

Breaking the housing-finance cycle: macroeconomic policy reforms for more affordable homes

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Abstract

This paper argues that the housing affordability and wealth inequality crises facing advanced economies are driven by the emergence of a feedback cycle between finance and landed property. The cycle has been created by the increasing policy preference for private home ownership coupled with the liberalisation of bank credit and accompanying financial innovation. Under such conditions, landed property becomes both the most attractive form of collateral for the banking system and the most desirable form of financial asset for households and investors. The housing-finance cycle emerged in Anglo-Saxon economies in the 1980s but has since spread to most advanced economies. Demand-side reforms, more than supply-side reforms that dominate policy discussion, are required to break this cycle. Two reforms are discussed: 1) structural and institutional reforms to banking systems, including central banks; and 2) land policy reforms targeted at reducing the potential for rent extraction and speculative profits from property ownership.



1. Introduction

This paper argues that the advanced economy housing affordabilty crisis has its roots in the interaction between the strong policy preference for private home ownership, realised through various state subsidies and fiscal advantages and a deregulated and (globally) liberalised financial system.

Their interaction creates a positive feedback cycle that drives up property prices at a much faster rate than incomes, ultimately makes housing increasingly unaffordable for a large proportion of the population.

The essential economic dynamics of the housing-finance cycle are simple. It involves the interaction of two commodities with diametrically opposed properties: land (upon which all housing must be situated) and bank credit. As was recognised by the classical political economists (Ricardo, Smith and Mill), land is unique as a 'factor of production', being inherently scarce, fixed and irreproducible. Whilst not all land is equally scarce, desirable land (i.e. attractive location near to decent paid work and other amenities) is inherently limited in supply. In contrast, the creation and allocation of bank credit and money is relatively unconstrained in modern economies (Ryan-Collins et al 2012; Turner 2017). The deregulation and liberalisation of advanced economy

banking systems in the 1980s and 1990s led to an explosion in the quantity of credit (relative to output and incomes), most of which was concentrated in domestic property loans rather than the textbook model of bank lending supporting business investment and working capital (Jorda et al 2016).

Since the majority of mortgage loans finance the purchase of *existing* rather than new property, the inevitable result is house price inflation. With the support of bank credit, households bid up the price of land as they compete for property in more desirable locations. This creates even more demand for mortgage debt which then flows in to existing property and so on. In other words, the supply of bank mortgage credit can be seen to create its own *increased* demand – via rising property prices - for ever more mortgage credit.

Broader changes in bank business models and financial innovations – in particular the emergence of mortgage-backed securitisation – and the increasing involvement of other non-bank financial institutions in property have amplified the cycle, in particular in the decade running up to the financial crisis. Post-crisis, whilst new macroprudential regulations have repressed mortgage credit in some countries, monetary policy has played an amplificatory role, with the ultra-low medium to long term interest rates generated by central bank Quantitative Easing programs increasing the

attractiveness of real estate as a financial asset - relative to other safe haven assets – for capital market investment.

None of this is to say that finance has been the only driver of rising house prices in the last few decades. Supply side factors – a collapse in public affordable housing provision, inelastic planning regimes, inefficiencies in the construction industry and national and local housing policies – have important effects in particular economies and in particular regions within those economies. But policy debate – outside the academies of political economy and economic geography - has largely focused almost exclusively upon supply-side dynamics, neglecting domestic and international demand for property as a financial asset (Gallent et al 2017).

Both the left and the right of the political spectrum have been guilty of this.

On the Left, a consensus has grown around the need to build more

(affordable) homes with little consideration as to the implications of such a
large expansion in terms of land availability in desirable locations.

Meanwhile, the Right has tended to focus on liberalising planning
frameworks and removing other market 'frictions', neglecting the fact that
planning rules only exist because of the scarce nature of desirable land. This
failure to consider demand-side policy developments reflects the dominance
of conventional, neo-classical economic theory in framing policy challenges.

This, broadly speaking, assumes land and credit are essentially subject to the same, equilibrium-based rules of supply and demand as any other commodity in the long-run, neglecting their unique properties of scarcity (land) and elasticity (credit). Excessively high house prices are, according to the supply-side approach, mainly due to artificial constraints (e.g. planning and zoning constraints or related government interference) that prevent efficient market clearing (see, *inter alia*, Glaeser et al 2005; Glaeser et al 2008; Hilber and Vermuelen 2010). The role of economic rent is also largely ignored in this narrative. Land rent extraction via capital gains by homeowners or investors and via interest charges and securitisation fees flowing to banks and non-bank financial institutions are neglected.

Related literature

This paper aligns with the economic geography and political economy literatures on land and housing as a financial asset and urban land rents (Coakley 1994; Harvey 1978, 1982, Haila 1990). Harvey, building on Marx, argued that the built environment is drawn in to the capitalist profit seeking effort as a result of 'capital switching' that occurs once the primary, productive circuit of profit is exhausted due to overaccumulation. This is only possible with the emergence of mature credit markets - indeed, Harvey

argues there is a parallel between land titles and interest-bearing bank loans which are both forms of 'fictitious capital'.

Harvey's work stimulated debate on the nature of urban land rent in the 1980s and early 1990s (King 1989; Haila 1990 and see Ward and Albers 2016 for recent overview). A number of scholars have argued Harvey's theory was economically deterministic, neglecting important institutional, cultural and socio-economic and spatial dynamics that mediated the relationship between (finance) capital and property (Ball 1985, Haila 1988, Katz 1986; King 1989). One contribution of this paper is to provide some institutional and historical fleshing out of the property-finance relationship that emphasizes the differences, rather than similarities between property and credit-money, and how macroeconomic policy choices can shape their interaction to generate different outcomes.

More recent, post-crisis interventions have focused on the financialisation of housing as a key channel for the transmission of neoliberal dynamics in late modern capitalism (Seabrooke and Schwartz 2008; Rolnik 2013; Aalbers & Christophers 2014; Aalbers 2016), in particular as a means via which capitalist economies can maintain demand in the face of stagnating wages and productivity. The deregulation and liberalisation of mortgage finance enabled households to borrow against the increasing rise in the value of their homes

to fund consumption, a form of 'privatised Keynesianism' (Crouch 2009; Watson 2010) that enabled the boom of the 1990s-2000s to last so long. Rising house prices and widespread home-ownership – both enabled by financialisation – is also tied to the neo-liberal concept of 'asset-based welfare' (Doling & Ronald 2010; Watson 2009) where the state withdraws from provision of economic support for the under- and un-employed and pensioners, with (liquid) property wealth taking its place as a new, but rather uneven safety net. The housing financialisation literature emphasizes the diversity of forms of 'residential capitalism' (Seabrooke and Schwartz 2008; Aalbers 2017) but also postulates a general tendency in advanced economies of housing becoming more tightly interwoven in to banking systems and financial markets and housing policy being increasingly determined by the needs of those markets rather than supporting access to housing (Aalbers 2016; Rolnik 2019).

The additional contribution of this paper is to provide a theoretical and historical elaboration, accompanied by recent data, of the housing-finance cycle as a critique of conventional neoclassical economic theory and its neglect of the key properties of credit and land. In doing so, it draws on Schumpeterian and post-keynesian economic theory which emphasises the role of credit-money and uncertainty in determining the trajectory of the macroeconomy and its effect on asset prices; and links this to the classical

political economists' concern with land rents as a key constraint on capitalist growth. Secondly, the paper develops a broadbased macroeconomic policy reform agenda targeted specifically at breaking this cycle and reducing the speculative demand for housing.

Breaking the housing-finance cycle, it is argued, will require structural political economy reforms that go well beyond the standard supply-side measures currently on offer. The paper focuses in particular on: 1) institutional and structural reforms to banking systems, including central banks; and 2) reforms to the distribution of land rents (or land value capture), best addressed by changes to fiscal policy, land-ownership and housing tenure. In both cases, examples can be found in modern capitalist economies, suggesting change is possible, despite the likely strong resistance from vested interests.

The remainder of this article is structured as follows. Section two outlines the dynamics of the housing-finance cycle in terms of theory, history and macroeconomic policy developments. Sections 3 and 4 examine financial reforms and reforms to land value capture that might be effective in breaking the housing-finance feedback cycle respectively. Section 5 concludes.

2. Dynamics of the housing-finance cycle

2.1 Economic theory and evidence

Banks create new credit, money and purchasing power in the act of lending — money is not borrowed from elsewhere in the economy (McLeay *et al.* 2014; Ryan-Collins *et al.* 2012). When a bank makes a 'loan' it creates a new, income-generating asset for itself alongside a mirroring liability (the deposit) which is effectively money since, in normal times, it is accepted at par with cash and central bank reserves and thus can be used to discharge tax obligations to the state. The making of a loan places no significant limits on a bank's ability to make future such loans in modern economies where central banks 'accommodate' expansions in the money supply by providing reserves on demand to the banking system. In this sense, bank credit is highly elastic and able to adjust rapidly to changing economic conditions.

Schumpeter (1934) viewed banks as the 'ephor' of the capitalist economy.

Credit creation enabled entrepreneurs to obtain a share of the economy's resources prior to production, allowing them to 'carry out new combinations' (innovation) and thus compete effectively with incumbent firms. This is key in enabling the process of 'creative destruction' that is a feature of dynamic capitalist economies. Similarly, Keynes described capitalism as a system of 'monetary production' in the sense that '[bank] Credit expansion provides not

an alternative to increased saving but a necessary preparation for it' (1939 p. 572).

Credit is thus key to innovation and economic growth. But there is no guarantee that credit will always be allocated efficiently to support economic growth. Broadly speaking, credit creation in support of goods-and-services transactions leads to GDP growth, whereas credit flows to asset markets raise asset prices relative to output prices, encouraging more speculative financing and becoming the fuel for capitalism's instability (Minsky 1975; Werner 2005; Bezemer 2014). The theory is supported by a range of empirical studies (see Bezemer et al 2018 for a review).

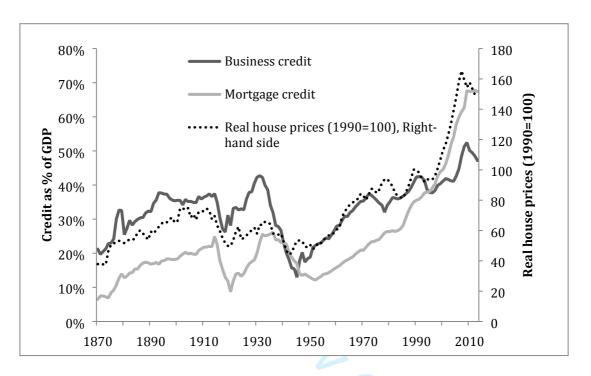
Even without expectations of rising future asset prices, however, a deregulated banking system is likely to develop a preference for mortgage lending (Ryan-Collins et al 2017). Due to asymmetric information between lenders and borrowers, banks develop a preference for collateral to secure loans, rather than raising interest rates – as standard economic theory would have it - to high levels for fear of attracting risky borrowers in an adverse selection process (Stiglitz and Weiss, 1981). Banks will discriminate against debtors whose assets cannot be collateralized, many of them in non-financial business who typically have limited liability. Landed property is one of the

most desirable forms of collateral as it is virtually impossible to hide and tends to appreciate over time.

Until recently, mainstream macroeconomic policy models largely assumed that the majority of bank credit supported non-financial investment and it was widely held that deeper financial markets would enable more efficient capital allocation and hence growth (King & Levine 1993). But a remarkable transformation in the allocation of bank credit has occurred over the past 3 decades. Today banks in advanced economies lend significantly more to households for the purposes of buying existing housing and real estate than they do for either business investment or consumer purchases, as shown in two recent comprehensive empirical studies (Jordà *et al.* 2016; Bezemer *et al.* 2017).

Figure 1 shows outstanding business and mortgage credit and, on the right-hand axis, house prices, averaged across 17 advanced economies since 1870. Up until the 1990s the two credit-series move broadly together but, as a proportion of GDP, banks lent more to firms than they did for domestic or commercial real estate purchase. But in the early 1990s, a dramatic change occurs. Mortgage lending in advanced economies increases from about 40% of GDP to 70% in the space of 20 years whilst the stock of non-mortgage loans

flattens, rising by little more than 5%. During the same period, average real house prices followed a similar path to mortgage credit, increasing by 50%. Figure 1: Business credit, mortgage credit and real house prices in advanced econoimes since 1870



Source: Data taken from Jordà-Schularick-Taylor Macrohistory Database, available at http://www.macrohistory.net/data/; see Jorda et al (2017) and Knoll et al. (2017).

The visual evidence in Figure 1 is backed by a number of single country and cross-country statistical analyses of the causes of house price growth. In a study of 19 countries between 1980-2005, the OECD estimates that financial deregulation enabling an expansion of mortgage credit has increased real house prices by 30%, far more than other variables demand and supply variables (Andrews *et al.* 2011). A similar study by the International Monetary

Fund (IMF) but extending to 2010, found that a 10 per cent increase in household credit leads to a 6 per cent increase in nominal average house prices (IMF 2011 p. 150). Single country studies of the U.S. (Duca *et al.* 2011), Ireland (Kelly *et al.* 2018) Japan and the UK (Aron *et al.* 2012) and Germany (Muellbauer 2018) equally find a key role for credit conditions in explaining house prices and household consumption.

The danger from a macroeconomic perspective is that credit creation for the purchase of existing property increases land and house prices and household debt without stimulating investment or productivity growth. This means there is insufficient funds to pay back the interest on the loan, meaning households must either take on more debt or reduce their spending, repressing demand. This will lead firms to cut back on investment, leading to lower profits and stagnating wages. In turn, this feeds in to more demand for mortgage debt as house prices continue to rise relative to incomes. Indeed, a study of 46 economies over 1990–2011 found a negative relationship between the stock of bank lending to domestic real estate and economic growth but positive growth effects of credit flows to non-financial business (Bezemer *et al.* 2016).

The housing-finance feedback cycle runs against standard economic theory where an increase in the supply of goods, all else being equal, should

eventually lead to a fall in prices. An 'equilibrium' price will be reached at the point when the quantity of goods supplied exactly matches the demand for them. But with bank credit and land, we have two phenomenon that are quite unlike standard commodities. Bank credit is highly elastic and essentially infinite; in contrast land is inherently inelastic due to its scarcity (Gaffney 1994).

The housing-finance cycle also has important implications for our understanding of economic rent, in particular land rent. Since the 1970s, wealth accumulation in many capitalist economies has largely been driven by increases in property prices via capital gains, rather than increases in profits from the production of goods and services (Rognlie 2014; Stiglitz 2015). This is a return to a form of 'rentier-capitalism', where life chances are determined not by hard work, innovation or entrepreneurial endeavor but simply by whether one is lucky enough to own a piece of land in the right part of the country (or city) or invested at the right time in the housing-finance cycle.

In much of the literature rent is viewed as accruing primarily to the landowner, following the classical economists' writings (George 1879; Ricardo 1817). Whilst, as noted in the introduction, economic geographers have provided a more sophisticated treatment of (urban) land rents, emphasising how social, cultural and political dynamics mediate rent creation and extraction (King 1989; Ward and Aalbers 2016), less attention has been given to the institutional dynamics of the banking system and financial and macroeconomic policy more generally, including fiscal policy, in determining rent extraction dynamics. But the housing-finance cycle implies the financial sector is able to generate and monetize – in the form of interest on mortgage debt - a significant proportion of land rents via credit creation (Hudson 2010). The phenomenon of securitisation further complicates matters as non-bank institutional investors who purchase such mortgage-backed securities from banks (and the flow of interest payments that accompany them) can be seen to further amplify the cycle and absorb a part of the land rent.

2.2 Potential critiques of the housing-finance cycle hypothesis

One concern with the housing-finance cycle hypothesis is causation. A bank's decision to lend is naturally affected by the demand for loans which in itself is driven by what is occurring in the wider economy (most obviously rising incomes or increasing populations relative to the supply of new homes). This creates endogeneity bias and means that correlations discussed in the previous section may not equate to causation from bank credit to house price growth.

Financial deregulation can be seen as a natural experiment to test this hypothesis, since it is largely a political rather than economic (and thus endogeneous) phenomena. A number of studies show that the Anglo-Saxon economies that deregulated their mortgage markets in the 1980s saw faster rises and more volatility in house prices than those economies that did not (Aron et al. 2012). One study of the US looked at the impact on house prices of bank branching deregulation which benefitted only certain types of banks but not others in the same U.S. states between 1994-2005 (Favara & Imbs 2015). The increased funding enjoyed by the first group of banks from the deregulation led them to increase their mortgage lending by between one-half and two thirds, which explained between one-third and a half of the observed increase in house prices. However, the banks in the same areas that did not benefit from the deregulation did not increase their lending. This provides strong evidence that increases in bank credit drive up house prices independently of demand-side/endogeneous factors.

Despite the above evidence, the dominant focus in much of the economics literature on house prices is on the supply side (Glaeser et al 2005; 2008). Some scholars have noted that those Anglo-Saxon countries that deregulated their financial systems most rapidly – the UK, US, Australia – also have less flexible planning systems and a less elastic supply of land. It does appear to be the case that Britain and Australia have less flexible planning systems than,

for example, continental Europe (Cheshire *et al.* 2014; Gurran & Whitehead 2011). However, the legislative changes that impacted on planning in these countries mainly took place in the 1950s and 1960s, so they seem less useful in explaining the more recent explosion in house prices since the late 1990s.

There are also examples where very rapid increases in housing construction (allowed by highly elastic planning regulations) did not temper house price booms. The experiences of Spain and Ireland in the run-up to the financial crisis show why 'building more homes' can never be the simple solution to housing affordability problems. Irish house prices doubled in the space of a decade between 1997 and 2007, whilst Spanish prices increased by 50% in just 6 years whilst both countries were undergoing huge construction booms.

Prices continued upwards until 2007 when the crisis hit, defaults started and property values collapsed. Australia has undergone a similar experience more recently, with Sydney and Melbourne undergoing massive constructions booms in new apatments in the last five years accompanied by increases rather than decreases in prices (Scutt 2016). However fast you can build, banks can create new credit faster.

Furthermore, research shows that increases in land and house prices may have a 'crowding out' effect on bank lending to non-financial firms in favour of mortgage lending. A study of bank lending in the US found that increases

in house prices led banks to substitute away from commercial lending towards mortgage lending (Chakraborty *et al.* 2016). The authors found that this resulted in a decrease in the investments of firms that had a relationship with the affected banks. In other words, increasing land prices negatively and potentially permanently effected business investment via reduced lending.

Finally, one argument commonly made by economists is that the rise in mortgage debt and hence house prices is attributable mainly to low and falling real interest rates experienced in advanced economies since the 1990s rather than primarily due to other forms of financial liberalisation and deregulation. Low rates have certainly been a contributory factor. However, interest rates on their own do not help explain the exceptions to the general rule of rising house prices in advanced economies in this period: for example, the falling house-price-to-income ratios experienced in Germany, Japan, Switzerland and South Korea which had the same falling real interest rates. As we shall discuss in section 4, it was policy choices by these countries unrelated to interest rates that made them exceptional.

2.3 Historical emergence of the housing-finance cycle

The emergence of the housing-finance feedback cycle was driven by the great home-owning democracies, the U.S. and the U.K. following the collapse of the Bretton-Woods fixed exchange rate regime in the early 1970s. This led to a rapid liberalisation of banking systems in these countries, spurred on by ferocious competition between the two nations' financial centres: New York and London (Krippner 2011; Ryan-Collins 2018). Prior to the 1980s, mortgage credit was restricted to conservative mutuals (the Thrifts in the U.S. and Building Societies in the UK) by a combination of formal and informal regulation. Mortgage terms were long with fixed interest rates and, in the US, often insured and gauranteed by the Federal Housing Administration and Veterans Administration. By the 1950s, 40% of all mortgages were federally subsidized (Jorda et al 2016: 122).

Innovations in the financial sector and the internationalization of capital flows that followed the breakdown of Bretton Woods weakened these regulations. There was also liberalisation and innovation on the liability side of bank's balance sheets. Whilst traditionally banks' funding was limited to domestic retail depositors, from the mid-1970s U.S. banks were able borrow funds from outside the U.S. to fund their mortgages, in particular from the largely unregulated 'Euro-dollar' market. Domestic financial innovations also enabled banks to attract deposit funding away from the Thrifts (Krippner 2005).

The neo-conservative administration of Margaret Thatcher responded to the resulting growth of the New York financial sector by liberalising the UK banking sector and encouraging it into the mortgage market. As with the U.S., foreign exchange controls were lifted allowing UK banks to also access the Eurodollar market. As part of the 'Big Bang' financial reform of 1986, Building Societies were permitted to borrow on wholesale markets and quantitative restrictions on mortgage lending for banks and mutuals were eased. The result was an explosion in domestic mortgage credit from just over 20% of GDP in the late 1970s to 55% a decade later; house prices doubled over the same period.

The internationalisation and harmonisation of financial regulation along the lines of the Anglo-Saxon model following the collapse of Bretton Woods, along with the liberalisation of capital controls and the emergence and globalisation of residential mortgage-backed securitisation (RMBS), saw advanced economies in Australasia and Europe gradually embrace the US-UK feedback cycle. Under the auspices of the Bank of International Settlements (BIS), a new regulatory framework was created – the "Basel Accords" - that introduced minimum capital requirements for all Banks related to the type of assets they held. Loans secured by mortgages on residential properties only carried half the risk weight of loans to non-

financial firms (50%) in the original Basel Accord. Furthermore, securitized mortgages, which were viewed as more liquid and thus even less risky, only carried a 20% risk weight. The effect of these reforms was to allow banks to earn fees and net interest margins on holding 2.5 times more credit risk in real estate than they had before without any increase in their capital requirements (Persaud 2016 p. 5).

The key financial innovation was RMBS. This transformed a geographically fixed and illiquid asset – a traditional 25 year fixed-rate mortgage loan – into a liquid and transparent financial asset which can be bought and sold almost anywhere in the world (Gotham 2009). By opening up housing finance to a vast global investment sector it broke down previous national and local institutional barriers over the funding of home purchase and transformed the banking system.

In Europe, the combination of low and stable interest rates - a requirement of single market membership - and the acceptance of higher levels of debt over longer durations by households and regulators in the 1990s made mortgages a more attractive form of asset for institutional investors seeking secure, long-dated assets. This coincided with the introduction of the Euro in 1999 which saw an explosion in capital market activity with the establishment of a Eurodenominated bond-market. This was more stable than single country bond

markets and provided access to lower cost, long-term funding which helped develop wholesale market instruments as alternatives to retail deposits as a source of funding for banks, including covered mortgage bonds and RMBS. As with the U.S. model, banks would originate loans but then package them up in to securities and shift them off their balance sheets to either Special Purpose Vehicles (SPVs) sponsored by banks or directly to investors.

RMBS became an important source of funding in the UK, Australia and Ireland in the 1990s and Europe during the early 2000s (Lunde & Whitehead 2016 p. 25). Securitisation enabled mortgage issuers to offer a wider range of mortgage products, to offer mortgages at much lower rates of interest and offer them at higher LTV ratios. This in turn enabled larger numbers of people to access home ownership at higher price to income and mortgagedebt to income ratios. The latter ratio increased by a third or more in many countries between 1998 and 2009.

2.4 The post-crisis feedback cycle

Post-crisis, while maintaining Consumer Price Inflation as their primary target, central banks have begun to take a closer interest in monitoring house prices and introduced policies aimed at restricting real estate credit to address 'systemic risks' across national economies; so called 'macroprudential' policy

(Cerutti *et al.* 2017).ⁱⁱ Regulators have imposed limits to loan-to-value and loan-to-income ratios for mortgages and also targeted buy-to-let and interest only mortgages in the UK, Australia, Switzerland, New Zealand and Hong Kong.

Such policies are welcome but there is little sign as yet they are strong enough to overcome the strong incentives banks have to lend against landed property. After previous house price bubbles, the house price to income ratio has generally returned to somewhere near its long-term average. Not so this time (Ryan-Collins 2018: p2). Instead, some of the richest and most sophisticated economies in the world have become caught up in another mortgage credit/house price bubble. House prices in Toronto, capital city of Canada, have doubled in the last 5 years. Total outstanding US mortgage loans are now back at nearly \$15trn, the same as at the 2008 crisis peak. In Sweden, the household debt to income ratio reached 179% in 2015, a higher rate than the crisis peak in the U.S. in 2008 (Andersson & Jonung 2016).

A similar story applies in Canada, the Netherlands, Norway and Belgium. Meanwhile Australia and New Zealand are the champions of the post-crisis house-price boom, seeing the value of property increase from 3 to 4 times GDP in the space of just 4 years since 2012 (Bourke 2017), racing far ahead of incomes. The two largest cities, Sydney and Melbourne, averaged 14% and

10% annual increases in house prices between 2013 and 2017 respectively.

And whilst average house prices did fall markedly in the UK and U.S., real wages have also flat-lined meaning affordability has not increased as rapidly as might have been expected.

Despite taking some steps to regulate mortgage credit, governments and central banks must both shoulder the blame for the emergence of this latest house price boom. After an initial fiscal stimulus, governments cut back on spending and hoped that easy monetary policy – low interest rates – would encourage consumption and investment. Since 2009, the American, British, Japanese and European central banks have together bought up more than \$11trillon-worth of government bonds and other safe assets from investors, replacing it with zero-interest newly created money via 'Quantitative Easing' (QE) programmes. The hope was that this would force investors to invest in more risky, real economy debt such as debt and equity issued by companies.

But the evidence suggests that rather than stimulating real economy growth, QE has pumped up asset prices, in particular house prices (Moodys Analytics 2015). The 'wall of liquidity' created by QE catalysed a global search for higher yielding but safe assets. Landed property, particularly in international cities, proved to be one of the most attractive assets for investors with global reach, not least because they could easily source borrowing, backed by

property assets, at ultra-low interest rates from a banking sector still hooked on real estate. Land in 'global cities' such as Paris, New York, London, Hong Kong and Toronto has become akin to gold – an essentially speculative but still 'safe' store of value. Property prices in these cities have 'synchronized', with price dynamics closer to each other than with domestic cities an regions (Brooker 2018). Although speculative buyers from both home and abroad usually target 'prime' (very expensive) properties, this naturally raises prices across these cities and means they become unaffordable for those on middle incomes.

2.5 The role of government policy

The financial deregulation, liberalisation and innovation that led to a huge expansion in credit on the supply side was complemented by changes in government policy that increased the demand for home ownership. In particular changes in taxation and public subsidies made property more attractive as a financial asset, as well providing a flow of housing services. Anglo-Saxon liberal market economies led the way, beginning the process even before the financial deregulation of the 1970s.

Tax changes favouring home ownership

In 1963 the UK abolished the 'Schedule A' income tax, a tax on imputed rental income (the ground rent that a property owner would have had to pay if they had not been an owner). Five years later, when capital gains tax was introduced, an exemption was made for primary residencies. This immediately made private property a more attractive financial asset than shares and savings vehicles, both of which attracted hefty taxes. In the late 1980s, the Thatcher government abolished the local property tax scheme ('Domestic rates'), at the height of the house price and credit boom, replacing it with the Poll Tax and later 'council tax' which has not been revalued since 1991, making it highly regressive. All of these policies meant that property owners were able to capture a larger and larger share of the capital gains from rising house prices. Much of this could be realised through mortgage-equity withdrawal which was also liberalised in the 1980s.

In the U.S., the twentieth century saw the tax system become systemically biased in favour of land and real estate ownership over other forms of activity. Prior to the 1930s property taxes accounted for around 2/3rds of state and local government tax receipts. But gradually taxes have been shifted off property and on to incomes and consumers (via increasing sales taxes). Today property taxes make up only 20% of state and local revenue (Hudson 2012 p. 227).

The maximum capital gains tax rate payable by individuals in the U.S. between 1942 and 1995 averaged 27% in contrast to 70% on income. Likewise for corporations, the maximum capital gains tax was 28% compared to 45% on corporate profits (Hudson 2010 p. 236). In addition, the tax code permits investors to avoid paying tax on real estate at the point of sale if they reinvest their sales proceeds to buy new property of equal or greater cost. Real estate is further favoured because land appreciation is not recognized in US accounting protocols. It is treated for tax purposes in the same way as depreciable capital – taxed income is considered to be cash flow less depreciation. But real estate does not provide a physical cash flow, but rather an imputed flow of income (or imputed rent). Land appreciates since increases in land values typically outpace the costs associated with depreciation of the physical structures of land. Yet real estate owners typically are able to offset their tax against depreciation whilst capital gains are ignored.

These changes to taxation in the UK and US made home ownership increasingly attractive as a financial asset. In particular in the cities where rapid growth was occurring, home owners were now able to enjoy large capital gains – i.e. economic rents - from the simple virtue of owning property in an area of rising economic growth and investment. But there was no

political constituency at the time to push back against these developments as the desire for home ownership increased and incomes continued to rise.

Subsidies shift from supply to demand

By the early 1980s, neo-liberal policies had become more entrenched in the Anglo-Saxon economies and governments began to withdraw from the direct provision of affordable housing and housing finance, instead enabling the market to take on a greater role. Rather than subsidizing or investing in the supply of housing or land – or indeed building or buying land themselves – these states began to shift towards subsidizing the demand for home ownership. Selling publicly owned houses to tenants – often at a discount - became a popular strategy: it increased home ownership and won votes whilst at the same time reducing public expenditure, in particular the costs of maintenance. The most spectacular example was the British Conservatives' "Right-to-Buy" legislation which saw 1.5 million publicly owned houses sold off in one of the largest ever privatisations of public housing in history, worth £40 billion in its first 25 years (Meek 2014).

In other countries, policies have been more subtle but the direction of travel – towards the commodification of housing and privatisation of land rents – has been the same (Aalbers 2017). In many countries, tenant protection and rent

regulation laws were rescinded leading to an increase in rents and evictions (Rolnik 2013). Municipalities were given increased responsibility for affordable housing provision but seen their funding to provide it cut (Hulchanski 2009). As funding for maintenance was cut, the quality of remaining public housing stock deteriorated and housing estates were increasingly stigmatized in the public and political imagination.

In most countries today, there is no capital gains due on primary private residences and a whole range of other subsidies privileging home ownership both as a form of tenure and as a financial asset (OECD 2016, Figure PH 2.2.1). Most advanced economies offer mortgage interest relief (MIR) on taxable income. In the Netherlands the foregone tax revenue from MIR was estimated to be around 2.14% of GDP in 2015 and 0.5% in the U.S. (ibid). Because the ownership of housing is skewed towards older and higher income households, this is a highly regressive. Evidence from both the U.S. (Hilber & Turner 2014) and Europe (Matsaganis & Flevotomou 2007) demonstrate that it has mainly benefited higher income groups, many of whom will already be home owners.

For neo-liberal governments concerned about rising budget deficits, encouraging the personal accumulation of assets such as housing equity as a means of meeting the cost of social care and retirement needs in an aging

population also made political sense. 'Asset-based welfare' began to emerge as a new policy framework with home ownership leading to less support for higher taxes to fund universal welfare provision and pensions (Doling & Ronald 2010).

3. Policies to break the feedback cycle: financial reform

How might it be possible to wean the advanced economy banking sector off landed property? In the next two sections, I outline reforms to the financial sector and to land and housing policy that might be effective in breaking the housing-finance feedback cycle.

3.1 Central banks and financial policy

As discussed, central banks have begun to implement new policies to restrict mortgage credit in the post-crisis period – so called 'macroprudential policy' (Cerutti *et al.* 2017). So far, this does not appear to have been effective in preventing new house price bubbles in a number of advanced economies. One additional policy reform would be for central banks to incorporate asset prices in their inflation target (currently house prices are excluded in most measures of consumer price inflation). More generally, financial policy

makers – in both central banks and ministries of finance - should now have the confidence to more explicitly regulate the quantity and allocation of credit for different purposes. During their history, almost all advanced economies and many emerging economies – including East Asia - employed forms of formal and informal quantity-based credit regulation under various terms, including 'credit guidance', 'window guidance', 'moral suasion' (see Bezemer et al. 2018 for a review).

Credit for the purchase of land and property was suppressed under these regimes as it was seen to produce excessive asset price inflation and subsequent banking crises. Most bank credit was allocated to productive useⁱⁱⁱ, either investment in plant and equipment to produce more goods, investment to offer more services, or other forms of investment that enhanced productivity (such as the implementation of new technologies, processes, and know-how) – and often a combination of these (Wade 1990; Wang & Vittas 1991; Werner 2003). A recent study found that the removal of credit controls and credit guidance policies (including the privatisation of state investment banks) is strongly correlated with an increase in the share of asset-based lending (mainly mortgage debt) in advanced economies (Bezemer *et al.* 2018).

Domestic regulations of this type would be considerably more effective if they were complemented by supportive international regulation. International regulators, including the BIS and the IMF, need to reverse the strong

favouritism shown towards property lending in terms of capital and liquidity requirements to support domestic regulations. Regulations should support banks that are able to de-risk their loans via methods other than land-based collateral, most obviously via the building up of long-term relationships with non-financial businesses, as discussed in the next section.

3.2 Structural reforms

There may be limits to what regulation can achieve on its own given how entrenched mortgage assets have become on modern banks' balance sheets and their strong attachment to collateral. In addition, the highly competitive and globalised nature of banking and capital flows today makes regulation easier to 'game'. Countries might have to re-impose foreign exchange controls to prevent foreign banks and shadow banking structures from getting around domestic rules. Given these challenges, institutional and structural reforms to banking systems may be appropriate.

Stakeholder banks vs. Shareholder banks

A range of studies suggest that bank lending behaviour is strongly influenced by ownership type, size and other institutional factors (Altunbas *et al.* 2001; Ferri *et al.* 2014; Prieg & Greenham 2012). Since the 1990s, advanced economy

banking systems have become less diverse as financial deregulation led to waves of mergers and acquisitions, often following financial crises. Large, universal shareholder banks that combine investment- and retail-banking functions have become the dominant model in Anglo-Saxon economies.

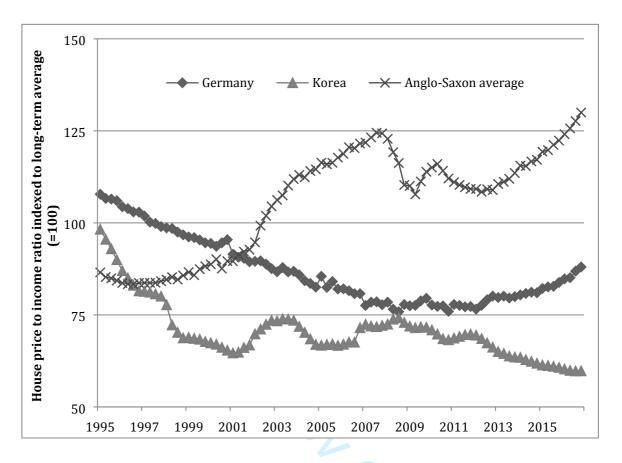
Specialist mortgage banks – the Savings and Loans and Building societies discussed in the previous section – having demutualised or been absorbed into larger universal banks.

The dominant ownership model for these banks is the publicly listed shareholder model. Shareholder banks typically operate a 'transaction' banking model (Collins 2012) characterised by a preference for centralised and automated credit-scoring techniques to make loan decisions, a need for high quarterly returns on equity, and a strong preference for collateral and thus property. Increasingly, the model favours the generation of profits through securitisation. The imperatives of short-term shareholder value mean that lending to SMEs – involving high transaction costs for relatively small loans – does not make business sense for larger banks (Berger & Udell 2002).

By contrast, in other countries, for example Germany, Switzerland and Austria, there is a much stronger culture of 'relationship banking'. In Germany, two-thirds of bank deposits are controlled by either cooperative or public savings banks, most of which are owned by regional or local people

and/or businesses. These 'stakeholder banks' are more focused on business lending, do not have such stringent collateral requirements and devolve decision making to branches (Prieg & Greenham 2012). They de-risk their loans not by requiring property as collateral but by building up strong and long-lasting relationships and an understanding of the businesses they lend to. Although the general pattern in advanced economies has been a shift towards mortgage lending, in Germany lending to non-financial businesses is significantly higher than mortgage lending at 40% of GDP, whilst mortgage lending has only increased to around 30% of GDP. This stands in marked contrast to the advanced economy average of 70% mortgage credit and 50% non-mortgage (Ryan-Collins 2018: 103) and likely plays a significant role in German households enjoying a falling house-price to income ratio for most of the last 4 decades (Figure 2).

Figure 2: House price-to-income ratio in Germany, Japan, Korea and Anglo-Saxon economies indexed to long term average (=100).



Source: OECD analytical house price database

Empirical studies find that 'stakeholder' banks, including public savings banks and cooperative banks, maintain their lending – both mortgage and non-mortgage - in the face of financial shocks (e.g. changes in interest rates) in contrast to shareholder banks which are much more pro-cyclical (Ferri *et al.* 2014; Beck *et al.* 2018). This is unsurprising if their models of lending are based on relationships rather than collateral values – a bank with a long and strong relationship with a firm is much more likely to have the confidence to

continue lending during a downturn and may also have a better grasp of the local and regional economy.

State investment banks

Another way of supporting non-collateralised lending to support productive activity and priority-infrastructure (including affordable housing) would be the creation of - or greater support for - State Investment Banks (SIBs) (also known as 'development banks' or 'public banks'). These institutions are government-owned or sponsored financial institutions concerned primarily with the provision of strategic and usually longterm finance to industry (De Aghion 1999).

Development banks are recognized as having played a crucial role in the rapid industrialization process of continental Europe in the 19th century, providing the patient capital necessary to build railroads and canals across the continent and in the process revolutionizing capitalist production. One of the largest examples from the 19th century was the French *Crédit Mobilier* bank, founded in 1852 by followers of the French socialist thinker and reformer Henri de Saint-Simon. Its name is revealing. In contrast to the common mortgage bank (*Sociétés du Crédit Foncier*) or 'land banks', which lent money on the security of *immovable* property, the *Crédit Mobilier* aimed to loan

to the owners of *movable* property and so to promote industrial enterprise (Hudson & Bezemer 2012 p. 7). The bank funded transport infrastructure in France via low-interest long-term equity investment and bond finance, rather than the short-term higher interest lending provided by French family banks such as the Rothschilds (Hudson 2011 pp. 13–14). The *Crédit Mobilier* also enabled the development of railroads across the rest of Europe by supporting other continental development banks, via share ownership and the provision of engineers and expert knowledge.

State sponsored banks were also key to rebuilding western and East Asian economies in the aftermath of the Great Depression and World War II when mortgage finance dried up and or property was destroyed on a major scale. The U.S. Reconstruction Finance Corporation (RFC) was a central component of the Roosevelt's New Deal, financing a huge expansion in infrastructure in the 1930s (Todd 1992). State investment banks played a key role in the rapid growth of East Asian countries in the 1970s and 1980s – the so called 'East Asian miracle' (Stiglitz & Uy 1996). Globally, by the 1970s, governments owned 50 percent of assets of the largest banks in industrial countries and 70 percent of assets of the largest banks in developing countries (Levy-Yeyati et al. 2004 p. 2). The emergence of neo-liberal policies in the 1980s and 1990s, as described in section 3, saw a wave of privatisations of public banks. From 1987 to 2003, more than 250 banks were privatized (Megginson 2005).

Development banks can play an important role stimulating innovation because of their capacity to provide patient long-term capital to potential growth sectors (such as green energy for example) that private sector venture capitalists find too risky or too low-yielding (Mazzucato & Penna 2015). For example, a recent study found that a large proportion of patient capital supporting green energy projects came from public institutions, including SIBs, rather than the private sector sources more usually associated with financing innovation (Mazzucato & Semieniuk 2017). Historically and in the present, SIBs have also supported SMEs that otherwise struggle to attain finance from the commercial banking sector and who in many cases lack property-based collateral. Both the German and Canadian SIBs, both set up in the post-war period, have played a key role in supporting SME sectors throughout their 60 year history. Germany and South Korea, which have both enjoyed falling house price-to-income ratios in the last two decades (Figure 2) both have large SIBs.

4. Policies to break the feedback cycle: Land policy reforms

4.1 Reforming fiscal policy: a land-value tax

Reforms to the banking system would suppress perhaps the most important source of finance flowing in to property – newly created credit and money. But in the post crisis world of low interest rates, land and housing will remain a highly attractive financial asset for speculative investment. Reversing the fiscal favouritism for home ownership and treating landed property in the same way as any other financial asset would appear a logical step if we are to bring house prices back to levels closer to incomes.

One proposal, supported by economists from across the political spectrum, would be a tax on the increasing value of land, or land value tax (LVT), most famously proposed by Henry George (1879). This would involve an annual tax on the incremental increase in the unimproved market value of land that would fall upon the landowner. The advantage of the tax is that it would accurately capture the economic gains deriving from public and private investment in a location – such as a new school or better transport infrastructure - not due to the land-owner's own efforts; in other words the tax would capture for the public purse economic rent.

By attaching a cost to owning land, LVT diminishes the incentive to buy land for speculative purposes – i.e. to realize capital gains – rather than productive purposes or simply to provide shelter. Knowing that any increase in the value

of a property would be taxed should lead to a shift towards households purchasing a house purely on the basis of its value as a place to live – i.e a consumption good - rather than a financial asset. There would also be less incentive for developers to hoard undeveloped land. Such a tax would likely end the practice of 'land banking' or 'slow release' that is a problem in countries like the UK and Australia where developers have no incentives to build and sell property efficiently because the capital gains on their assets are rising, despite the shortage of housing the country faces (Ryan-Collins *et al.* 2017 pp. 200–201).

A tax on land should naturally reduce mortgage lending. Under current arrangements, as land values increase, land owners/home owners benefit from most of this increase as the value of their properties increase. The larger the increase in land values and thus property equity, the larger the loan the bank will be prepared to make, all else being equal. Of course, the larger the loan relative to equity, the more of the economic rent will flow to the bank in the form of interest payments. With a sizeable land value tax, most of the increase in land values flows to the public purse leaving just a small proportion for the household to use as collateral. This would inevitably reduce the size of mortgage loans and the rentier interest profits flowing to banks.

There are major political challenges with implementing property taxes in western democracies where home ownership and the idea of wealth generation from the home has become culturally entrenched. Today 'immovable property taxes' make up just 1% of GDP and 2.5 per cent of total tax revenues on average across the OECD economies (Blöchliger 2015 p. 6). There are genuine fairness issues in some cases – in particular where a household or individual is asset rich but cash poor, meaning a tax would significantly reduce their income.

To overcome these concerns, any land tax should be introduced as part of a wider tax reform that would reduce other unpopular and regressive taxes such as income or sales taxes (research shows land taxes are more economically efficient than other taxes (Arnold *et al.* 2011; Blöchliger 2015)). Exemptions for low-income home-owners, or allowing homeowners to defer payment until sale, may reduce the political difficulties of land taxes. Or home-owners could give up a percentage of their equity in the property each year that wasn't paid to the state, enabling the community to gain from any capital appreciation (Mayhew & Smith 2014).

Another option would be to hypothecate the proceeds of a large-scale land tax evenly across the population as some kind of universal basic income, or perhaps hypothecate it to support a widely popular public service such as

national healthcare. Reframing a property tax as a shared citizens' 'land dividend' could make it more appealing in the public imagination. Finally, reducing the saliency of the tax by withholding it at source from employment or pension income could make politically more acceptable.

Ultimately, the biggest challenge facing the implementation of taxes on land and property are the vested interests facing significant wealth losses from such a policy. Nevertheless, the stagnation of incomes and ageing demographics that have been a feature of advanced economies over recent decades suggest the policy may become more politically attractive. Recently there have been calls by major international bodies including the OECD (Blöchliger 2015) and the IMF (Norregaard 2013) for an increase in property taxation as the tax best placed to boost growth in the post-crisis period. As incomes decline and wealth increases, and financial wealth becomes ever harder to locate and tax, it may become increasingly tempting for politicians to turn to land and property taxation to maintain tax bases.

4.2 Land ownership reforms

The risk with LVT, as with any tax, is that it could be easily reversed by a new government. By keeping land – and the economic value of land – outside the

market economy and the financial system completely, the banking sector would be forced to find alternative ways of de-risking its lending. Few banks will be prepared to lend purely against the deteriorating value of the structures on top of a location.

In mainstream economic theory, private property and home ownership has generally been thought of as beneficial. However a number of empirical studies find a positive relationship between the growth of home ownership and increasing unemployment in a given area or country (Blanchflower & Oswald 2013; Laamanen 2013). Countries with high levels of home ownership will likely have less mobile populations, reducing the efficiency of the distribution of labour and increasing the likelihood of NIMBY-ISM (Not In My Backyard-ISM) that may impede economic development. Whilst the rise in home ownership in the 1945-1970s period certainly coincided with widespread increases in prosperity, since the 1970s, growth rates have fallen, inequality of wealth and income has risen and financial instability increased despite a continued growth in home ownership.

One alternative is public ownership of land. At its simplest, public ownership serves to remove land from the market in perpetuity and socialise rents in the process. Public land ownership today is widespread, and takes many forms: from public parks and public highways, to social housing and heritage

buildings. Holding land under permanent public ownership can ensure that such socially desirable uses are preserved in particular locations when market forces would dictate that they make way for more profitable uses, squeezing affordability.

In Singapore, a densely populated city-state island of 3.9m residents, 90% of the land is owned by the state which leases it out for development, enabling it to capture land value increases as leases come up for renewal. 82% of the resident population lives in high quality public housing provided by the state-owned Housing Development Board. The Central Provident Fund (CPF), a compulsory savings scheme sfor both employers and employees, invests its balances in government debt and the government issues a variety of affordable housing loans to the HDB. This creates a virtuous circle of socialised non-bank mortgage finance that has proven effective at providing affordable housing (Phang 2001 p. 449). The average house price to income ratio in Singapore is one of the lowest in Asia and has been falling since a housing bubble in the mid-1990s. Meanwhile, the system provides the Singapore Government with a handsome source of public revenues. In 2012 alone government receipts from land sales totalled the equivalent of £9.1 billion (Purves 2015).

In South Korea, around half of all residential land development and almost all industrial land development is carried out by the Korean Land Corporation (KLC)^v. Since being formed in 1975, the KLC has played a key role in transforming the economy of South Korea by efficiently managing land and promoting economic development. The KLC's functions include developing and selling land for residential use, acquiring idle and vacant land for resale at current usage prices and developing new towns (Kaganova 2011). This has helped ensure that land and housing has remained affordable in South Korea, as shown in Figure 2.

Of course, majority state ownership of land may not be politically feasible in many western countries. However, similar principles can apply at a smaller scale. If public sector entities are willing and able to purchase sufficient land for entire new settlements, it becomes fairly easy for the public body to capture all of the land value created by the development of the new town, enabling the cost of the original land purchase to be made up and exceeded, with profits put in to further upgrades to infrastructure. This is the model that was used successfully in the development of New Towns in the UK in the 1960s (DCLG 2006).

A similar approach can be used to capture the land value uplift created by the provision of infrastructure. if a public body acquires land at pre-development

prices, it can then sell or lease the land at development prices upon completion of the new infrastructure – thereby capturing the rent itself. This form of land value capture has been perhaps most effectively used to finance Hong Kong's Mass Transit Railway (Purves 2015).

These kinds of benefits could be achieved on a national basis by establishing national land banks or development authorities responsible for purchasing, developing and selling land for residential and commercial use following the Korea model. These land banks could use public money to buy land without planning permission and then lease or sell land to private developers at development prices following the grant of planning permission. As well as being a source of land release for housing and other development, the increase in land values could provide significant sources of revenue for the government.

4.3 Alternative tenure patterns

Tenure patterns play an important role in mediating the impact of deregulation and innovation in the financial sector. The higher the levels of home ownership in an economy, the greater the impacts of such developments are likely to be. This is because renters are not in a position to leverage against their property. The general pattern of home ownership in advanced economies has been an increase from around 40% home ownership

in the 1940s to closer to 60% by the 2000s (Jordà *et al.* 2016 p. 121)(Jordà *et al.* 2016 p. 121). But there are some interesting exceptions. Not all countries implemented changes in policies to boost private home ownership and mortgages. Germany, Austria and Switzerland, where home ownership rates are below 50%, provide good counter-examples.

In Germany, loan-to-value ratios at savings and mortgage banks (the main providers of home loans) were often capped at 60%. At the same time, the comparatively high levels of rent protection that were put in place in the immediate post-war years were upheld in the following decades. In addition, the German tax code provided only limited incentives to take on debt. As a consequence, the home ownership rate in Germany stood at 43% in 2013 and was hence only marginally higher than the 39% ratio reached in 1950. Switzerland is one of the few remaining advanced economies that still levies taxes on the imputed rents of house owners. It also has rent caps in many cities and many Cantons ban foreigners from buying up property. Home ownership in Switzerland levelled out at around 35% in the past half century. And, also like Germany, Switzerland has a more devolved fiscal, planning and banking system with the Cantons having considerable autonomy over these issues.

There is little evidence that economies where private home ownership dominates as a form of tenure are more productive or efficient. Easy access to housing credit may provide a short-term boost to consumption but ultimately results in greater financial fragility and growing wealth inequality. Housing policies should be tenure neutral in terms of subsidies or taxes offered or taken by the state. The private rented sector should be made as secure as possible, with long guaranteed tenancies, limitations on rent rises and strong tenants' rights. Government should take steps to boost the stock of nonmarket housing including homes with social rents, community-led schemes and co-operatives to ensure that different housing types and sizes are available in all tenures, and to make housing supply less dependent on the volatile private market in land and homes. Finally, decent investment alternatives and secure pensions should be provided so that households are less prone to invest in the housing market to pay for their retirement, or to rely on it to fund their care in old age.

5. Conclusion

Housing affordability presents a major challenge in modern capitalist economies. This is because the major cause of the affordability crisis is the

interaction of two of its central pillars: private landed property and a deregulated financial system. Their interaction creates a feedback cycle that came to dominate Anglo-Saxon economies since the 1980s and, via the harmonization of cross-border financial flows, banking regulation and financial innovation, also European economies since the 1990s (with some important exceptions). At its heart, the cycle involves an elastic supply of credit and finance flowing in to an inherently scarce, fixed and irreproducible asset, land (or desirable location), with inevitable inflationary consequences.

The deregulation and liberalisation of the financial system, initiated by the U.S. and U.K. in the late 1970s and early 1980s led to an enormous expansion in mortgage credit supply, flowing mainly in to existing property. This has been complemented by fiscal favouritism for home ownership over other tenures, through both taxation and subsidies, leading households to increasingly view property as a financial asset as well as a consumption good and attracting investment funds. The affordability crisis can thus be seen as primarily a demand-side problem, yet policy makers have largely focused attention on supply-side issues such as insufficient new building of homes, excessive immigration and restrictive planning rules.

The housing finance-feedback cycle is economically inefficient, incentivising investment in unproductive property, but has strong self-perpetuating

dynamics because a majority of the middle-class population in advanced economies own homes and have enjoyed significant capital gains – there is no longer a simple dichotomy between rentier landowners and workers. Home equity withdrawal has enabled these households to monetize a proportion of these gains and propped up consumer demand. But this debt-driven growth model involves a high level of rent extraction and generates increasing wealth inequalities as the young and those outside cities are shut out of the process. Ultimately, such a model also generates financial instability and crisis as rising debt levels eventually eat in to demand.

The housing-finance feedback cycle is more than just a minor 'market failure'. Unregulated banks will naturally incline towards asset-backed lending given the attractiveness of land as a form of collateral. As a result, demand-side reforms are needed. These include regulatory and structural changes to the ownership of banks to support business-lending over property lending; and major changes to taxation, subsidies and tenure policies. Important lessons can be learned from economically successful countries such as Germany, Singapore and South Korea which have shown that the financialisation of housing is not an inevitability.

References

- Aalbers, M. B. (2016). *The financialization of housing: A political economy approach*, London: Routledge.
- Aalbers, M. B. (2017). The variegated financialization of housing. *International Journal of Urban and Regional Research*, **41**.
- Aalbers, M. B., & Christophers, B. (2014). Centring housing in political economy. *Housing, Theory and Society*, **31**(4), 373–394.
- Altunbas, Y., Evans, L., & Molyneux, P. (2001). Bank ownership and efficiency. *Journal of Money, Credit and Banking*, 926–954.
- Andersson, F., & Jonung, L. (2016, May 30). The credit and housing boom in Sweden, 1995-2015: Forewarned is forearmed. Retrieved from http://voxeu.org/article/credit-and-housing-boom-sweden-1995-2015
- Andrews, D., Sanchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries. *OECD Economic Department Working Papers*, (836), 0_1.
- Arnold, J., Brys, B., Heady, C., Johansson, Å., Schwellnus, C., & Vartia, L. (2011). Tax policy for economic recovery and growth. *The Economic Journal*, **121**(550), F59–F80.

- Aron, J., Duca, J. V., Muellbauer, J., Murata, K., & Murphy, A. (2012). Credit, housing, collateral and consumption: evidence from Japan, the UK and the U.S. *Review of Income and Wealth*, **58**(3), 397–423.
- Ball, Michael. "Housing analysis: time for a theoretical refocus?." *Housing* studies 1, no. 3 (1986): 147-166.
- Beck, T., Degryse, H., De Haas, R., & Van Horen, N. (2018). When arm's length is too far: Relationship banking over the credit cycle. *Journal of Financial Economics*, **127**(1), 174–196.
- Berger, A. N., & Udell, G. F. (2002). Small business credit availability and relationship lending: The importance of bank organisational structure. *The Economic Journal*, **112**(477), F32–F53.
- Bezemer, D., Ryan-Collins, J., van lerven, F., & Zhang, Lu. (2018). Credit where it's due: A historical, theoretical and empirical review of credit guidance policies in the 20th century. *UCL Institute for Innovation and Public Purpose Working Paper Series*, (IIPP WP 2018-11). Retrieved from https://www.ucl.ac.uk/bartlett/public-purpose/wp2018-11
- Bezemer, D., Samarina, A., & Zhang, L. (2017). The Shift in Bank Credit

 Allocation: New Data and New Findings. Retrieved from

 https://papers.ssrn.com/abstract=2992621
- Bezemer, D., Zhang, L., & Grydaki, M. (2016). More mortgages, lower growth? *Economic Inquiry*, **54**(1), 652–674.

- Blanchflower, D. G., & Oswald, A. J. (2013). *Does high home-ownership impair the labor market?*, National Bureau of Economic Research.
- Blöchliger, H. (2015). Reforming the Tax on Immovable Property: taking care of the unloved. *OECD Economic Department Working Papers; Paris,* (1205), 0_1,3,5-31.
- Bourke, C. (2017, November 23). The Party Is Over for Australia's \$5.6 Trillion Housing Frenzy. *Bloomberg.Com*. Retrieved from https://www.bloomberg.com/news/articles/2017-11-23/australia-faceshousing-hangover-twice-size-of-u-s-subprime-era
- Brooker, N. (2018, March 15). How the financial crash made our cities unaffordable. *Financial Times*. Retrieved from https://www.ft.com/content/cc77babe-2213-11e8-add1-0e8958b189ea
- Coakley, J. (1994). The integration of property and financial markets. *Environment and planning A*, 26(5), 697-713.
- Cerutti, E., Claessens, S., & Laeven, L. (2017). The use and effectiveness of macroprudential policies: New evidence. *Journal of Financial Stability*, **28**, 203–224.
- Chakraborty, I., Goldstein, I., & MacKinlay, A. (2016). Housing price booms and crowding-out effects in bank lending.
- Cheshire, P. C., Nathan, M., & Overman, H. G. (2014). *Urban economics and urban policy: Challenging conventional policy wisdom*, Edward Elgar Publishing.

- Collins, M. (2012). *Money and Banking in the UK: A History*, Vol. 6, London: Routledge.
- Crouch, C. (2009). Privatised Keynesianism: An unacknowledged policy regime. *The British Journal of Politics and International Relations*, **11**(3), 382–399.
- DCLG. (2006). *Transferable Lessons from the New Towns*, Oxford: Department of Planning, Oxford Brookes University.
- De Aghion, B. A. (1999). Development banking. *Journal of Development Economics*, **58**(1), 83–100.
- Demographia. (2018). 14th Annual Demographia International Housing

 Affordability Survey: 2018, St. Louis Metropolitan Area: Demographia.
- Doling, J., & Ronald, R. (2010). Home ownership and asset-based welfare. *Journal of Housing and the Built Environment*, **25**(2), 165–173.
- Duca, J. V., Muellbauer, J., & Murphy, A. (2011). House prices and credit constraints: Making sense of the US experience. *The Economic Journal*, **121**(552), 533–551.
- Favara, G., & Imbs, J. (2015). Credit Supply and the Price of Housing. *American Economic Review*, **105**(3), 958–92.
- Ferri, G., Kalmi, P., & Kerola, E. (2014). Does bank ownership affect lending behavior? Evidence from the Euro area. *Journal of Banking & Finance*, **48**, 194–209.

Gaffney, M. (1994). Land as a distinctive factor of production. In N. Tideman, ed., *Land and taxation*, London: Shepheard-Walwyn, pp. 39–102.

Gallent, N., Durrant, D., & May, N. (2017). Housing supply, investment demand and money creation: A comment on the drivers of London's housing crisis. *Urban Studies*, *54*(10), 2204-2216.

- George, H. (1879). *Progress and Poverty*, Centenary condensed edition, London: Hogarth press.
- Gotham, K. F. (2009). Creating liquidity out of spatial fixity: The secondary circuit of capital and the subprime mortgage crisis. *International Journal of Urban and Regional Research*, **33**(2), 355–371.
- Gurran, N., & Whitehead, C. (2011). Planning and affordable housing in Australia and the UK: a comparative perspective. *Housing Studies*, **26**(7–8), 1193–1214.

Glaeser, E. L., Gyourko, J., & Saks, R. E. (2005). Why have housing prices gone up?. *American Economic Review*, 95(2), 329-333.

Glaeser, E. L., Gyourko, J., & Saiz, A. (2008). Housing supply and housing bubbles. *Journal of urban Economics*, 64(2), 198-217.

Haila, A. (1988). Land as a Financial Asset: The Theory of Urban Rent as a Mirror of Economic Transformation*. *Antipode*, **20**(2), 79–101.

Haila, A. (1990). The theory of land rent at the crossroads. *Environment and Planning D: Society and Space*, 8(3), 275-296.

Harvey, D. (1978). The urban process under capitalism: a framework for analysis. *International journal of urban and regional research*, 2(1-3), 101-131.

Hilber C. and Vermeulen W. (2010) The Impacts of Restricting Housing

Supply on House Prices and Affordability – Final Report. London: DCLG.

- Hilber, C. A., & Turner, T. M. (2014). The mortgage interest deduction and its impact on homeownership decisions. *Review of Economics and Statistics*, **96**(4), 618–637.
- Hudson, M. (2010). The Transition from Industrial Capitalism to a

 Financialized Bubble Economy. *Levy Economics Institute: Working Paper*No. 627, 1–34.
- Hudson, M. (2011). How economic theory came to ignore the role of debt.

 *Real-World Economics Review, (57), 2–24.
- Hudson, M. (2012). *The bubble and beyond: Fictitious Capital, Debt Deflation and Global Crisis,* Dresden: ISLET.
- Hudson, M., & Bezemer, D. (2012). Incorporating the rentier sectors into a financial model. *World Economic Review*, **1**(1), 1–12.

- Hulchanski, J. D. (2009). *Homelessness in Canada: Past, present, future,* Cities Centre and Faculty of Social Work, University of Toronto.
- IMF. (2011). Chapter III. Housing Finance and Financial Stability—Back to Basics? In *IMF Global Financial Stability Report, April* 2011.
- Jackson, B. (2005). Revisionism reconsidered: 'Property-owning democracy' and egalitarian strategy in post-war Britain. *Twentieth Century British History*, **16**(4), 416–440.
- Jordà, Ò., Schularick, M., & Taylor, A. M. (2016). The great mortgaging: housing finance, crises and business cycles. *Economic Policy*, **31**(85), 107–152.
- Jordà, Ò., Schularick, M., & Taylor, A. M. (2017). Macrofinancial history and the new business cycle facts. *NBER Macroeconomics Annual*, **31**(1), 213–263.
- Kaganova, O. (2011). International Experiences on Government Land Development

 Companies: What Can Be Learned? (Working Paper No. IDG Working

 Paper No. 2011-01), Urban institute Centre on International

 Development and Governance. Retrieved from

 http://www.urban.org/url.cfm?renderforprint=1&ID=412299&buildstatic=1
- Katz, S. (1986). Towards a sociological definition of rent: notes on David Harvey's The Limits to Capital. *Antipode*, *18*(1), 64-78.

- Kelly, R., McCann, F., & O'Toole, C. (2018). Credit conditions, macroprudential policy and house prices. *Journal of Housing Economics*, 41, 153–167.
- Keynes, J. M. (1939). The process of capital formation. *Economic Journal*, **49**(195), 569–574.
- King, R., & Levine, R. (1993). Finance and growth: Schumpeter might be right.

 The Quarterly Journal of Economics, 108(3), 717–737.
- King, R. J. (1989). Capital switching and the role of ground rent: 1 Theoretical problems. *Environment and Planning A*, **21**(4), 445–462.
- Krippner, G. R. (2005). The financialization of the American economy. *Socio-Economic Review*, **3**(2), 173–208.
- Krippner, G. R. (2011). Capitalizing on crisis, Harvard University Press.
- Laamanen, J.-P. (2013). *Home-ownership and the labour market: Evidence from rental housing market deregulation* (No. 89), University of Tampere.
- Levy-Yeyati, E. L., Micco, A., & Panizza, U. (2004). Should the government be in the banking business? The role of state-owned and development banks.
- Lunde, J., & Whitehead, C. (2016). European Housing Finance Models in 1989 and 2014. In C. Whitehead & J. Lunde, eds., *Milestones in European Housing Finance*, London: John Wiley & Sons, p. 14.

- Matsaganis, M., & Flevotomou, M. (2007). The impact of mortgage interest tax relief in the Netherlands, Sweden, Finland, Italy and Greece, EUROMOD Working Paper Series.
- Mayhew, L., & Smith, D. (2014). *The UK Equity Bank-Towards income security in old age*, City University, London: The International Longevity Centre UK (ILC-UK). Retrieved from http://openaccess.city.ac.uk/16807/
- Mazzucato, M., & Penna, C. C. R. (2015). Beyond market failures: The market creating and shaping roles of state investment banks. *Levy Economics Institute of Bard College Working Paper*, (831).
- Mazzucato, M., & Semieniuk, G. (2017). Financing renewable energy: who is financing what and why it matters. *Technological Forecasting and Social Change*, **22**(8).
- McLeay, M., Radia, A., & Thomas, R. (2014). Money creation in the modern economy. *Bank of England Quarterly Bulletin*, **54**(1).
- Meek, J. (2014, January 9). Where will we live? *London Review of Books*, pp. 7–16.
- Megginson, W. L. (2005). The economics of bank privatization. *Journal of Banking & Finance*, **29**(8), 1931–1980.
- Moodys Analytics. (2015). *QE Could Fuel Housing Bubbles in Europe*. Retrieved from https://www.economy.com/dismal/analysis/free/255221/QE-Could-Fuel-Housing-Bubbles-in-Europe

- Muellbauer, J. (2018). Housing, debt and the economy: A tale of two countries.

 National Institute Economic Review, 245(1), R20–R33.
- Norregaard, M. J. (2013). Taxing Immovable Property Revenue Potential and Implementation Challenges. *IMF Staff Papers*.
- OECD. (2016). OECD Affordable Housing Database December 2016 indicators. Retrieved July 22, 2017, from http://www.oecd.org/social/affordable-housing-database.htm
- Persaud, A. (2016). Breaking the Link between Housing Cycles, Banking Crises, and Recession.
- Phang, S.-Y. (2001). Housing policy, wealth formation and the Singapore economy. *Housing Studies*, **16**(4), 443–459.
- Prieg, L., & Greenham, T. (2012). Stakeholder Banks: benefits of banking diversity. *London: NEF*.
- Purves, A. (2015). No Debt, High Growth, Low Tax: Hong Kong's Economic Miracle Explained, Shepheard-Walwyn.
- Ricardo, D. (1817). *Principles of political economy and taxation,* Ontario: Batoche Books.
- Rognlie, M. (2014). A note on Piketty and diminishing returns to capital.

 *Mimeograph, MIT. Retrieved from mattrognlie.com/piketty_diminishing_returns.pdf

- Rolnik, R. (2013). Late neoliberalism: the financialization of homeownership and housing rights. *International Journal of Urban and Regional Research*, **37**(3), 1058–1066.
- Rolnik, R. (2019). Urban Warfare. New York: Verso Trade
- Ryan-Collins, J. (2018). Why can't you afford a home?, London: Polity press.
- Ryan-Collins, J., Greenham, T., Werner, R., & Jackson, A. (2012). Where does money come from? A guide to the UK monetary system, 2nd edn, London:

 New Economics Foundation.
- Ryan-Collins, J., Lloyd, T., & Macfarlane, L. (2017). *Rethinking the Economics of Land and Housing*, Zed Books Ltd.
- Schumpeter, J. A. (1934). The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle, New Brunswick, N.J.: Transaction Books.
- Schwartz, H., & Seabrooke, L. (2008). Varieties of residential capitalism in the international political economy: Old welfare states and the new politics of housing. *Comparative European Politics*, **6**(3), 237–261.
- Scutt, D. (2016, July 21). 3 charts that show Australia's high rise construction boom is scaling to new heights. Retrieved January 23, 2019, from https://www.businessinsider.com.au/3-charts-that-show-australias-high-rise-construction-boom-is-scaling-to-new-heights-2016-7

- Stiglitz, J. (2015). New Theoretical perspectives on the distribution of income and wealth among individuals: Part IV: Land and Credit. *NBER*Working Paper Series, (21192), 1–36.
- Stiglitz, J. E., & Uy, M. (1996). Financial markets, public policy, and the East Asian miracle. *The World Bank Research Observer*, **11**(2), 249–276.
- Thatcher, M. (1975). Leader's speech, Blackpool 1975. Retrieved October 11, 2017, from http://www.britishpoliticalspeech.org/speech-archive.htm?speech=121
- Todd, W. F. (1992). History of and rationales for the Reconstruction Finance Corporation. *Federal Reserve Bank of Cleveland Economic Review*, **28**(4), 22–35.

Turner, A. (2017). Between debt and the devil: Money, credit, and fixing global finance. Princeton University Press.

- Wade, R. (1990). Governing the Market: Economic Theory and the Role of

 Government in East Asian Industrialization, Princeton, New Jersey:

 Princeton University Press.
- Wang, B., & Vittas, D. (1991). *Credit policies in Japan and Korea: a review of the literature* (No. WPS747), The World Bank. Retrieved from

 http://documents.worldbank.org/curated/en/106201468774540812/Credit-policies-in-Japan-and-Korea-a-review-of-the-literature

Ward, C., & Aalbers, M. B. (2016). Virtual special issue editorial essay: The shitty rent business': What's the point of land rent theory?. *Urban Studies*, 2016, Vol 53(9) 1760-1783

Watson, M. (2009). Planning for a future of asset-based welfare? New Labour, financialized economic agency and the housing market. *Planning, Practice & Research*, **24**(1), 41–56.

Watson, M. (2010). House price Keynesianism and the contradictions of the modern investor subject. *Housing Studies*, **25**(3), 413–426.

Werner, R. A. (2003). *Princes of the Yen: Japan's Central Bankers and the Transformation of the Economy*, ME Sharpe.

ⁱ Based on the average across 14 advanced economies.

ⁱⁱ Regulation had previously only focused on the stability of individual financial institutions: 'micro-prudential' policy.

iii This is not to say that all forms of real estate lending are unproductive – for example mortgage finance that supports the building of new homes is likely to contribute positively to economic growth. However the majority of mortgage lending in advanced economies enables households to buy existing property.

iv Although formally privately owned, the *Credit Mobilier* had close working relations with the state and was the only private bank to invest heavily in state-subsidized projects.

v In 2009 the KLC merged with the Korean National Housing Corporation to the Korean Land and Housing Corporation.