oscillation between 9 and 15% of return for three-year equity (referring to the IRR), while on the expected cash return (in addition to the Ke there is also Kd) the figure fluctuates from 4 to 12%. The interview with 100 funds indicated that two-thirds expected a return that varied between 5 and 10%, while the remaining one-third expected 10–15%. These are high returns for social infrastructures (e.g. hospitals and schools, etc.) compared to traditional assembly interventions. This means that if it is a question of social infrastructures in which a public fee is paid, the infrastructure is more expensive in terms of D&C (Design & Construction) and O&M (Operation & Maintenance). Sustainability would only be achieved if the cost were off balance sheet (outside of the public deficit) and new forms of management and effectiveness were added to this, in other words, a new 'form' of urban infrastructure. However, it becomes necessary to further change the actors and cultures of infrastructure assembly.

To these data we must be add that the phenomenon of funds emerged significantly in the beginning of the 2000s and is constantly growing. Interest in infrastructure is a more recent focus, which is also the result of the global 'subprime' crisis of 2007–2013, with going beyond interest in real estate being one of the most critical elements. In 2019, the investment by funds in infrastructure was more attractive than real estate for 46%, against the 8% who said the opposite, while 35% said that the attraction was similar, and the remaining percentage (11%) had no opinion. The figures are not very different from those for 2018, which in any event is a sign of a segment trending towards growth. Recent data suggests that funds' investment in infrastructure is outstripping that of Real Estate. These are investments that unlike real estate attract interest because they are oriented to the medium-long term and are presented in a stable form. There is not only equity (Ke is 70% of fund investments), but also debt investment (Kd 30%). Real Estate is itself differentiated and not all segments have the same weight on returns. There is diversity between offices, retail, logistics, residential, hotels, student housing, healtcare.

Attached (this chapter) are the general financing data for some funds, those that are transparent in the provision of data.

6.5 What Happens with the Covid-19 Phase?

The same survey on the 100 funds investing in infrastructure was also carried out in 2020 in the midst of the Covid-19 (Lowe, 2020) and has been deliberately compared with the same questions asked the year before (Lowe, 2020).

The answers given by the funds show the propensity to look to Europe and partly to the Asia-Pacific as regions where to seek the best investment opportunities, while references to South and North America have plummeted. The response from investors adversely affected by Covid-19 was predictable: transport as a whole (91%) while there is also a minority that considers the situation an opportunity (31%).

Sectors seen as pure opportunities are telecoms and digital and renewable energy, while opportunity also prevails slightly for social infrastructures (health, education). The impact on the global city remains uncertain, especially with regard to transport.

Compared to the 19 (updated) questions that were asked of the 100 largest world funds, 3 specific questions on Covid-19 were added, one of which found that 71% expected there will be no effects on funds' investments due to the pandemic, with 11% for both seeking to increase the exposure of investments and for taking a break from investments. Only a residual component (2–3%) declared that they wanted to change strategy compared to the previous year. The limited impact of Covid-19 on fund investments, which in some cases tend to increase the attraction to infrastructure, is due to a higher return compared to the global market and above all to a lower perceived risk. The decisive element is constituted by the fact that: it is the totality of the assets (100% declared by the interviewees) to be considered and above all that the investments have an indicated duration of more than 15 years (28%) and between 10 and 15 years (47%) and only a limited share (22%) between 5 and 10 years; investments that remain restricted for 1 to 5 years are completely residual (3%).

Therefore, Covid-19 is perceived as a contingent situation, such that once the pandemic passes, it will be possible to restore the previous order with some changes.

One difference with 2018 and 2019 regards a shift of investment from the long term (more than 15 years) to the medium term (5–10 years). In the long term, the figure went from 35% in 2019 to 28% in 2020; in the medium term, from 16% in 2019 to 22% in 2020. A percentage of 58% of the 100 funds also argue that liquidity is not important in the activation of strategies, an increase compared to the pre Covid-19 period (54%).

Furthermore:

– Compared to 2019, the willingness to invest in infrastructure has increased from 63 to 70%, reducing the portion not willing to invest to 30%.
– In 2020, the opinion of the top 100 funds rose from 51% (2019) to 62%, believing that investment in infrastructures by funds will grow in the next 18 months. Proof of this is that investment already increased in the year between the two interviews, from 415 to 467 billion dollars from 2019 to 2020, with the Covid-19 underway.

(a) An asymmetry is confirmed between national investment, consisting mainly of resources for public works, and funds that are located and move within a global space;
(b) Financing of public works infrastructure tends to be more uniform across an entire state. The funds that finance urban infrastructure such as real estate are much more selective and focus on urban infrastructure and global cities, accentuating the territorial divergences within the national territory in favor of the interconnection of global (cities).
(c) Both the dynamics of the assembly of infrastructure (urban infrastructure) and the way of understanding the brownfield infrastructure change. Pension funds prefer brownfield to greenfield infrastructure, due to the lower risk that investors face (Whiteside, 2017). Brownfield infrastructure is also preferred due to its greater agility and management of investment entry and exit times.
(d) Funds are attracted to urban infrastructure (the same goes for real estate) in which rules are shown to be compatible with the assembly expressed by the funds, producing a clash between national rules and the new global rules expressed by the new lenders. There is also a clash of specializations and languages (which is mainly technical in public works).
(e) In the background there is the competitive advantage within competing global systems and a growing need to find alternative resources to those provided through public works. This is followed by an increase in the need for infrastructure development, and urban infrastructure in particular.
(f) The competition also takes place through a review of accountability, and at the same time the development of new interdisciplinary knowledge of a global nature in the assembly of urban infrastructures.
(g) The most competitive urban infrastructures and global cities are the ones that best adapt to new attractive scenarios. Knowing how to attract funding from a fund may not always prove successful if conflicts and vicious circles are created.
(h) A dichotomy can be surmised between the push towards simplification and the increase in the complexity of urban infrastructure assembly.
(i) Urban infrastructures will be more and more inclined towards innovation (e.g. the smart city) and integration with real estate, having as its drop point the selected and selective global city with respect to the proposed funds.
(j) We leave the traditional concept and form of infrastructure and enter a plural concept of infrastructure that is well-summarized by urban.

6.6 Some Evidences

The description of cases regarding funds implies ‘photographing’ the phenomenon when it occurs to mark its structurality, impact, innovation, and dynamics. Funds are by definition fluid, as are the investments they control. It may happen that after some time all of the references have changed, with the removal and different placement of the investments and interests. There is much more flexibility and discretion in this area compared to commercial banks.

Case (1a): M&G

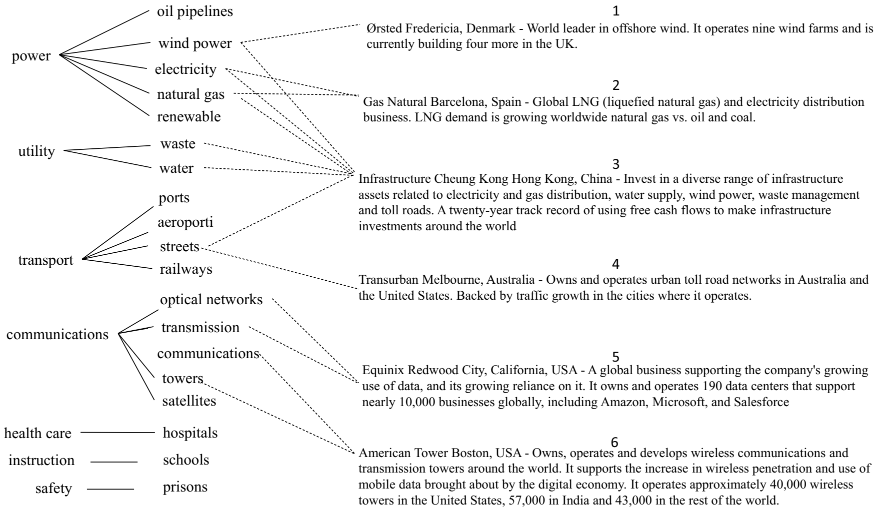
M&G in the international ranking, as of June 30, 2020, represented the fifth global fund with investments in infrastructure with 43 billion dollars. However, compared to six months earlier, it showed a reduction in investment in infrastructure. This is a factor in contrast to the other funds considered, especially when viewed in the short and medium term: in the period 2017–2020, M&G is the only fund among the top 50 that invest in infrastructure to have reduced the amount of investment in this segment. M & G's investment in infrastructure represented 17.3% in 2018 compared to the amount of its other investments; in 2020 it drops to 11.7%. M&G is a British fund based in London regulated by the Financial Conduct Authority of the United Kingdom, this could also be a consequence of the referendum of June 2026 on Brexit, where the space of globalization is reduced, albeit very marginally. In reality, the amount of funds that M&G allocates to infrastructures must add two different brands that it directly controls (M&G investments and Infracapital) to which the 43 billion dollars allocated to infrastructures must be added to the 8 billion managed directly by Infracapital. There are three other brands controlled by the M&G holding including one on Real Estate, the other two carry out traditional prudential and bond activities. The funding invested by M&G Real Estrate is 37.7 billion euros, overall an amount lower than that invested in infrastructure. The strong opening to globalization of M & G takes place in 2001 where representations are opened in Germany, France, Italy, Spain, Holland and other European countries and in 2012 in Asia Pacific.

M&G has a traditional fund profile, manages assets of 371 billion euros divided into bonds, equities, and other (which includes infrastructure assets). A bond is a loan to the public administration or to companies. If it is directed to the public administration, it can be recorded in the public debt if the bond is issued to finance infrastructures. The bond component, which is the most prudent in the composition of the various compound funds, is the pre-eminent part (it never falls below 50%). Equities are intermediate in terms of specific weight (varying from 20 to 40%) and it is the purchase of a security that gives the holder a share of ownership in a company or a mutual fund and therefore refers to a share of control and returns.

Within equities there is a specific fund (Infrastructure) created in 2017, which has as its 'core' objective the investment of 80% of shares issued by infrastructure companies, referable to real estate or infrastructures of any dimension. The fund owns shares in fewer than 50 companies around the world and effectively controls them. For infrastructure companies, the reference is to utilities, energy, transport, health, education, security (e.g. prisons), communications.

The fund manages 50.4 billion euros, a part of which is invested in infrastructure understood in a strict sense.

Below are the types of infrastructure in which the fund invests, and six cases in which it used its specific infrastructure fund to purchase shares and control of companies.



Case (1b): Infracapital

Infracapital of M&G Group plc, constituting its European savings and investments business. It operates in equities (shares). It is therefore an operational arm of M&G in terms of infrastructure investments in Europe.

Infracapital was created at the beginning of the century by two founders who come from the initial PPP (PFI) experiences in the UK.

The fund's beginning can be identified about 20 years ago (2001). It is also the result of the English PFI experience that began a few years earlier and anticipated PPPs in Europe. The Fund manages billion euro invested in twenty-two infrastructures located mostly in medium-large cities and global cities:

– three in Italy (Milan and Florence);
– thirtysix in the UK (much London, Birmingham, Manchester, and Glasgow);
– fourteen in other European states

– There are 56 employees divided among transactions, greenfield, asset management, and finance;
– The infrastructures on which they intervene with the funding are judicial and penitentiary structures, education, health, waste and water, energy and energy efficiency;
– In Italy the fund intervened in 2016 with an agreement with Pipelines (among the top ten construction companies in Italy) spending 700 million to buy 80% of the shares of C2i, the company that controls the SPV of Vimercate-Milan Hospital PPP (which was present in the construction of the hospital and now in the management of seven services), the Empoli Hospital located near Florence, and in the management of the trigeneration plant of the Careggi-Florence Hospital. These were three brownfield interventions; namely, the part of construction had already been carried out (D&C), so the interventions involve managing the O & M. The initial package also includes the construction of a new hospital in Milan (Health City) with an integration of D&C and O&M.

The philosophy behind the 'Infracapital' interventions can be summarized in the following points.

– Value can also be extracted by targeting complex agreements that require considerable experience in execution. This could include transactions regarding assets that require separation from a parent company, more complete consolidation under a new management structure, or the establishment of a new executive group. Typically, these operations require a hands-on approach led by a dedicated wealth management team that can support the transition to a solid independent business.

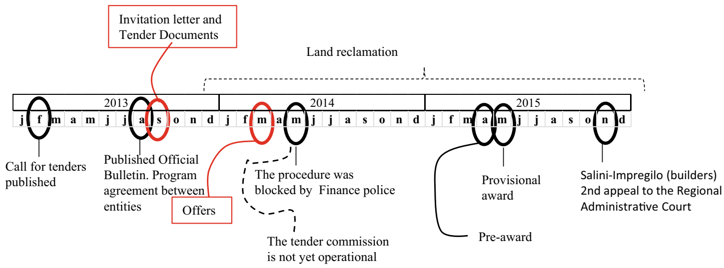
- However, by identifying macro trends and leveraging wealth management experience, experienced managers can develop broader platforms. Nevertheless, we also attach great importance to developing high quality executive management teams within portfolio companies with the appropriate level of clearance to achieve our strategic goals.
- In many cases, it may be possible to optimize performance without taking unjustified risks. Indeed, in some regulated companies it is not possible to make substantial changes to the strategy. However, this does not limit the ability to make material enhancements. By working closely with management, asset managers can provide the support and incentives needed to guide the business towards improvement.
- Infracapital's top management says that they believe it is important for wealth managers to spend a lot of time engaging with all stakeholders, in order to understand the role of assets in the communities in which they operate, which ultimately produces value for investors.
- There is a quantitative aspect; it is a question of understanding how much the intervention of the funds, in addition to bringing increasing resources, is able to modify the assembly of infrastructures and the change in their shape and interconnection. Stakeholders expand and enter a global scenario in which direction no longer comes only from a nation, as new forms of direction and management are also created. Profitability and risk take on a new characteristic, as does the concept of infrastructure.
- It is useful to frame the context in which Infracapital intervenes in the investment also to understand the interconnection of different global cultures in infrastructures that in the past were by definition understood within national cultures and contexts.
- To get a general picture of the change in the infrastructure, its assembly and the environment in which it took place, the following reference is useful. The relationship was often between an organizational unit of a public body, of professions, of national companies linked by rather limited time contracts and almost never of Long Term Contract (LTC). An enormous contractual fragmentation prevailed and interventions on 'segments' (specialists, outputs, products), which were then difficult to integrate. The advent of funds, and more, revolutionizes the concept of infrastructure and helps to give birth to that of urban infrastructure.

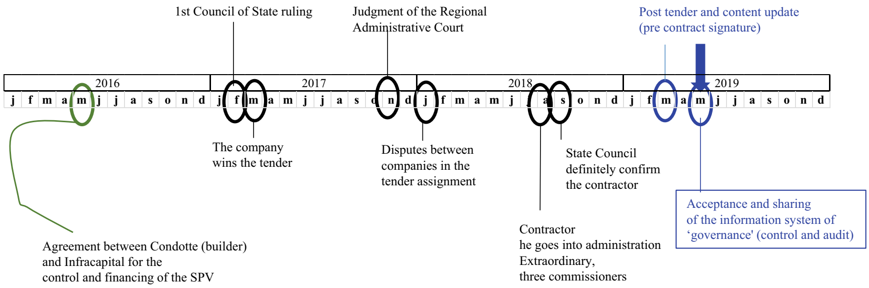
Below is an analysis of two of the different interventions in which Infracapital carried out, or tried to carry out, infrastructure financialization in Italy:

- Health City of Milan;
- Trigeneration plant at the Careggi Hospital.

Health City of Milan

This is a major investment for the city of Milan as it will absorb two centers of excellence in Milanese healthcare, Besta and the Cancer Institute. The investment is 300 million in the construction of the new hospital and another 2 billion in the management of seven services for twenty years.





– The investment by the fund is partially to be considered greenfield as there has already been a tender and therefore all the contents of an offer, but a contract has not yet been signed, and thus the assembly risks have not yet begun to be implemented;
– The investment by Infracapital was forecast for three years after the tender and two years after the submission of bids by the economic operators. In the process leading to the signing of the contract, some elements attributable to accountability and increased complexity arose, that are not unusual in Italy. It is also the result of the troubled transition from an old public work to an urban infrastructure. It remains an issue that is not obvious and not easy to solve.

The pathologies—What is indicated in the new complexity and in the management of this is an important step of urban infrastructure, financialization and urban development and global cities. In this case and in what will follow (Careggi Hospital), the case represents a pathological exception, but not so rare (Reeves, 2013, 2015): (a) there was a slowdown of the procedure for awarding the contract due to the intervention of a state body regarding alleged corruption; (b) one year later there is provisional assignment (sub-judge) of the intervention to the winning economic operator (Condotte—Inso); (c) six months later, there was an appeal to the TAR (a judicial body—Regional Administrative Court) by the runner-up in the tender (Salini Impregilo—the largest Italian construction company); (d) seven months later, there was a Condotte Infracapital pre-agreement for the sale of control in the SPV in the case the contract was signed; (e) nine months later there is the first judgment of the Council of State which follows the provisional awarding of the tender to Condotte and therefore there are the necessary conditions for finalizing a pre-agreement with

Infracapital; (g) eight months later, Condotte entered into receivership (three commissioners were appointed). The pre-bankruptcy was not due to ‘City of Health’ tender, but to more complex factors; (h) one month later, the Council of State definitively confirmed the contractor (the legitimacy of the tender won by Condotte); (i) finally eight months later the documents are reconsidered and updated in order to close the contract and the start the works—it had been over six years since publication of the call for tenders; (l) in mid-2019, a new information system platform was updated and prepared to guide the D&C and O&M phases; and (m) in January 2020, with the establishment of the SPV, the contract was signed and the work began.

- From the publication of the call for tenders to the signing of the contract, as indicated, seven years passed (six and a half years if the reference is to the letter of invitation); an amount of time not compatible with a PPP. All of the actors who can generate absolutely critical situations in the assembly of a PPP intervened in the process. This is not the norm in Italy, but it can represent an extreme case, not to be overlooked, to better understand the difficulties of assembling and financing infrastructures within an evolving situation of complexity.
- This is a serious pathology that is not uncommon in the assembly of complex interventions in Italy, that also indicates the inadequacy of public management to move from the standardization of public works to the complexity of urban infrastructure. It is not just an Italian phenomenon, which in this specific case is the sum of several critical elements that feed a huge vicious circle. In France, the following case occurred:
- Eight months late, on Monday, January 23, 2012, the Sud-Ile hospital, on the border between Evry and Corbeil-Essonne, welcomed its first patients. With 1,017 beds and twenty operating rooms, it became the largest hospital in France, replacing Georges-Pompidou in Paris. The opening of the hospital had been postponed several times due to 8,000 reservations for equipment not meeting standards, and the additional work required by the hospital.
- The delay fueled the controversy over the choice of the public-private partnership (PPP) contract with the Eiffage company (the third-largest construction company in France and among the top twenty in the world). The PPP grants Eiffage the right to finance and build the hospital and facilities, and then to intervene on maintenance for the next thirty years, in exchange for a fee of 40 million euros per year. Many consider the sum to be exorbitant, so much so that the president of the hospital, the PS mayor of Evry, Manuel Valls (a future French prime minister) declared that he was in favor of termination of the contract[8]

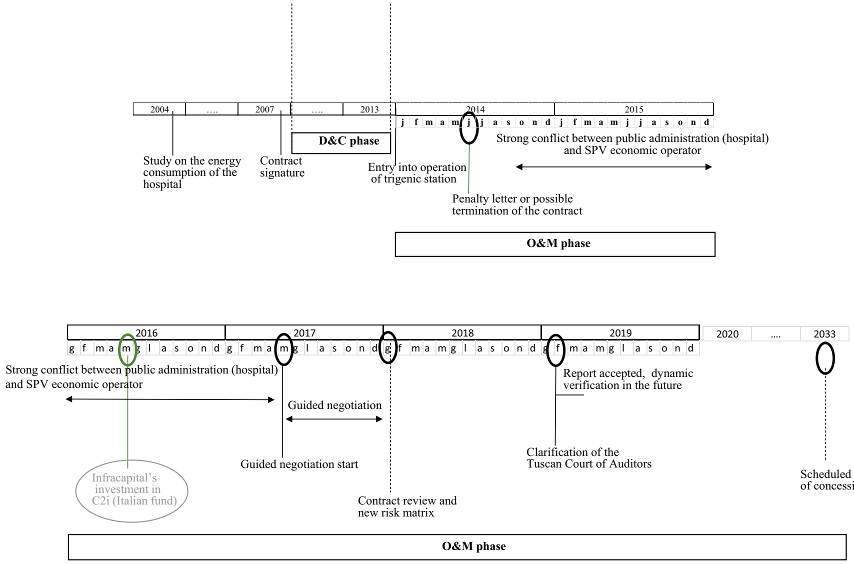
[8] ‘*Le Monde*’, 23 January 2012.

– The Health City PPP is a Long Term Contract for construction (D&C) and (O&M) that incorporates, in addition to maintenance, the energy component, catering, cleaning, hospital waste management; sanitization and linen rental and laundry. The PPP cannot be entered within the (public off balance sheet) as the public contribution by far exceeds 50% of investments, and the off balance sheet is not applicable to the energy component, as the operation was not carried out within the EPC rules that have allowed the application off balance sheet. This could be considered a part of the public administration setting mistake that he thought the intervention. However, it must be considered that the rules, accountability and assembly management itself are constantly changing and the error must be contextualized and this is also a criticality of the PPP.
– There is inflow of private capital through a bank loan and an equity line; to this is added the fund that purchases the shares of the SPV and controls its operation. However, as it did not respect the proper method from transfer of risk from the public to the private operator, the debt is recorded in the public budget of the Lombardy Region.

Trigeneration plant inside the Careggi hospital

The trigeneration plant is one of the first PPP investments in Italy in the field of trigeneration plants for energy production. The investment is located inside an important national university hospital, and it produces 10 MWh of thermal energy and electricity. The hospital is located in the central part of the city of Florence, and city transportation has been has been reshaped around it. The amount of the investment is 33.7 million euros and there is payment of an annual public fee of 8 million euros per year for twenty years (2013–2033).

– The stipulation of the PPP contract (construction and management concession) took place in February 2007; from that date on, the D&C (Design & Contruction) and testing phase began.
– The investment was sustained entirely by the economic operator, with no public contribution for construction.
– It is therefore recorded as private debt (within the SPV), and there is no accuracy on EPC front also because the national and EU rules on the subject change.
– In mid-2013, the trigeneration plant began to operate with the payment of the fee for a duration of twenty years.



- Information and operational management systems for control and verification of contractual forms are lacking, and complexity and in part the lack of valid management tools take over (e.g. there is a discrepancy in the construction cost accounts of a few million euros, there is no bill of quantities, the relationship between Kd - debt and Ke - risk capital—which end up affecting the fee, is used in a not completely transparent way).
- The fee includes a share of financial charges, equity, and repayment of the invested capital.
- On June 17, 2014, the General Directorate of Careggi Hospital indicated the application of a harsh penalty or termination of the contract, since the payments for thermal and electrical Kwh were higher, and considered to be excessive, compared to what could be purchased on the market, contrary to what was indicated in the contract.
- The question is: what is the advantage for the public administration (hospital) to pay for energy at a higher cost than that sold by the market (sold by other carriers)? The answer is: actually owning the production plant that will be fully returned after 2033. The observation is: the life cycle of the plant is less than 20 years and there is a risk of inheriting a cost rather than a benefit.
- From 2014 to the beginning of 2017, there was a strong conflict between the public administration (hospital) and the economic operator (SPV).
- In the context of this conflict, in 2016, Infracapital purchased 80% of C2i from Condotte, and de facto found itself controlling the SPV downstream.
- At the beginning of 2017, opens a 'window' of guided negotiations was opened between the public administration and the economic operator (SPV).
- At the beginning of 2018, the parties revised the original contract with the application of a manual and a new risk matrix.

– At the beginning of 2019, a regional accounting body (the Court of Auditors) asked the hospital for a report for the proper classification of the trigeneration plant. The question was dramatic: was the 33.7 million euro trigeneration plant to be recorded '*on*' or '*off*' *public balance sheet*? It would be '*off*' *public balance sheet* only if the European EPC rules were respected (no deviations or assembly errors). This would require very careful management of the parts built over time, which was absolutely not present at the beginning. An '*on public balance sheet*' classification would have led to disastrous choices on the part of the Hospital (blocking the hospital budget) including the repayment of an ordinary loan obtained thanks to the effect on the budget of recording the plant off public balance sheet. A large penalty would have to be paid for early repayment of the loan. And damage to the state revenue would be declared, with the public managers having to pay for the damage caused to the hospital coffers from their own pockets.

The case shows how an asymmetry is created between the investment of the fund Infracapital's equity and the needs of the public administration. The high expected return underlying an expansion/restriction of private infrastructure financing is found to be in contrast with the needs of the public operator, which needs the off balance sheet not to turn into an off balance guided by 'additional acts' which would increase the annual fee paid by the hospital and cancel the risk transferred. The increase in the investment return would probably lead to on balance sheet, while a freeze on the fee would create an opposite situation with a reduction in the return on the investment made by Infracapital and a flight of capital. The problem is not unsolved, but it requires operating from the time the PPP is conceived with tools and an evolved culture that allow for a coherent 'governance' of D&C and O&M assembly and not operating with disruptions when one is aware that the lack of tools and culture has driven the financial parameters out of control. It is also this type of financing that ends up transforming the nature of infrastructure and makes it possible to better classify the concept of urban infrastructure.

These two cases in which funds and financialization are inserted provide reflections on how to interpret complexity (Chap. 3) and avoid underestimation in combining it with the evolution of urban infrastructure.

It is also part of the travails of a change in models with contradictions, the presence of asymmetrical components, generated conflicts, and stop and go situations that are determined, and the attraction and flight of capital/funds from initiatives that run aground. Other examples, in addition to the one described above, are the south-Ile Paris hospital already mentioned, the London underground (O'Brien & Pike, 2015; O'Brien, Pike, et al., 2019), with the Metronet bankruptcy in London in 2007 (Jupe, 2011) with the Lusoponte concession in Lisbon (de Lemosa et al., 2004) the interventions of funds in Chicago (Ashton et al., 2016) and other investments of different types and with different angles (Reeves, 2013, 2015; Reeves et al., 2017). Financialization is constantly changing, forcing past formulas (Domingues & Zlatkovich, 2015; Hodge & Greve, 2021) to be revised within a situation of complexity that is also evolving.

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