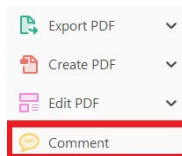


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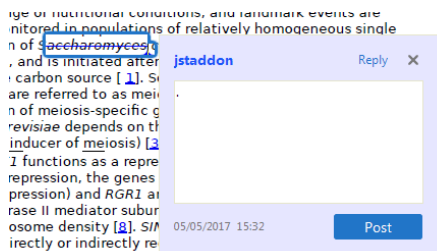


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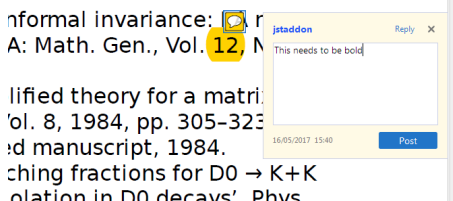
1. Small size (35–250 amino acids).
2. Absence of similarity to known proteins.
3. Absence of functional data which could not be the real overlapping gene.
4. Greater than 25% overlap at the N-terminus terminus with another coding feature; over both ends; or ORF containing a tRNA.

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How to use it:


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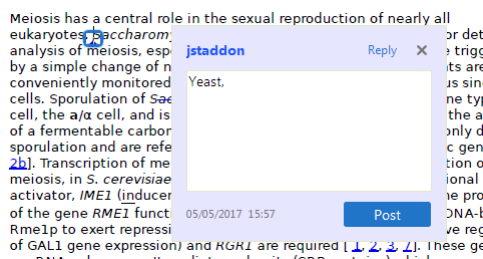


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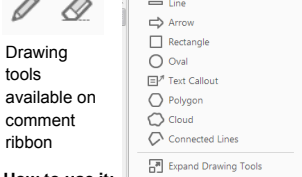
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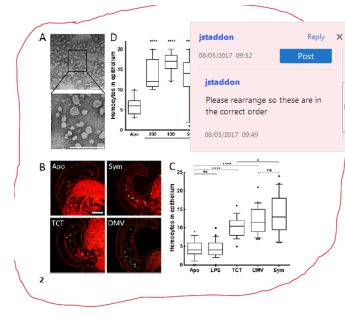


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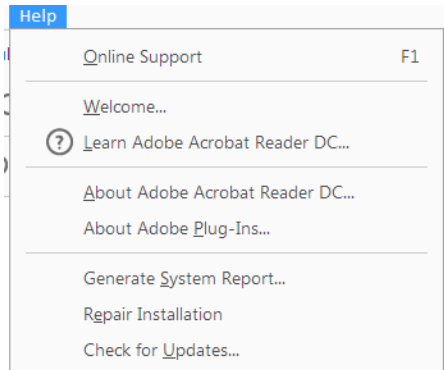
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The Financialisation of Rental Housing 2.0: Releasing Housing into the Privatised Mainstream of Capital Accumulation

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Abstract: This article presents two cases of listed real estate companies that operate in the Ruhr metropolitan region of Germany. The first is Immeo Wohnen, a subsidiary of the French real estate investment trust (REIT) Foncière des Régions that was previously owned by a US hedge fund. The second is Vonovia, Germany's largest real estate company, originally a subsidiary of a British private equity firm. Both examples embody what we call the shift from financialisation 1.0 to financialisation 2.0, i.e. the transition from pure speculation to long-term investment. We show that long-term investment strategies are used by REITs and listed funds in order to release housing into the privatised mainstream of capital accumulation. With the advent of the financialisation of rental housing 2.0, the long-term investment focus of these funds paradoxically enables a short-term investment focus by buying and selling shares in these funds on the stock exchange.

Kurzfassung: In diesem Beitrag werden zwei im Ruhrgebiet tätige börsennotierte Wohnungsgesellschaften in den Blick genommen. Die erste Aktiengesellschaft ist Immeo Wohnen, eine Tochtergesellschaft des französischen Real Estate Investment Trusts (REIT) Foncière des Régions, die sich zuvor im Besitz eines US-amerikanischen Hedge Fonds befand. Das zweite Wohnungsunternehmen ist Vonovia, das gegenwärtig größte Wohnungsunternehmen in Deutschland. Ursprünglich war Vonovia ein Ableger einer Britischen Privat-Equity-Gesellschaft. Beide Beispiele stehen für das, was wir als eine Verschiebung von Finanzialisierung 1.0 zu Finanzialisierung 2.0 bezeichnen, d.h. der Übergang von reiner Spekulation zu langfristigem Investment. Wir argumentieren, dass langfristige Investmentstrategien von REITs und Aktiengesellschaften darauf zielen, Wohnen in den privatisierten Mainstream der Kapitalakkumulation zu überführen. Allerdings wird der langfristige Investmentfokus beider Aktiengesellschaften mit Beginn von Finanzialisierung 2.0 von einem kurzfristig orientierten Börsenhandel der Aktien dieser Gesellschaften begleitet.

Keywords: financialisation, gentrification, Germany, primitive accumulation, private equity and hedge funds, rental housing

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Introduction

In Germany, Spain, the US and elsewhere, a new set of landlords has entered the rental housing market: private equity firms, hedge funds, real estate investment trusts (REITs) and publicly listed real estate firms. We refer to the original acquisition of different forms of de commodified and not-fully commodified housing (public, social, cooperative, rent-stabilised and company housing)¹ by private equity funds and other opportunistic investment funds as financialisation 1.0. Like land grabbing (Ince 2014), it is one of the forms of land enclosures or primitive accumulation of the early 21st century. The subsequent phase 2.0 starts with the conversion to REITs and listed real estate firms.

The financialisation of rental housing 1.0 largely took place in the seven years before the global financial crisis (GFC) of 2007 and is associated with short-term investment strategies of “buying low and selling high” (Fields and Uffer 2016; Holm 2010b). Private equity firms operate in a financial web of multiple actors, loans and securitisations, which makes it difficult to conceptualise who really is the landlord and to whom tenants should address their grievances. Private equity firms have a short-term focus (three to five years), are highly leveraged (i.e. loaded with borrowed money and little equity) and typically invest little in maintenance (Diamantis 2013; Fields 2015). Some of their real estate acquisitions are so over-leveraged that the average rent per unit is lower than the cost of servicing the debt per unit, i.e. the rent does not even cover the interest on the loans that were taken out to acquire these properties in the first place (Fields 2015; Holm 2010a; Uffer 2011).

However, in cities like New York and Berlin the financial expectations of the private equity firms often did not materialise. Making money on subsidised rental housing turned out to be harder than expected. Some of these firms simply have collapsed, others had to readjust their strategies: both rents and sales brought in less money than expected and buy-, hold- and sell-plans had to be adjusted accordingly (Fields 2015; Fields and Uffer 2016). As a result of the GFC, accessing external finance, crucial for the business models of private equity real and hedge funds, became so difficult that most were forced to sell off their portfolios (Aalbers 2016). However, financialisation did not stop or halt; many private equity funds were converted into REITs and listed real estate companies, and housing portfolios were sold directly to listed real estate funds (Wijburg and Aalbers 2017a). Here we focus on the financialisation of rental housing 2.0, i.e. the takeover of housing portfolios by REITs and listed real estate funds.

Unlike private equity and hedge funds, REITs and listed real estate companies appear to adopt a long-term investment strategy to create stable cash flows for their shareholders (Lizieri 2009). They seek to create a “rentier structure” to optimise cash flows, rental incomes and capital gains through the sale of individual housing units (Moreno 2014; Rutland 2010). Second, they seek to enhance the net value of the portfolio, for instance through focusing on core investment strategies, stimulating gentrification effects through modernisations and refurbishments, “gaming” rental regulations and teaming up with local authorities to coordinate neighbourhood development (Bernt et al. 2017; Beswick et al. 2016). Instead of the “pure” speculative strategies of “buy low and sell high”, the new

landlords focus on long-term real estate management. Nevertheless, also REITs and listed real estate companies are primarily aimed at extracting (potential) value from former decommodified and not fully-commodified housing.

We argue that the shift towards financialisation 2.0 does not signify a radical break with financialisation 1.0, but rather a continuation with different means and strategies. We show that the more aggressive phase of financialisation 1.0 was a prerequisite to launch the “expanded reproduction” of dispossessed housing as an income-producing financial asset. Albeit qualitatively different, both stages are part of the “ongoing process of social reconfiguration that imposes logics of (fictitious) commodification and fictitious capital formation on land” (AlShehabi and Suroor 2016:837–838). Therefore, we also show that the boundaries between 1.0 and 2.0 and, accordingly, between private equity and hedge funds on the one hand, and REITs and listed real estate companies on the other, are not as clear-cut as they seem and that both stages make up for what Harvey (2003) considers a wider pattern of “accumulation by dispossession”. Like earlier forms of accumulation, financialisation 2.0 “entail[s] taking land ... and then releasing the land into the privatised mainstream of capital accumulation” (Harvey 2005:145).² More precisely, it entails a stage of capital accumulation in which rental housing units are no longer treated as purely speculative goods but rather as long-term investment objects for investment funds. Paradoxically, the long-term investment focus of these funds enables a short-term investment focus by buying and selling shares in these funds on the stock exchange.

Although the arrival of listed real estate companies is recognised as an important development, the rise of financialisation 2.0 remains under-studied in the literature. Against the background of austerity urbanism and the ongoing expansion of international capital markets into housing and real estate (Fernandez and Aalbers 2016; Peck 2012), this could be considered a shortcoming. On the one hand, there are several urban case studies which have highlighted how former decommodified housing portfolios have been sold to financial investors (Bernt et al. 2017; Beswick et al. 2016; Fields and Uffer 2016; García-Lamarca 2017; Teresa 2016).³ Yet, these studies focus primarily on financialisation 1.0 and have only hinted at the rise of the next phase: financialisation 2.0. On the other hand, there are a couple of studies that focus on REITs and listed real estate companies in Germany, France and Ireland (Byrne 2016; Holm 2010a; Waldron 2017; Wijburg and Aalbers 2017b). However, the latter studies are national in scope and neither focus on local investment strategies, nor on the urban processes shaping financialisation 2.0.

We scrutinise these processes through an analysis of the investment activities of a REIT and a listed firm in Germany: Immeo Wohnen and Vonovia. Immeo is a subsidiary of the French REIT Foncière des Régions (FdR) that entered the German market in 2005 after it purchased a 39,400 unit large housing portfolio from a hedge fund of US investment bank Morgan Stanley. The second company, Vonovia, is the largest listed real estate company in Germany. Until 2015, the company was known as Deutsche Annington and belonged to the British private equity firm Terra Firma Capital Partners. Both companies operate in the Ruhr area, the region where the largest number of housing units in Germany were sold to financial

investors between 1999 and 2008 (BBSR 2007; Diamantis 2013; Kofner 2012). FdR is currently selling most of its remaining housing assets here as it conducts a “core investment strategy” and relocates its business activities to more profitable areas, such as Berlin and Hamburg. Although Vonovia’s overall strategy is broadly similar, the company is currently engaged in the redevelopment of a neighbourhood in Essen. Using government aid and modernisation techniques, Vonovia adopts a gentrification strategy to enhance the real estate values by gaming the system of rental housing regulations.


By describing the shift from financialisation 1.0 to 2.0, this paper adds to the literature on the financialisation of rental housing (Aalbers 2016; Bernt et al. 2017; Beswick et al. 2016; Fields and Uffer 2016; Soederberg 2017; Wijburg and Aalbers 2017a) but also contributes real-world examples to the literature that argues that real estate increasingly is managed as an object of investment (Coakley 1994; Lizieri and Pain 2014; Van Loon and Aalbers 2017) and more generally to the a strand of the financialisation literature that argues that profit-making occurs increasingly through financial channels rather than through trade and commodity production (Krippner 2011). Because the advent of financialisation 2.0 coincides with wider transformations in the financial sector and urban political economy (cf. Botzem and Dobusch 2017), we conclude that the described transition also exemplifies how international finance and the stock exchange intensify their control over the management and production of urban space and local real estate markets (cf. Moreno 2014; Rutland 2010). We demonstrate this by adopting an actor-centred research approach and by focusing on the local investment strategies of Immeo Wohnen and Vonovia in the Ruhr area of Germany.

This paper has adopted a mixed case study design. Newspaper articles, policy documents and annual reports have been investigated to explore the investment practices of Immeo and Vonovia in Mülheim an der Ruhr and Essen. In order to fully comprehend the local investment practices of both companies we also conducted 14 semi-structured, in-depth interviews with various city councillors, urban planners, tenant associations, housing activists, but also with general managers and project managers of Immeo and Vonovia between October and December 2016. The next section provides a contextual history of housing privatisation in Germany. We then discuss the local investment practices of FdR and Vonovia in Mülheim an der Ruhr and Essen. We conclude by summarising the business strategies of listed real estate companies and explain how these strategies, together with other developments in rental housing, constitute financialisation 2.0.

From Financialisation 1.0 to Financialisation 2.0

During the late 19th century, a subsidised private rental sector emerged in German cities (Harloe 1995; Kohl 2015). Mortgage banks, manufacturing firms, private developers and local municipalities were responsible for the construction of large-scale social housing associations (see also Voigtländer 2010). After World War II, subsidised rental housing became a cornerstone of post-war housing policies in the Federal Republic of Germany (Kofner 2014).⁴ Facing a permanent

1 housing shortage, in part a result of war damage, the federal government vastly
2 supported the construction of affordable housing (Voigtländer 2010). Affordable
3 housing, typically managed by private or municipal companies, was seen as an
4 integral part of Germany's post-war "social market economy" (Kofner 2014). The
5 law of the *Wohnungsgemeinnützigkeit* ("common interest principle") guaranteed
6 that social housing companies were exempt from taxation, providing that they
7 served a public goal and offered affordable, rental housing units (Voigtländer
8 2010).

9 However, during the 1980s the state support for subsidised rental housing was
10 heavily debated. The Kohl administration argued that it was necessary to reduce
11 public expenditure to the subsidised housing sector and to promote "free" com-
12 petition (Holm 2015). A new law, introduced in 1989, abolished the "common
13 interest principle". Upon German reunification, social housing companies lost
14 their protected status and were forced to become market-oriented and to intro-
15 duce market logics to make the provision of housing possible (Voigtländer
16 2007).⁵ As a result, many municipal and industrial housing companies divested
17 their real estate portfolios in order to pay off municipal debt or to raise share-
18 holder value (Kirchner 2007; Voigtländer 2010). Between 1999 and 2011, around
19  1.4 million housing units were sold off (BBSR 2011), almost 3.5% of the entire
20 housing stock in Germany. Such sales took place in both East and West Germany;
21 and in both economically weak and strong regions.

22 The reforms in the subsidised rental sector opened up the market to interna-
23 tional investors: the financialisation of rental housing 1.0. Although it was not the
24 goal of the German government to facilitate these investors, their entry into the
25 German housing market is the contingent outcome of state restructuring, welfare
26 reforms and housing privatisation that created new state-market relations (Bernt
27 et al. 2017). The first international investors that entered the German housing
28 market were US- and UK-based private equity and hedge funds (Aalbers and
29 Holm 2008; Kaiser 2008; Voigtländer 2007). These funds create and manage real
30 estate portfolios by collecting investment capital and leveraging it with credit
31 from investments banks or the shadow banking system. Operating with little
32 equity and high leverage ratios, private equity funds aim to make high returns
33 but are also exposed to high default risks (Fichtner 2014; Kofner 2012). Their
34 business model is based on "buying low and selling high"—i.e. on speculation in
35 its purest form—and revolves around the usage of complex financial instruments
36 and measurements (Deeg and Hardie 2016; Kofner 2012). Private equity funds
37 aim to reduce vacancy rates and extract higher rents while deliberately disregard-
38 ing maintenance, sometimes even when the older housing units of their portfolio
39 are eroding (Botzem and Dobusch 2017; Holm 2010b).

40 In Germany privatisation and financialisation happened throughout the coun-
41 try, but more intensely in some regions such as Berlin because of the large public
42 housing stock and the dire budgetary crisis of the State of Berlin. Not only did
43 the 19 different public housing companies sell off thousands of units, two compa-
44 nies were completely privatised. With the 2004 purchase of GSW and its 65,000
45 units, Cerberus, an American private equity firm valued at \$24 billion, became the
46 largest landlord of Berlin overnight. Valued at €405 million, the deal allowed

1 Cerberus to purchase the stock at a mere €6230 per housing unit, although Cer-
2 berus also took on GSW's debt. The company acquired another 30,000 units in at
3 least nine different transactions (Aalbers and Holm 2008). Cerberus was backed
4 by Goldman Sachs' real estate subsidiary Whitehall Funds. Cerberus and Whitehall
5 had planned to hold GSW and the other 30,000 units for a few years, raising
6 rents, upgrading and selling a number of units in gentrified neighbourhoods
7 (Uffer 2011), while reducing maintenance costs elsewhere.

8 During the mid 2000s and in particular since the GFC, many private equity and
9 hedge funds have exited the German housing market (Müller 2012; Scharmanski
10 2013). However, most housing portfolios were not sold directly to new investors.
11 Instead, several funds transformed their housing subsidiaries into independent
12 housing companies that became listed on the Frankfurt Stock Exchange, allowing
13 the private equity and hedge funds to exit the German housing market (Heeg
14 2013; Kofner 2012). For instance, Cerberus managed to bring GSW to the stock
15 exchange, marking the shift to financialisation 2.0. The IPO of GSW was valued at
16 €468 million, undoubtedly less than Cerberus and Whitehall Funds had counted
17 on, but assuming these firms have loaded GSW further with debt than it already
18 was when Cerberus bought it in 2004, both companies probably still realised a
19 handsome profit. Other funds struggled with meeting the high interest payments
20 on their offshore credit loans and defaulted in the wake of the crisis (Botzem and
21 Dobusch 2017). The shift from private equity and hedge funds to REITs and listed
22 real estate was followed by a wave of mergers and acquisitions, resulting in a
23 select group of listed companies and REITs: Vonovia, Deutsche Wohnen, LEG
24 Immobilien and Foncière des Régions (Immeo Wohnen) are four major players
25 with a quasi-monopoly position. In 2013 the total size of the listed real estate sec-
26 tor in Germany, 75% of which is residential (Barkow and Georgi 2014), was val-
27 ued at €1,833 billion (EPRA 2013).



28 Unlike private equity funds, listed real estate companies adopt a mid- to long-term
29 approach of managing and maintaining income-producing real estate assets (Kofner
30 2012). Much like REITs, listed real estate companies are legally obliged to distribute
31 the largest part of their operative income to their shareholders (Lizieri 2009).⁶ While
32 shareholders expect a maximisation of shareholder value, listed real estate compa-
33 nies typically seek returns of 4–6% annually and are thus devoted to creating contin-
34 uous cash flow and operative income by renting out housing units and selling
35 individual units at profitable prices (Heeg 2013; IEIF 2014). In doing so, listed real
36 estate companies and REITs alike are known for developing strategies to enhance the
37 real estate values of their portfolio, sometimes by gaming the systems of rental regu-
38 lations (Kofner 2012; Lizieri 2009), as will become clear in the next section. These
39 strategies of “expanded reproduction” can be considered as a continuation of the
40 more “primitive” strategies of private equity funds, albeit with different means and
41 considering a longer time frame (cf. AlShehabi and Suroor 2016).

42 Nonetheless, it must be emphasised that the boundaries between private equity
43 and hedge funds on the one hand and REITs and listed real estate companies on
44 the other are not as clear-cut as it seems. For instance, Bernt et al. (2017) have
45 shown how private equity funds can make money through receiving state-
46 subsidised rents to house unemployed welfare recipients. Providing that a housing

shortage prevails and interest rates remain low, private equity funds can make money on this so-called “Hartz IV-model” as they offer low-cost and often low-maintained housing units to this target group (see also Müller 2012). However, this model has also been adopted by various listed funds that seek to make long-term profits. Similarly, some private equity funds were already involved in property management before they sold off their portfolios or before their IPO; some listed funds still adopt private equity techniques and divest the less profitable parts of their housing portfolio (Kofner 2012). Increasing evidence also shows how both private equity funds and listed real estate companies engage in a tight network of supporting financial intermediaries, thus extending their activities far beyond the reach of the real estate industry alone and also generating income through fees, commissions and mortgage securitisation (Botzem and Dobusch 2017). Table 1 provides a summary of the investment strategies of REITs and listed real estate companies compared with both social housing companies, and private equity and hedge funds.

Listed Real Estate Companies: FdR and Vonovia

Since the aim of this paper is to identify local investment strategies that make up for expanded reproduction, this section focuses on two large listed real estate companies operating in the Ruhr area in the state of Nordrhein-Westfalen (NRW): Foncière des Régions (Immeo Wohnen) and Vonovia. While both companies adopt broadly similar investment approaches, they locally adjust their strategies to fully exploit the uneven geographies of the regional and urban economy of Germany. Table 2 displays the key figures and locations of both companies.

Before moving into the analysis, we want to emphasise that both companies can be considered as representative for all listed real estate companies in Germany which, as we have explained in the previous section, adopt broadly similar investment strategies regardless of the historical origin of their housing portfolio (public, municipal or industrial) but adjust these strategies according to the market

Table 1: Investment strategies of listed real estate companies in Germany

Company structure	Social housing company	Private equity and hedge funds	Listed real estate companies/REITs
<i>Characteristics</i>			
Principal activity	Providing affordable housing for low- and moderate-income households	Buying low and selling high	Managing and maintaining income-producing real estate assets
Debt structure	Fiscal and financial subsidies, bank loans	Low equity and high debt, often through offshore finance (highly leveraged)	Capital markets and offshore finance
Profit versus risks	Non-profit, long-term	High risks, high profits, short-term	Medium profits, low to medium risks, long-term

Table 2: Key figures from Vonovia and Immeo Wohnen (source: based on annual reports and calculations by the authors)

	FdR (Immeo Wohnen)	Vonovia
Original owner	ThyssenKrupp steel company	Railway and utility companies (among others)
Private equity/hedge fund	Immeo Wohnen (Corpus/ Morgan Stanley)	Deutsche Annington (Terra Firma)
Net initial yield (EPRA)	5,0%	5,6%
Market capitalisation	€18.4 billion (€2.1 billion in Germany)	€13.3 billion
Housing units under management	44,939 in Germany	333,381
Geographical focus	NRW (52%), Berlin (34%), Dresden and Leipzig (8%), Hamburg (6%)	Nationwide: in NRW (31%), Leipzig and Dresden (14%), Stuttgart (9%), Berlin (9%)

challenges and opportunities of the city or region in which the housing portfolio is located. Likewise, we want to emphasise that both firms are not uniquely “German” inasmuch as they translate global real estate practices into local investment strategies and hence adopt a similar business model as REITs and listed funds in other countries (cf. Aalbers 2016; Beswick et al. 2016). The German case is similar to transitions from financialisation 1.0 to 2.0 in countries such as Ireland, Spain, the UK and the US where, albeit in a different institutional environment, the ownership transfer from private equity to listed real estate also can be observed (see e.g. Beswick et al. 2016; Fields forthcoming; García-Lamarca 2017; Waldron 2017). However, whereas Vonovia is more representative for a listed real estate company launched on the stock exchange initiated by a private equity firm, Immeo Wohnen is more representative for a globally operating REIT which expands its real estate portfolio through acquisitions. Yet, Vonovia also strategically cooperates with important housing companies in other European countries such as France.

Immeo Wohnen

The housing portfolio of Immeo Wohnen consists of the former housing units of two steel companies: Thyssen and Krupp. After the two competitors merged in 1999, ThyssenKrupp decided to focus on its “core” activities. As a result, the housing portfolio in the Ruhr area was put up for sale. In 2004, the ThyssenKrupp portfolio of 48,000 housing units was sold to Corpus, a hedge fund owned by US investment bank Morgan Stanley for an estimated price of €2.1 billion (Kofner 2012). Morgan Stanley rebranded the housing portfolio into Immeo Wohnen. Morgan Stanley’s goal was to improve the cash flow of Immeo in order to resell it during a future market upswing (Kaiser 2008). However, it was faced with high interest payments on loans it had obtained to finance the acquisition of the portfolio (Kofner 2012). As the company struggled with repaying its debts, in particular during the GFC, Morgan Stanley started selling some of its dwellings. In 2005–2006, FdR acquired Immeo for €1.8 billion.

1 Founded in 1963, FdR was initially a property company that maintained a large
2 parking garage in Metz (IEIF 2014). After some acquisitions and leaseback agree-
3 ments in the 1980s and 1990s, it expanded its portfolio with residential units and
4 also acquired commercial real estate properties from Axa, Telecom and other
5 French multinationals (IEIF 2014). After its IPO at the Paris Stock Exchange in
6 2003, FdR began to diversify its portfolio further, also internationally. Focusing
7 strategically on offices in France and Italy, on hotels throughout Europe and hous-
8 ing units in Germany, the company developed into one of the largest REITs of
9 Europe (IFRA 2014). By 2015, the portfolio of FdR consisted of commercial real
10 estate in France (45%) and Italy (17%), residential real estate in Germany (20%),
11 hotels and hospitals in Europe (13%) and other types of real estate (6%). In
12 2015, the company's portfolio equalled a total market capitalisation of around
13 €13 billion. A majority of the shares of FdR are owned by a consortium of share-
14 holders, including Delfin Group (29%), the holding company of Italian billionaire
15 Leonardo del Vecchio, and three French insurance companies: Covéa Group
16 (12%), Crédit Mutuel Insurances (8%) and Crédit Agricole (7%). Parts of the com-
17 pany are still owned by Charles Ruggieri, its founder.

18 The entry of FdR into the German housing market was part of its wider strategy of
19 global diversification (Immeo 2014). While homeownership rates, rental price and
20 house price levels in Germany were lower than in other European countries, the Ger-
21 man housing market was considered full of potential. However, FdR soon realised
22 that the Immeo portfolio was less profitable than it had anticipated. Since most of
23 Immeo's housing units were located in the less dynamic Ruhr area, the surge in
24 house prices and rents remained limited. As a result, FdR changed its investment
25 strategy in 2009 (Boisnier 2011). Selling many of its "non-core" assets in the Ruhr
26 area, the company relocated its investment activities to the metropolitan regions of
27 Berlin, Dresden, Leipzig and Hamburg where house price dynamics were stronger
28 (Wijburg and Aalbers 2017a). As a result, the dominant investment strategy of FdR
29 can be characterised as a core investment strategy: a general withdrawal from the
30 Ruhr area in order to expand in more booming regions, whereby the company only
31 keeps those assets with a special value, as we will see in the next section.⁷
32
33

34 Vonovia

35 The housing portfolio of Vonovia was established after a merger between
36 Deutsche Annington and Gagfah in 2015. Deutsche Annington was created in
37 2001 when British private equity fund Terra Firma acquired 64,000 housing units
38 from the German Federal Railways. With its headquarters in Düsseldorf and
39 Bochum, Deutsche Annington started expanding its portfolio and eventually
40 acquired large housing companies in Berlin, Dresden and Leipzig (Holm 2010b).
41 In 2005, the energy companies E.On (previously, Veba and Viag) and RWE sold
42 their housing portfolios of respectively 138,000 and 4500 housing units, which
43 also enlarged the company's housing portfolio in the Ruhr area (Kofner 2012:89).
44 During the GFC, Deutsche Annington introduced the so-called Clear Water
45 reform, consisting of the abolishment of regional contact centres, the digitalisa-
46 tion of rental leases and the dismissal of 300 employees (Kofner 2012).

1 Furthermore, it was able to refinance €4.3 billion of outstanding debt in 2012, at
2 the time the largest commercial mortgage-backed security deal in Europe. In the
3 German public debate, Deutsche Annington has often been portrayed as a
4 grasshopper (*Heuschrecken*) that destroys the harvest, without sowing because it
5 was a prime example of a private equity fund that increased rents while simulta-
6 neously neglecting maintenance (Holm 2010b).

7 Terra Firma never intended to stay in Germany for more than six to eight years.
8 In 2013 Deutsche Annington was transformed from a subsidiary of Terra Firma
9 into an independent company listed at the Frankfurt Stock Exchange. After
10 Deutsche Annington merged with Gagfah in 2015, the company was transformed
11 into Vonovia, a listed real estate company. The initial public offering of the com-
12 pany allowed Terra Firma to progressively reduce and sell its shares in the com-
13 pany. Since its IPO, about 28% of the company in 2015 is owned by a
14 consortium of asset managers and banks, including Blackrock (8%), Norges Bank
15 (8%), Lansdowne Partners (5%), Deutsche Bank (4%) and Sunlife Partners (3%).
16 This shareholder structure underlines the international dimension of listed real
17 estate in Germany. Not only can global asset managers such as Blackrock influ-
18 ence the local business strategies of Vonovia through shareholder votes; a large
19 share of the profits of Vonovia, i.e. the rents of tenants in Germany, flow out of
20 the country and are absorbed into international capital circuits.

21 With the exit of Terra Firma, the new company of Vonovia started “focusing on
22 scale advantages and offering mid-priced private rental housing” (Interview, Regio-
23 nal Ministry NRW, 2016). Another way of Vonovia increasing profits is through a
24 strategy of *insourcing* services, such as internet, energy and repairs. By closing
25 package deals with local companies, Vonovia is able to provide relatively affordable
26 services to its tenants while also taking a cut themselves. Sometimes the service
27 package of Vonovia is included in the rental contract. To counter its past reputa-
28 tion as a grasshopper, Vonovia also developed a strategy to improve customer sat-
29 isfaction and its corporate image. For instance, many of the Clear Water reforms
30 were reversed. Vonovia also started refurbishing and modernising its housing stock
31 in low-income neighbourhoods and engaging with “neighbourhood develop-
32 ment” (*Quartiersentwicklung*) (Vonovia 2015), typically as a strategy to increase
33 rents, thereby increasing pressure on some low-income tenants to move.

34 **The Local Investment Strategies of Immeo and Vonovia**

35 In this section we present two local case studies to demonstrate what investment
36 strategies Immeo and Vonovia have adopted. These cases point to how listed real
37 estate companies adopt two main strategies to make profits: selling housing units
38 at a lucrative price or renting them out while improving the net value of the port-
39 folio. The first case is the Heimerde, a neighbourhood in Mülheim an der Ruhr
40 where Immeo Wohnen sells most of its housing assets and maintains only those
41 that cannot be sold immediately or that are still profitable. The sale of the Heima-
42 terde illustrates Immeo’s wider investment strategy of relocating to more boom-
43 ing metropolitan regions outside the Ruhr metropolitan area, with the exception
44 of Düsseldorf. The second case is Elting, a central neighbourhood in Essen.
45
46

1 Because Vonovia recognised the potential of Elting, the company has entered into
2 a public–private partnership with the City of Essen and other stakeholders to
3 develop the neighbourhood by investing in the modernisation of the housing
4 units. As such, Vonovia adopts a gentrification strategy to enhance the real estate
5 values by gaming the system of rental housing regulations.
6
7

8 ***Immeo in Mülheim an der Ruhr***

9 The Heimaterde (in English: “home ground”⁸) is a neighbourhood in Mülheim an
10 der Ruhr of approximately 900 dwellings. It was built during the 1920s and
11 1930s by workers of the steel company of Krupp according to the principles of
12 the English garden city movement. During the reign of the Nazi regime the Hei-
13 materde was collectivised and became fully owned by Krupp, the regime’s
14 weapon producer. After the war, Krupp remained owner and intended to sell
15 parts of its housing portfolio in the 1980s. However, it first took a merger with
16 Thyssen in 1999 until it eventually sold its housing subsidiary to Morgan Stanley
17 in 2004 (Kaiser 2008). Morgan Stanley, immediately focused on increasing the
18 earnings of the company, but sold Immeo to FdR one year later as it struggled
19 with making profits and meeting interest payments (Kofner 2012).

20 Initially, FdR manifested itself as a long-term investor and focused on the mainte-
21 nance of the Heimaterde, thereby securing real estate values and contributing to
22 neighbourhood stability: “Immeo was not so much concerned with profit maximisa-
23 tion. At least from the political side, we could still talk to them and the issues of
24 tenants were also taken seriously” (Interview, City Councillor I, 2016). The long-
25 term commitment to the Heimaterde was also reflected in its ambition to develop
26 some parcels of land in the Max Halbachstraße. Since the Heimaterde has rather
27 large gardens, Immeo planned to use some of them for new housing construction
28 and received permission from the municipality, provided that it would construct
29 housing for senior residents of the Heimaterde (Hesselmann 2015).

30 However, in 2008, in the midst of the GFC, FdR decided to change its invest-
31 ment strategy. On the one hand, the company realised that the former ThyssenK-
32 rupp dwellings were not profitable enough: “We are currently selling individual
33 housing units, mainly family apartments and those that are difficult to manage ...
34 We also seek to divest our non-core assets, which are mainly larger housing
35 estates located in Duisburg” (Interview, CEO of Immeo Wohnen, 2016). On the
36 other hand, the company strategically relocated its investment activities to more
37 dynamic metropolitan regions: “We mainly invest in inner cities, including Berlin,
38 Dresden and Düsseldorf, that is to say, in smaller housing units, which have rental
39 potential” (Interview, CEO of Immeo Wohnen, 2016). As the outcome of this
40 wider development, large sales followed in 2008 in Essen and Oberhausen
41 (Lindgens and Süselbeck 2012). Simultaneously, the company progressively
42 acquired more dwellings in Berlin, Dresden, Leipzig and Hamburg.

43 The local strategy of Immeo can be characterised as an “exit strategy”, similar
44 to that of private equity funds (Diamantis 2013). However, whereas private equity
45 funds anticipate an exit from the market, either through an IPO or a resale of the
46 entire portfolio, Immeo mainly focuses on the sale of individual housing units,

1 thereby seeking to realise profits on each transaction and using the money to
2 fund new acquisitions elsewhere. Although data of housing transactions in
3 Mülheim are not available, Immeo started selling family homes in the Heimiterde
4 soon after it changed its investment strategy. As a city councillor mentioned:
5 “Mülheim an der Ruhr is one of the greenest cities of the Ruhr area. There are
6 large plots of land. People working in Düsseldorf or Essen want to come and live
7 here. Real estate and land is in high demand” (Interview, City Councillor II,
8 2016). As both the CEO of Immeo and a local urban planner stress, several
9 houses were also sold to existing tenants or their children.

10 The exit strategy also resulted in the termination of the Immeo plan to con-
11 struct housing for seniors (Hesselmann 2015). In 2016 the company sold the land
12 and its building plan to Engel & Völkers, a private developer based in Hamburg.
13 This created a problem for the municipality because the building plan was open
14 to interpretation: “The development plan was not *precise* enough; it could be sold
15 and reinterpreted by the new developer” (Interview, Urban Planner I, 2016). In
16 other words, Engel & Völkers could bypass some of the commitments Immeo had
17 made and instead focus on the construction of more luxurious apartments with
18 an underground car park. As such, the new homes that are currently under con-
19 struction can be sold to any buyer regardless of age or income class. A city coun-
20 cillor confirmed: “The CEO had decided that rental houses for elderly no longer
21 belonged to the ‘core’ business of Immeo: they sold the land for a good price”
22 (Interview, City Councillor II, 2016).

23 Although FdR is selling part of its local portfolio, the company still owns several
24 blocks in the Heimiterde. First, it owns a couple of retirement homes (see Figure 1)
25 which are offered as “special-purpose properties” on their website. Although retire-
26 ment homes are difficult to split and to sell as pieces, senior homes can be easily
27 marketised since they are scarce and equipped with added value, such as elevators or
28 wheelchair accessibility. Against the background of a nationally and locally ageing
29 society, Immeo can still profit from the demand for age-appropriate houses, without
30 having to build those assets from scratch, and also receiving federal grants to
31 finance renovations (see also Helbrecht and Geilenkeuser 2012). Furthermore,
32 Immeo has recently installed new solar panels on the rooftop of the retirement
33 homes. The costs of these modernisations can be charged to the tenants, allowing
34 Immeo to increase the rents.⁹

35 Second, Immeo still owns a number of under-maintained blocks of flats. As pri-
36 vate landlords in Germany receive federal subsidies to house welfare recipients
37 below market prices, these low-cost and low-quality dwellings can still be made
38 profitable, providing that the capital costs of the buildings are low (cf. Bernt et al.
39 2017). The case of the Heimiterde illustrates that a listed real estate company
40 may combine a long-term “hold” strategy for its core assets with a “sell” strategy
41 for its non-core assets, depending on location, rental potential, sale potential and
42 government policies it can incorporate in its business model. Through the sale of
43 non-core assets in NRW, FdR is able to collect the money for new acquisitions in
44 more dynamic regions, including Berlin and Hamburg. Essentially, the company
45 applies a “core investment strategy” characterised by divestments in NRW and
46 investments in booming metropolitan areas.



Figure 1: Max-Halbachstraße 53–55: one of the few remaining assets of FdR in Mülheim an der Ruhr (source: photo taken by Annia Martinez)

Vonovia in Essen

Vonovia's investment strategies in Essen's Elting neighbourhood are another paradigmatic example of financialisation 2.0. Once a lively working class neighbourhood, Elting was populated by the coalminers of RWE and railroad workers of Deutsche Bahn. After the coal crisis in 1957 and deindustrialisation, Elting slowly started to decline. While many workers lost their jobs, the neighbourhood got abandoned. From the 1970s onward, low-skilled migrants arrived in Essen and moved into Elting. The neighbourhood became known for its high unemployment rates and impoverished housing conditions. In 2016, more than one third of the population in the neighbourhood received welfare benefits and almost half of the population had a double or non-German nationality (Schymiczek 2015).

Vonovia owns around 3500 housing units in Elting and struggled to keep up its real estate values. As the neighbourhood was known as a "no go" area, Vonovia initially hired "guards to keep control in the neighbourhood" (Interview, Project Manager Elting, 2016). Yet, Elting was recognised as a neighbourhood with potential as it was relatively well located between the city centre and the University of Duisburg-Essen (Vonovia and CBRE 2016). At the same time, the energy company RWE and various other companies reopened their headquarters at the nearby Altenesesener Straße, thus providing local employment. Hence, Vonovia realised that there was not only potential in the neighbourhood, but also an opportunity to change its socio-economic structure. In the words of a project manager of Elting: "they had to do something for the stability of the neighbourhood, this was purely to secure the real estate values of Elting" (Interview, 2016).

1 The first steps in the transformation of Elting had already been taken by
2 Deutsche Annington when, in 2014, it approached a public–private entity named
3 Innovation City.¹⁰ Innovation City operates largely in line with the Energy and Cli-
4 mate Plan adopted by the German federal government in 2008 in order to
5 reduce CO₂ emissions (Eckardt 2015). Central to the approach of Innovation City
6 is the idea that “without a common effort, neighbourhood improvements cannot
7 be made” (Interview, Innovation City, 2016). Vonovia and Innovation City laid
8 the foundation for a development project based around the theme of “making
9 Essen and Elting greener” (Interview, City Councillor II, 2016). First, it was negoti-
10 ated that Vonovia would invest around €9.3 million in Elting in order to mod-
11 ernise around 1400 of its 3500 housing units. The renovations included energetic
12 refurbishments, replacement of boilers, installations of double glazing and insulat-
13 ing external walls (Vonovia 2015). Second, the City channelled federal grants to
14 the improvement of the neighbourhood and also agreed to pay rent increases for
15 welfare recipients if the improvements allowed Vonovia to increase them over the
16 thresholds defined in the Hartz IV-model of welfare.

17 The different actors involved agreed that neighbourhood development should
18 not result in the displacement of existing tenants. It was argued that modernisation
19 would result in lower energy expenses, which would compensate for higher rents.
20 However, the development plan of Elting soon transformed into a prestige project
21 of Vonovia, meant to improve its corporate image: “Vonovia has a bad image in
22 Germany, they are under enormous pressure. For instance, to mobilise local support
23 of residents, students and artists, Vonovia hired a project manager who would be in
24 charge of “neighbourhood development” (*Quartiersentwicklung*) (Grenz 2016). In
25 2015 Vonovia also opened a pop-up art gallery, thereby providing an opportunity
26 to local artists and students to exhibit their work locally (Hagenbucher 2016). Addi-
27 tionally, Vonovia installed new balconies in the better streets of Elting and equipped
28 them with geraniums to please existing tenants (Hagenbucher 2016). Figure 2
29 shows the new balconies placed in the Victoriahof, a particular quarter of Elting
30 where Vonovia and the City also develop a green courtyard.

31 However, the approach of neighbourhood development also caused some local
32 controversies. In 2016 Vonovia announced its intention to replace a popular play-
33 ground with a new child care centre (Grenz 2016). Some inhabitants and journal-
34 ists feared that neighbourhood development of Vonovia was de facto a
35 gentrification strategy (Böhnke 2015). With the combination of renovation, arts,
36 neighbourhood branding and having the local and federal government pay for at
37 least part of Vonovia’s investments, it is not hard to see why its strategies were
38 labelled gentrification. By forming a partnership with the municipality and other
39 local stakeholders, Vonovia has succeeded in improving a well-located neighbour-
40 hood while only investing €9.3 million of its own resources.

41 At the same time, Vonovia is “playing” rental regulations. In 2013, the liberal-
42 conservative government introduced a new rental law in which private landlords
43 are allowed to pass on environmental modernisation costs to their tenants. While
44 doing so, the government has provided a leeway in Germany’s rental regulation
45 to increase the rents at a faster rate than normally is possible. As a representative
46 of a tenant association confirmed:



Figure 2: Victoriashof, Essen: Vonovia installs new balconies and co-finances a green courtyard (source: photo taken by Annia Martinez)

A private landlord in Germany is allowed to transfer eleven percent of modernisation costs [that are in line with the Energy and Climate Plan] to its tenant on an annual basis. After ten years [taking into account a low interest rate on loans], Vonovia has paid off its entire investment in Elting but the higher rental charges remain. Everything that follows is net profit. (Interview, Tenant Association, 2016)

In other words, Vonovia uses modernisation in their business model to raise rents in the Ruhr area and elsewhere in Germany (Unger 2017). Without modernisations, rents are only allowed to increase with a maximum of 302 over three years and not above the rental ceiling (*Mietspiegel*) of the neighbourhood (Deschermeier et al. 2016).¹¹

Furthermore, Vonovia has found ways to game the rental regulations, a strategy reminiscent of those used by landlords of rent-stabilised apartments in New York (Aalbers 2016; Wily et al. 2010). Private landlords in Germany are legally obliged to pay the maintenance costs of their housing units. However, in practice, the distinction between modernisation and maintenance is not always clear-cut. In the words of a representative of a tenant association:

The rental law says that it should be “comprehensible” what exactly belongs to maintenance or renovation costs. [However,] Vonovia sends a very detailed building plan of 300 pages, which due to its length and detail, is almost impossible to comprehend. We cannot verify how the maintenance and renovation costs are calculated. (Interview, 2016)

This spurs fierce protests among tenants, which are further ignited by the communication strategies of some of the larger funds. Vonovia is known for its

1 automated and individualised announcements of rent increases and payment
2 reminders, giving the impression of imminent eviction and increasing fear among
3 tenants. Thus, the huge housing stock enables scale effects and strategies which
4 smaller landlords do not have. This set-up, which will further drive up the costs of
5 living, spurs gentrification and may also result in the displacement of low-income
6 tenants when rents become unaffordable. This shows the real face of Vonovia's
7 "modernisation strategy": neighbourhood development goes hand in hand with
8 gentrification and displacement pressures.
9

10 Conclusion

11
12 In this paper we have introduced the concept of "the financialisation of rented
13 housing 2.0" as a heuristic device to denote the shift in ownership from private
14 equity funds and hedge funds to listed real estate companies and REITs. Whereas
15 phase 1.0 is about enclosure or primitive accumulation 21st century style—the
16 commodification of fictitious commodities—and is a purely speculative strategy,
17 phase 2.0 is about the treatment of housing as if it is a mainstream rather than
18 fictitious commodity in the Polanyian sense (Polanyi 2001). Likewise, the massive
19 privatisation of housing in many former socialist states (e.g. Murie et al. 2005)
20 could be considered a case of primitive accumulation, but only when these units
21 are being resold or mortgaged have they entered the privatised mainstream of
22 capital accumulation. Furthermore, the buying out of favela dwellers in Brazil and
23 the subsequent commodification of the land could be considered a form of primi-
24 tive accumulation, whereas the rehousing of these people into mortgaged houses
25 signifies the start of financialisation 2.0 (cf. Pereira 2017). By adopting an actor-
26 centred approach and focusing on the investment and management strategies of
27 two listed real estate companies, we have shown how these strategies have chan-
28 ged in Germany.

29 In the case of the Foncière des Régions, we find ~~that~~ that a REIT in a less
30 dynamic market adopts a core investment strategy that results in selectively hold-
31 ing and selling properties. In the wake of the GFC, FdR decided to sell most of its
32 housing assets in the Ruhr area and to refocus its investments on the more
33 dynamic regions of Berlin and Hamburg where returns on investment are higher.
34 Non-core properties, notably family houses in mid-sized cities as well as large
35 housing portfolios in post-industrial cities like Duisburg and Oberhausen, are con-
36 sidered less attractive. The listed real estate company Vonovia, on the other hand,
37 manages rental housing throughout Germany and makes additional investments
38 in the Ruhr area. While Vonovia may not be implementing the aggressive policies
39 of private equity and hedge funds and appears to be taking a long-term interest
40 in neighbourhoods like Elting, its main goal is to create shareholder value.
41 Government subsidies and rental regulations are employed and gamed to be able
42 to increase rents. Even if this does not always result in direct displacement in the
43 short run, thanks to local government guarantees, it does contribute to indirect
44 displacement in the mid- to long-term.

45 Both cases show how REITs and listed real estate companies have moved pro-
46 gressively beyond the phase of speculative investment and appear to be

1 interested in rental housing in the long run. Although they selectively withdraw
2 from less dynamic regions, they define different core regions: whereas some focus
3 on more dynamic regions with increasing housing prices and rents, others focus
4 on less dynamic regions where they can monopolise local sub-markets. Within
5 their core and non-core regions these companies also apply more local invest-
6 ment strategies. These landlords sell and hold properties selectively, depending
7 on their location, rental potential and sale potential as well as the government
8 policies and subsidies it can incorporate in its business model. In some cases, the
9 rules of the welfare system are used to rent out low-quality housing to low-
10 income tenants (see also Bernt et al. 2017); in other cases they mobilise energy
11 efficiency initiatives or gentrification pressures to increase rents. Both FdR and
12 Vonovia have made arrangements with local governments to coordinate neigh-
13 bourhood development or to invest in age-appropriate housing. While potentially
14 benefitting local communities, such partnerships may also result in gentrification
15 and displacement and clearly underline the important role of state authorities.

16 In this paper, we have demonstrated that financialisation 2.0 has not substi-
17 tuted or replaced financialisation 1.0, but rather has transcended it. However, our
18 critical point here is that financialisation 1.0 and 2.0 are part of the same cycle of
19 accumulation by dispossession, despite the fact that both stages are qualitatively
20 different and involve different market actors and investment practices. As we have
21 focused on the role of REITs and listed real estate companies, we have pointed
22 out that these funds are in charge of the second stage of financialisation, i.e. with
23 releasing housing into “the privatised mainstream of capital accumulation” (cf.
24 Harvey 2005). In phase 1.0, private equity and hedge funds are engaged in pure
25 speculative operations of buying low and selling high, and increasing the rents
26 while neglecting maintenance. REITs and listed real estate companies have a long-
27 term focus in which annual or monthly returns become more important than
28 pure speculation. With the advent of the financialisation of rental housing 2.0,
29 the long-term investment focus of these funds paradoxically enables a short-term
30 investment focus by buying and selling shares in these funds on the stock
31 exchange, thereby substituting pure speculative strategies in the housing market
32 by those in the stock exchange—*plus ça change, plus c’est la même chose*.¹² The
33 dividing line between financialisation 1.0 and 2.0 therefore remains thin: some
34 listed funds still adopt investment techniques typical of private equity funds and
35 vice versa. In other words, we do not consider the endeavours of listed real estate
36 companies as more “friendly” or “patient” per se; the creation of shareholder
37 value is the prime consideration; both financialisation 1.0 and 2.0 constitute and
38 reconstitute capital accumulation, either through pure speculation or through
39 strategies of expanded reproduction (see AlShehabi and Suroor 2016).

40 Financialisation 1.0 and 2.0 highlight the dual nature of housing both as a
41 place of survival and a site of accumulation (e.g. Soederberg 2017). Under the
42 regime of *Wohnungsgemeinnützigkeit* (“common interest principle”) housing was
43 primarily valued for its use value, even though the exchange value was never
44 completely out of sight and exploitation not completely averted, as such houses
45 were still constructed and managed within a capitalist regime and often owned
46 by private corporations. As the idea of *Wohnungsgemeinnützigkeit* was abandoned,

1 many public, non-profit and corporate entities sold their housing stock to the
2 highest bidder, opening up to the primitive accumulation of financialisation 1.0.
3 At the time, use values—still important to tenants—became secondary to
4 exchange values. With the shift from phase 1.0 to 2.0 we also witness a shift in
5 how these exchange values are created: first primarily (but never exclusively)
6 through pure speculation strategies of “buy low and sell high”, and then primarily
7 (but again not exclusively) through maximising rental returns and expanded
8 reproduction. The long-term effects on housing affordability and displacement
9 will, no doubt, be a topic of future research. Also, the ways in which listed real
10 estate funds play “a transformative role in the transition from industrial to finan-
11 cial capitalism” (Kaika and Ruggiero 2016:5) deserves more attention.

12 In conclusion, we state that our real-world examples also have important implica-
13 tions for the “financialisation of rental housing 2.0” in other countries. As large
14 housing portfolios have been put up for sale, the phenomenon of the global corpo-
15 rate landlord is becoming more widespread (Beswick et al. 2016; cf. Soederberg
16 2017). We conclude that more comparative research is necessary to denote the
17 local and national varieties between countries and cities, but also between invest-
18 ment strategies. Further, it must be taken into account how these trends coincide
19 with related developments, such as new innovations of social housing bonds, the
20 revival of securitisation markets, the introduction of REIT-like systems across capital-
21 ist countries and the role of special-purpose vehicles and offshore finance in (re)-
22 funding real estate acquisitions and investment costs (Botzem and Dobusch 2017;
23 Wainwright and Manville 2017). For better or worse, housing provision in present-
24 day financialised capitalism becomes increasingly funded and managed by capital
25 markets, a pattern which reminisces the late 19th century (Harloe 1990; Kohl 2015).
26 The arrival of listed real estate companies that invest in real estate assets is only the
27 beginning of this trend. By the last turn of the century Neil Smith (2002:430) con-
28 sidered gentrification “generalised as a central feature of...urbanism”; with the
29 advent of financialisation 2.0 we can consider financialisation increasingly becoming
30 generalised as a central feature of urbanism.

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38 plex” research project (European Research Council grant number 313376).

39 **Endnotes**

40
41
42 ¹ Rental housing in Germany is organised on the one hand in private housing and on the
43 other hand in public (different state companies), non-profit (e.g. cooperative housing) and
44 social housing (this is a special state financing scheme in order to enable lower rents for a
45 limited time—mostly 10–20 years).

46 ² In this specific quote, Harvey (2005) understands the “privatised mainstream of capital
accumulation” as the private market itself. However, in the spirit of his work on

1 accumulation by dispossession, we see housing units really becoming part of the “main-
2 stream” once the units become tradable as long-term investment objects on the stock
3 exchange.

4 ³ While finishing our paper, we became aware of a working paper that uses almost the
5 same heuristic, but has a slightly different understanding of financialisation 2.0 (García-
6 Lamarca 2017).

7 ⁴ Under the state socialism of East Germany, housing construction was state-led and part
8 of a planned economy. Upon German reunification, the institutions from the West were
9 transferred to the East. Because of this “institutional transfer”, German housing scholars
10 usually focus on the post-war history of West Germany to describe the housing trajectory
11 of the country as a whole. For the purposes of this paper, we do the same.

12 ⁵ Before the large portfolio transactions in the late 1990s and early 2000s, housing com-
13 panies in the former East and Berlin had already sold many of their individual housing
14 units as they were legally obliged to compensate for the remission of old debts
15 (*Altschuldehilfe*).

16 ⁶ Every country has different legislations for listed real estate companies, mostly based
17 around a REIT structure (KPMG 2013). In Germany, the G-REIT which has tax advantages
18 compared with regular listed real estate companies was introduced in 2007. But while G-
19 REITs are only allowed to invest in housing units constructed after 2007, most listed real
20 estate companies in Germany have adopted the legal structure of a joint-stock company
21 (*Aktiengesellschaft*).

22 ⁷ Here it must be noted that Immeo still considers Düsseldorf as an important market for
23 their investments. Mainly the smaller cities in the Ruhr area, of which Mülheim an der Ruhr,
24 Duisburg and Oberhausen are good examples, are considered non-strategic.

25 ⁸ The German concept of *Heimat* (and, therefore, *Heimaterde*) does not have an equivalent
26 in many European languages, including English. We have used a literal translation.

27 ⁹ It has to be taken into account that German rent regulation makes a fundamental differ-
28 ence between maintenance which has to be paid by landlords and modernisation which
29 has to be paid by tenants. Modernisation applies mostly to energy saving expenditures
30 which should save energy. This is why the difference is an issue between both sides,
31 although the German law rarely offers possibilities to oppose the modernisation (see Bür-
32 gerliches Gesetzbuch § 559).

33 ¹⁰ Interestingly, the CEO of Innovation City and former mayor of Oberhausen, Burkhard
34 Drescher, was the CEO of Deutsche Annington between 2008 and 2011.

35 ¹¹ Calculated on an annual average, rents can normally only increase with less than 7%
36 on a three-year basis and not above the rental ceiling in the specific neighbourhood.
37 Modernisation creates an incentive for listed real estate companies to increase the rents.
38 Up to 11% of the modernisation costs can be added to the rents on an annual basis irre-
39 spective of whether or not the new rents are calculated above the rental ceiling. Moreover,
40 the 11% increase is without time restrictions.

41 ¹² French proverb: “the more things change, the more they stay the same”.

References

- 42 Aalbers M B (2016) *The Financialisation of Housing: A Political Economy Approach*. New York:
43 Routledge
- 44 Aalbers M B and Holm A (2008) Privatising social housing in Europe: The cases of Amster-
45 dam and Berlin. In K Adelhof, B Glock, J Lossau and M Schulz (eds) *Urban Trends in Berlin
46 and Amsterdam* (pp 12–23). Berlin: Berliner Geographische Arbeiten, Humboldt Univer-
sität zu Berlin
- 47 AlShehabi O H and Suroor S (2016) Unpacking “accumulation by dispossession”, “fictitious
48 commodification”, and “fictitious capital formation”: Tracing the dynamics of Bahrain’s
49 land reclamation. *Antipode* 48(4):835–856
- 50 BBSR (2007) “Veränderung der Anbieterstrukturen im deutschen Wohnungsmarkt und
51 wohnungspolitische Implikationen.” *Forschungen Heft 124*, Bonn

- Bernt M, Colini L and Förste D (2017) Privatisation, financialisation, and state restructuring in East Germany: The case of "Am Südpark". *International Journal of Urban and Regional Research*. <https://doi.org/10.1111/1468-2427.12521>.
- Beswick J, Alexandri G, Byrne M, Fields D, Hodgkinson S and Janoschka M (2016) Speculating on London's housing future. *City* 20(2):321–341
- Böhnke A (2015) Das Eltingviertel soll grüner werden. *Der Westen* 18 November <https://www.waz.de/staedte/essen/nord-west-borbeck/essener-elingviertel-soll-gruener-werden-id11296688.html> (last accessed 30 November 2017)
- Boisnier C (2011) Les sociétés immobilières d'investissement cotées (SIIC) ou French REITs: foncière des régions et Unibail-Rodamco. *Flux* 3(85/86):89–104
- Botzem S and Dobusch L (2017) Financialisation as strategy: Accounting for inter-organisational value creation in the European real estate industry. *Accounting, Organisations, and Society* 59:31–43
- Byrne M (2016) "Asset price urbanism" and financialisation after the crisis: Ireland's National Asset Management Agency. *International Journal of Urban and Regional Research* 40(1):31–45
- Coakley J (1994) The integration of property and financial markets. *Environment and Planning A* 26(5):697–713
- Deeg R and Hardie I (2016) What is patient capital and who supplies it? *Socio-Economic Review* 14(4):627–645
- Deschermeier P, Haas H, Hude M and Voigtländer M (2016) A first analysis of the new German rent regulation. *International Journal of Housing Policy* 16(3):293–315
- Diamantis C (2013) "Abschlussbericht der Enquetekommission 'Wohnungswirtschaftlicher Wandel und neue Finanzinvestoren auf den Wohnungsmärkten in NRW'." Hrsg. Landtag Nordrhein-Westfalen, Düsseldorf (Drucksache 16/229)
- Eckardt V (2015) Startschuss fürs Eltingviertel. *Der Westen* 16 April. <http://www.derwesten.de/staedte/essen/startschuss-fuers-elingviertel-id10568256.html> (last accessed 30 November 2017)
- EPRA (2013) *Stock Exchange Listed Property Companies: Building a Stronger Europe*. Brussels: European Public Real Estate Association
- Fernandez R and Aalbers M B (2016) Housing and the variations of financialised capitalism. *Competition and Change* 20(2):71–88
- Fichtner J (2014) Privateers of the Caribbean: The hedge funds-US-UK-offshore nexus. *Competition and Change* 18(1):37–53
- Fields D (2015) Contesting the financialisation of urban space: Community organisations and the struggle to preserve affordable rental housing in New York City. *Journal of Urban Affairs* 37(2):144–165
- Fields D (forthcoming) Constructing a new asset class: Property-led financial accumulation after the crisis. *Economic Geography*
- Fields D and Uffer S (2016) The financialisation of rental housing: A comparative analysis of New York City and Berlin. *Urban Studies* 53(7):1486–1502
- Foncière des Régions (2015) "Document de Référence 2015." Foncière des Régions, Paris
- García-Lamarca M (2017) "Housing Dispossession and (Re)surging Rents in Barcelona: Financialised Housing 2.0?" Paper presented at the Finance, Crisis and the City: Global Urbanism and the Great Recession conference, Villa La Pietra, NYU Florence, 5–7 May
- Grenz M (2016) Eltingstraße wird zum Wohnzimmer. *Der Westen* 3 July. <http://www.derwesten.de/staedte/essen/elingstrasse-im-nordviertel-wird-zum-wohnzimmer-id11972999.html> (last accessed 30 November 2017)
- Hagenbucher R (2016) Das Eltingviertel blüht auf. *Der Westen* 7 June. <http://www.derwesten.de/staedte/essen/nord-west-borbeck/das-elingviertel-blueht-auf-oder-geht-ein-id11893693.html> (last accessed 30 November 2017)
- Harloe M (1995) *The People's Home? Social Rented Housing in Europe and America*. Hoboken: Wiley-Blackwell
- Harvey D (2005) *The New Imperialism*. Oxford: Oxford University Press
- Heeg S (2013) Wohnen als Anlageform: Vom Gebrauchsgut zur Ware. *Emanzipation-Zeitschrift für sozialistische Theorie und Praxis* 3(2):5–20

- 1 Helbrecht I and Geilenkeuser T (2012) Demographischer Wandel, Generationeneffekte und
2 Wohnungsmarktentwicklung: Wohneigentum als Altersvorsorge? *Raumforschung und*
3 *Raumordnung* 70(5):425–436
- 4 Hesselmann F-R (2015) Projekt an Max-Halbach-Straße mit der Stadt abgestimmt. *Der West-*
5 *ten* 4 July. [http://www.derwesten.de/staedte/muelheim/projekt-an-max-halbach-strasse-](http://www.derwesten.de/staedte/muelheim/projekt-an-max-halbach-strasse-mit-der-stadt-abgestimmt-id10846976.html)
6 [mit-der-stadt-abgestimmt-id10846976.html](http://www.derwesten.de/staedte/muelheim/projekt-an-max-halbach-strasse-mit-der-stadt-abgestimmt-id10846976.html) (last accessed 30 November 2017)
- 7 Holm A (2010a) Institutionelle Anbieter auf deutschen Wohnungsmärkten – neue Strate-
8 gien der Wohnungsbewirtschaftung. *Informationen zur Raumentwicklung* 5(6):391–402
- 9 Holm A (2010b) Privare heißt Rauben Zur Ökonomie von Wohnungsprivatisierungen. *Zeits-*
10 *chrift Marxistische Erneuerung* 21(83):46–59
- 11 Holm A (2015) “Neue Gemeinnützigkeit: Gemeinwohlorientierung in der Wohnungsver-
12 sorgung.” [http://www.heidrun-bluhm.de/fileadmin/kreise/Bluhm/Neue_Gemeinnue-](http://www.heidrun-bluhm.de/fileadmin/kreise/Bluhm/Neue_Gemeinnueztzigkeit_gesamt_2015-09-16.pdf)
13 [ztzigkeit_gesamt_2015-09-16.pdf](http://www.heidrun-bluhm.de/fileadmin/kreise/Bluhm/Neue_Gemeinnueztzigkeit_gesamt_2015-09-16.pdf) (last accessed 1 December 2017)
- 14 IEIF (2014) “Annuaire des Sociétés immobilières cotées européennes. SIIC, REITs et fon-
15 cières.” IEIF les publications, Paris
- 16 Ince O U (2014) Primitive accumulation, new enclosures, and global land grabs: A theoret-
17 ical intervention. *Rural Sociology* 79(1):104–131
- 18 Kaika M and Ruggiero L (2016) Land financialisation as a “lived” process: The transforma-
19 tion of Milan’s Bicocca by Pirelli. *European Urban and Regional Studies* 23(1):3–22
- 20 Kaiser H-G (2008) “Die Entwicklung der Wohnungswirtschaft von Thyssen I Krupp bis
21 Immeo Wohnen als Mitglied der Foncière des Régions.” [https://www.immeo.de/filead-](https://www.immeo.de/fileadmin/user_upload/downloads/PDFs/Die_Entwicklung_der_Wohnungswirtschaft_19.02.2009.pdf)
22 [min/user_upload/downloads/PDFs/Die_Entwicklung_der_Wohnungswirtschaft_19.02.](https://www.immeo.de/fileadmin/user_upload/downloads/PDFs/Die_Entwicklung_der_Wohnungswirtschaft_19.02.2009.pdf)
23 [2009.pdf](https://www.immeo.de/fileadmin/user_upload/downloads/PDFs/Die_Entwicklung_der_Wohnungswirtschaft_19.02.2009.pdf) (last accessed 1 December 2017)
- 24 Kirchner J (2007) The declining social rental sector in Germany. *International Journal of*
25 *Housing Policy* 7(1):85–101
- 26 Kofner S (2012) “Aktuelle Geschäftsmodelle von Finanzinvestoren im Themenfeld Woh-
27 nungswirtschaftlicher Wandel und neue Finanzinvestoren.” [https://www.landtag.](https://www.landtag.nrw.de/portal/WWW/GB_1/I.1/EK/16.WP/EK_1/Gutachten_Enquete_2011_-_Endfassung_Juli_2012_Arbeitsstand_24.02.2013....pdf)
28 [nrw.de/portal/WWW/GB_1/I.1/EK/16.WP/EK_1/Gutachten_Enquete_2011_-_Enddfa-](https://www.landtag.nrw.de/portal/WWW/GB_1/I.1/EK/16.WP/EK_1/Gutachten_Enquete_2011_-_Endfassung_Juli_2012_Arbeitsstand_24.02.2013....pdf)
29 [ssung_Juli_2012_Arbeitsstand_24.02.2013....pdf](https://www.landtag.nrw.de/portal/WWW/GB_1/I.1/EK/16.WP/EK_1/Gutachten_Enquete_2011_-_Endfassung_Juli_2012_Arbeitsstand_24.02.2013....pdf) (last accessed 1 December 2017)
- 30 Kofner S (2014) The German housing system: Fundamentally resilient? *Journal of Housing*
31 *and the Built Environment* 29(2):255–275
- 32 Kohl S (2015) The power of institutional legacies: How 19th century housing associations
33 shaped 20th century housing regime differences between Germany and the United
34 States. *European Journal of Sociology* 56(2):271–306
- 35 KPMG (2013) “Taxation of Real Estate Investment Trusts: An Overview of the REIT Regimes
36 in Europe, Asia and the Americas.” [https://home.kpmg.com/content/dam/kpmg/pdf/](https://home.kpmg.com/content/dam/kpmg/pdf/2014/02/taxation-real-estate-investment-trusts-v3.pdf)
37 [2014/02/taxation-real-estate-investment-trusts-v3.pdf](https://home.kpmg.com/content/dam/kpmg/pdf/2014/02/taxation-real-estate-investment-trusts-v3.pdf) (last accessed 1 December 2017)
- 38 Krippner G (2011) *Capitalizing on Crisis: The Political Origins of the Rise of Finance*. Cam-
39 bridge: Harvard University Press
- 40 Lindgens J and Süselbeck K (2012) Immeo trennt sich von über 500 Wohnungen in Essen.
41 *Der Westen* 12 October. [https://www.derwesten.de/staedte/essen/immeo-trennt-sich-](https://www.derwesten.de/staedte/essen/immeo-trennt-sich-von-ueber-500-wohnungen-in-essen-id7186586.html)
42 [von-ueber-500-wohnungen-in-essen-id7186586.html](https://www.derwesten.de/staedte/essen/immeo-trennt-sich-von-ueber-500-wohnungen-in-essen-id7186586.html) (last accessed 1 December 2017)
- 43 Lizieri C (2009) *Towers of Capital: Office Markets and International Financial Services*. Oxford:
44 Wiley-Blackwell
- 45 Lizieri C and Pain K (2014) International office investment in global cities: The production
46 of financial space and systemic risk. *Regional Studies* 48(3):439–455
- Moreno L (2014) The urban process under financialised capitalism. *City* 18(3):244–268
- Müller S (2012) “Wie Wohnen prekär wird. Finanzinvestoren, Schrottimmobilen und Hartz IV.” Zentrale wissenschaftliche Einrichtung der TU Dortmund. [http://www.sfs.tu-dort-](http://www.sfs.tu-dortmund.de/sfs-Reihe/Band%20181.pdf)
[mund.de/sfs-Reihe/Band%20181.pdf](http://www.sfs.tu-dortmund.de/sfs-Reihe/Band%20181.pdf) (last accessed 1 December 2017)
- Murie A, Tosics I, Aalbers M, Sendi R and Černič Mali B (2005) Privatisation and after. In R van Kempen, Dekker K, Hall S and Tosics I (eds) *Restructuring Large Housing Estates in Europe* (pp 85–103). Bristol: Policy Press
- Peck J (2012) Austerity urbanism. *City* 16(6):625–655
- Pereira A (2017) The financialisation of housing: New frontiers in Brazilian cities. *International Journal of Urban and Regional Research*. <https://doi.org/10.1111/1468-2427.12518>

- 1 Polanyi K (2001 [1944]) *The Great Transformation: The Political and Economic Origins of Our*
2 *Time*. Boston: Beacon Press
- 3 Rutland T (2010) The financialisation of urban redevelopment. *Geography Compass* 4
4 (8):1167–1178
- 5 Scharmanski A (2013) "'Corephorie' und Alternativen. Institutionelle Immobilieninvestitio-
6 nen 2013/2014." *Quantum Fokus*, 4. Quartal 2013. <http://docplayer.org/8154733-Quantum-fokus-4-quartal-2013-corephorie-und-alternativen.html> (last accessed 1 December
7 2017)
- 8 Schymiczek M (2015) Auf Stippvisite im Eltingviertel. *Der Westen* 26 August. <http://www.derwesten.de/staedte/essen/auf-stippvisite-im-elingviertel-id11028079.html> (last accessed
9 1 December 2017)
- 10 Smith N (2002) New globalism, new urbanism: Gentrification as global urban strategy.
11 *Antipode* 34(3):427–450
- 12 Soederberg S (2017) The rental housing question: Exploitation, eviction, and erasures. *Geo-*
13 *forum*. <https://doi.org/10.1016/j.geoforum.2017.01.007>
- 14 Teresa B F (2016) Managing fictitious capital: The legal geography of investment and polit-
15 ical struggle in rental housing in New York City. *Environment and Planning A* 48(3):465–
16 484
- 17 Uffer S (2011) "The Uneven Development of Berlin's Housing Provision." Unpublished PhD
18 thesis, London School of Economics and Political Science
- 19 Unger K (2017) "Kohle machen über Tage." Rosa Luxemburg Stiftung. <https://www.rosalux.de/publikation/id/37832/kohle-machen-ueber-tage/> (last accessed 1 December
20 2017)
- 21 Van Loon J and Aalbers M B (2017) How real estate became "just another asset class": The
22 financialisation of the investment strategies of Dutch institutional investors. *European*
23 *Planning Studies* 25(2):221–240
- 24 Voigtländer M (2007) Die Privatisierung öffentlicher Wohnungen. *Wirtschaftsdienst* 87
25 (10):679–686
- 26 Voigtländer M (2010) *Der Immobilienmarkt in Deutschland. Struktur und Funktionsweise*. Ber-
27 lin: Verband deutscher Pfandbriefbanken
- 28 Vonovia (2015) "Annual Report Vonovia SE 2015: It's Time To Rethink Housing." Vonovia
29 SE
- 30 Vonovia and CBRE (2016) "Housing Market Report Germany 2016." Vonovia SE and CBRE
31 GmbH3
- 32 Wainwright T and Manville G (2017) Financialisation and the third sector: Innovation in
33 social housing bond markets. *Environment and Planning A* 49(4):819–838
- 34 Waldron R (2017) "Capitalizing on the Urban Debtscape: The Political Economy of Real
35 Estate Investment Trusts and the 'Resolution' of the Crisis." Working Paper, Queen's
36 University Belfast
- 37 Wijburg G and Aalbers M B (2017a) The alternative financialisation of the German housing
38 market. *Housing Studies* 32(7):968–989
- 39 Wijburg G and Aalbers M B (2017b) The internationalisation of commercial real estate mar-
40 kets in France and Germany. *Competition and Change* 21(4):301–320
- 41 Wylie E, Newman K, Schafran A and Lee E (2010) Displacing New York. *Environment and*
42 *Planning A* 42(11):2602–2623
- 43
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