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**Platform Lending and the Politics of Financial Infrastructures**

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## Platform Lending and the Politics of Financial Infrastructures

Online platform lending is typically understood as a challenge to incumbent banking institutions. Since its inception platform lending has been closely associated with particular financial and digital technological innovations that are thought to be changing how people engage in lending and borrowing around the world. In this article, I emphasise the deeply *political* aspect of these innovations. I claim that the platform lending model is built on the ostensible ‘infrastructural quality’ of credit providers across a number of national contexts. This helps explain why platform lending has emerged in its current form and why the firms involved tend to have a certain attachment to and association with the perceived merits of financial inclusion policy initiatives. The article further seeks to show that this infrastructural quality is politically contestable. When the politics of *claims to* infrastructure are taken seriously it is possible to demonstrate how platform lending, in spite of the ‘alternative’ and ‘democratising’ discourses that surround the sector, is in fact built upon a particular set of political state and business-led agendas that essentially further entrench widespread dependence on debt.

Financial infrastructures, platform lending, financial inclusion, platform capitalism, alternative finance.

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## Introduction

The globalisation of ‘alternative finance’ has increased rapidly in recent years. Often aimed at serving a common financial inclusion agenda around the world, platform lending constitutes a sizable part of this process through the promise of harnessing the supposed gains of disintermediating ‘mainstream finance’. In this article, the political settlement that deems credit provision part of the necessary infrastructure of contemporary societies – the primary means through which platform lending is able to rapidly expand– is problematised through an analysis of the flawed conceptions of alterity, democracy and disintermediation on which the industry is built. The politics of claims to infrastructure are foregrounded, allowing for a discussion of the complex and often obscured set of power relations, practices, and socio-technical systems that constitute platform lending. Though in infancy and involving an uncertain set of social relations, platform lending could be suggestive of a tendency that fuels credit bubbles and increases reliance on socially harmful forms of risk assessment, while broadening and deepening a problematic dependence on debt-fuelled consumption-based growth and development models.

Over the last decade, lending and borrowing through specialist online platforms, particularly those based in the US, the UK and China, has grown to the extent that it is now changing the character of consumer and business lending. Loan origination volumes attract the attention of ‘traditional’ lenders, such as major banks and credit card companies (FCA 2016: 35). Wall Street and City of London firms have taken direct stakes in online lending firms and set up platforms in-house to compete with newer ‘fintech’ firms. The rationale for Goldman Sachs establishing their platform ‘Marcus’ was given by CEO Lloyd Blankfein: ‘the world kind of favors lending over a lot of other activities that we do’ (CNBC

2017). It was used to lend out over US\$1 billion in consumer loans within the first eight months of operation.

Online alternative finance platforms have expanded rapidly based on the ostensible benefits presented by emergent forms of digital and mobile technologies. Between 2011-16, £10.6 billion market transaction volume was intermediated by online alternative finance platforms in the UK (CCAF 2017a: 12). Between 2014-2016 the corresponding figure for the US was US\$75.6 billion, while China between 2013-2016 continued to be the world's largest alternative finance market with a total volume of US\$242.3 billion (CCAF 2017b: 26; 2017c: 24). Total market volumes are much lower across the Middle East and Africa, US\$358.87 million in 2016 (with Nigeria, South Africa and Kenya constituting the largest markets), but the outlook for these regions is typically one of optimism about potential growth (CCAF 2018a: 8). For instance, the Cambridge Centre for Alternative Finance (2018a: 31) depicts a widely-held outlook:

Disrupters in this space are using artificial intelligence, big data, and other revolutionary capabilities to spur financial inclusion and improve access to finance for those who will otherwise be left behind ... The increasing connectivity, mobile penetration and growing economies of the Middle East and Africa hold vast opportunities for the development of alternative financial instruments, and the time for dynamic growth has arrived.

Industry insiders, regulators and sympathetic commentators tend to stress the novelty of the uses to which digital data sources can be put, especially in terms of improving access to financial services (Lyman 2014; WEF 2017: 108). Emerging digital data sources parallel

the rapid rise in industry interest in Big Data analytics, particularly as they can be applied in financial practices (Campbell-Verduyn, Goguen and Porter 2017). Though their integration into broader financial practices remains piecemeal at present, such digital ‘innovations’ can also be understood in terms of a deepening of the financialisation of everyday life through mobile and online activity, as an ‘integration of capital not only with individuals’ every desire but also with their everyday social lives’ (Tiessen: 2015: 878).

The focus of this article is on online platform lending specifically, which makes up the largest proportion of alternative finance activities (CCAF 2017a: 13; 2017b: 29; 2017c: 28). Both industry and regulators regularly suggest that online platform lending improves the efficiency of financial intermediation, which is usually though not always conceived as one of the core functions of banks (Oxera 2016: 7). The Governor of the Bank of England Mark Carney (2018: 5) has discussed this within the context of how the UK economy ‘is reorganising into a series of distributed peer-to-peer connections across powerful networks’. The Bank is attempting create ‘the new hard and soft infrastructure that the new finance will require’ in a world in which ‘Data is the new oil’ (Carney 2018: 5).

Both financial regulators and more critical studies in IPE and beyond have examined the growth of digital financial technologies to bring about ‘financial inclusion’ (Aitken 2015a; Gabor and Brooks 2017; Mader 2016; Roy 2012). As a core organising assemblage, financial inclusion allows both state-led programmes and the business models of private firms to be organised around furthering specific market-oriented goals, such as access to credit and financial literacy education (Clarke 2015). Indeed, the Bank for International Settlements and Financial Stability Board (BIS/FSB 2017: 30) state that a ‘key policy implication of FinTech credit [platform lending] is its potential to foster financial inclusion’. For advocates, financial inclusion is a means through which to access ‘modern’

economic citizenship by smoothing consumption cycles. For critics, it is better understood as a set of practices that create hierarchical relations based on debt, justified through the supposed need to expand marketisation and individualism (Soederberg 2014).

I argue that while online lending platforms design their operations in opposition to established banks, they do so through means of instituting business models that are premised on capturing a certain infrastructural quality. This means that even though the language of ‘disruption’ and financial ‘democratisation’ surrounds the industry, the situation is actually one of firms reproducing some of the problems associated with conventional finance. Such problems include fuelling credit bubbles through an in-built dependence on credit growth, socially harmful forms of risk assessment that make individuals objects of intervention, and the capacity to broaden and deepen a dependence on debt in national growth models. These tendencies can be better understood if greater attention is brought to the political nature of what tends to be presented as a merely ‘technical’ settlement that supposes that credit provision is part of a necessary infrastructure. The growing attachment to financial inclusion initiatives around the world is, at least in part, responsible for cementing the strength of this political settlement.

The foundational starting point for this article is the contention that financial inclusion policies and, crucially, how they are increasingly being underpinned by new financial technologies, deserve continued critical attention for at least three reasons. First, the ways in which private firms are involved in bringing ever-greater populations at and beyond the ‘fringes’ of finance into its formal realms are crucial to understanding the accumulation dynamics of contemporary financialised capitalism. Specifically, the approximately 50% of adults worldwide who are ‘unbanked’ and have no relationship to formalised finance are increasingly targeted as objects of knowledge and intervention

(Aitken 2015a: 5). Second, and relatedly, there are important consequences of such trends in the making of indebted subjects, not least in the context of broader recognition of the centrality of the creditor-debtor relation to contemporary capitalism (Lazarrato 2012). Third, conversations continue about the limits of neoliberalism and indeed the limits of specific neoliberal policy agendas, such as financial inclusion, that are often not successful even on their own terms (see Bernards, this issue).

In this article, I suggest that the rise of platform lending serves to demonstrate how financial inclusion as a set of practices promoted by a broad coalition of policy makers and businesses at the national and international level is part of a political consensus – sometimes referred agreement over an accepted ‘growth model’ (Gamble 2009) – in which certain financial services, in particular providers of credit, are deemed to be part of the basic ‘infrastructures’ of contemporary societies across the Global North and Global South. In other words, the design and growth of platform lending is built on a state-endorsed view that lending and borrowing is, and should be, at the core of contemporary capitalism and that providers of credit collectively have a basic infrastructural quality similar to providers of transport, electricity, or water supply systems. When providers of credit are enabled to constitute a form of ‘infrastructure’ in this way, this allows for particular groups and businesses, in this case the platform lending industry, to profit at the expense of people who become increasingly indebted as a result of the discourses and practices surrounding financial inclusion policies. This echoes Susan Strange’s (1990: 264) argument about how the application of certain technologies is facilitated by specific regulatory projects. Without doubt, the financial services industry in general benefits from state promotion of financial inclusion, yet as I will argue the platform lending industry is uniquely positioned to benefit



from this agenda because of the close association between emerging digital financial technologies and new forms of credit scoring ‘risky’ borrowers.

The goals, merits and outcomes of financial inclusion agendas are politically significant, as a number of important contributions to the critical study of finance demonstrate (Gabor and Brooks 2017; Soederberg 2014). Yet the business models of platforms are dependent upon the ability to act as if credit provision has an infrastructural quality, endorsed and supported by a number of major states and private firms promoting financial inclusion. In the broader context of debt-based consumption-driven growth and development models in which microcredit, payday lending and credit card debt play a central role in supporting economic activity, it might be very difficult for ordinary people to do much else than depend on debt to meet social provisioning needs (Roberts 2013). Potentially this means that borrowers, in a digital lending context, have every reason to willingly submit to the demands and techniques of digital credit assessment. Such submission is not without political significance, in particular when it comes to surrendering privacy, as well as autonomy over one’s position as a financial subject.

To make this argument, the article proceeds as follows. First, the emergence of platform lending is discussed in the context of an approach that mobilises an infrastructural lens inspired by literature from Science and Technology Studies (STS) and the related Social Studies of Finance. In particular, the suitability of an emphasis on infrastructure is outlined along with the socio-technical formation of the platform and its positioning within finance. Second, the formation and positioning of platform lending as a specific set of practices is examined in relation to wider financial inclusion goals. The core issue explored here is how the intermediation function of platform lending is linked to notions of lending and borrowing as foundational to contemporary modes of living. Finally, a discussion of the

platform lending industry and its practices is used to demonstrate how the entanglement of platform lending and financial inclusion, first, produces particular and potentially harmful developments through credit-scoring technologies and, second and relatedly, facilitates the intensification of the financialisation of everyday life and social provisioning.

The core empirical material on which this article is based consists of participant observation at over ten financial technology industry and regulatory conferences and workshops that took place primarily in London and San Francisco between 2014-2017, as well as anonymous off-the-record interviews with practitioners working at platform lending firms and associated US and UK regulatory bodies, supported by desk-based research. This approach allowed for the most direct engagement with the relational position of platform lending as a set of actors, technical objects and socio-economic practices. It also allowed for critical engagement with the materiality, spatiality and potential power of platform lending, which are key themes for studying financial infrastructures (see Bernards and Campbell-Verduyn, this issue). The wider implication of the arguments made is that there is a complex and often obscured set of power relations, practices, and socio-technical systems involved in platform lending, which shows how certain configurations of state and non-state actors position access to credit as a central part of a necessary critical infrastructure, as well as how such notions of infrastructure are politically contestable, especially in the context of furthering incorporation into formal financial practices.

## **Platform lending as infrastructure**

First emerging in the mid-2000s as a form of ‘social finance’, online lending platforms are increasingly significant players in finance (Aitken 2015a; Rogers and Clarke 2016). As a working group of the BIS and FSB (2017: 1) advises, official data on platform lending, what it calls ‘FinTech credit’, is limited primarily because quantitative analyses of alternative finance in general tend to be based on disclosures from platforms themselves and non-official sector surveys. As a still emerging form of finance, volumes as a proportion of total global financial activity are like to be very small. Nevertheless, platform lending activity has grown rapidly in recent years from a very low base. The BIS/FSB (2017: 6) working group report that between 2013-15 the volume of new credit expanded by multiples of four or more in the largest markets such as China, the US and the UK, and at a similar rate in smaller markets from an even lower level of activity. Platforms have different areas of focus but the majority of lending tends to be either in the form of unsecured consumer credit, which accounted for 61% of the US alternative finance market in 2016, used for such things as debt consolidation (often student debt), emergency expenditures and consumption, or SME funding and small business credit, which is particularly notable as the largest market segment in the UK reaching £1.23 billion in 2016 (CCAF 2017b: 56; CCAF 2017a: 10). Real estate lending secured on property is also a rapidly growing area of activity, reaching £1.15 billion in the UK in 2016 (CCAF 2017a: 12). Firms like Prosper and Lending Club in the US, Lufax and CreditEase in China, Zopa and Funding Circle in the UK, and Lendbox and i-Lend in India, are all becoming recognised names in consumer and small business lending and are subject to significant attention in the business press. The series of bank failures and scandals that have taken place since 2007 have fostered

renewed interest in innovative and ‘alternative’ forms of lending and borrowing (Clarke and Tooker 2018). Platforms have attempted to use the apparent unpopularity of major banks in light of successive crises to capture some of their market share.

The platform lending model can be characterised as follows. At a basic level, platforms create an online facility that allows investors (lenders) to find and lend funds to borrowers through agreements (that is, loan contracts) arranged by the platform (Oxera 2016: 5). Borrowers are individuals in P2P consumer lending and firms in P2P business lending. The matching function performed by the platforms can take two forms. The original form, now less common, provided a novel means through which the interest rates for loans could be set through interaction between lenders and borrowers. For instance, the original Zopa model used a reverse-auction mechanism that allowed borrowers to post interest rates for the funds they wanted to borrow. In turn, investors would bid to fund posted loans at offered interest rates based on individual assessments of borrower profiles. By contrast the more dominant form of matching, which became the industry standard across P2P and marketplace lending particularly in the US and UK, is based on a model that relies on the platform setting the interest rate for investors and borrowers. In this model the platform is also responsible for allocating investments to different loans so that an investor’s funds are auto-allocated to a portfolio of loans (Oxera 2016: 5). As such, the linking together of lender and borrower funds is not strictly speaking a ‘direct’ form. That is, the lender does not have direct control over where their funds are invested and does not have direct interaction with the borrower as some platforms originally allowed. The evolution of the P2P lending model was signalled by industry players who rebranded their operations as ‘marketplace lending’.

Across the different models, platforms undertake a series of operational functions to facilitate lending and borrowing. Some functions are similar to those undertaken by banks and other mainstream lenders. These include such tasks as customer verification, payment processing, loan performance reporting, debt collection and legal compliance. Other functions are more distinct to platform lending (Oxera 2016: 6). These include: (1) credit risk assessment based on the latest digital data sources (which are used by other lenders but have a particular relationship with platforms); (2) 'buffer' funds designed to cover investor losses (but which are *not* a form of deposit protection); (3) the creation of secondary markets (allowing borrowers to exit loan investments); and (4) offering special services to borrowers (such as helping them put forward loan propositions). It is difficult to make generalised claims about the platform lending industry because of the diversity of firms involved, but this distinction between more conventional and novel operations in the platform lending industry provides useful starting points of comparison with more traditional lenders.

For industry insiders, the key point of differentiation between platform and bank lending is framed around the issue of disintermediation. The enablement of lending from investor funds directly to borrowers in need of funds, which is what is meant by the original label 'peer-to-peer', is said to be part of the bypassing of banks. While a whole range of business commentators, management consultants and economists play a role in producing this image, some of the most dominant framings of the sector are fashioned by the firms that operate platforms themselves. Undoubtedly this is a form of marketing and an attempt at product differentiation, yet the platform lending concept also has been seized on by other firms in order to launch similar platforms, including major global banks such as Goldman Sachs mentioned above. The platform Zopa (2017) claims 'to do things

differently ... [by] directly match[ing] people looking for a low rate loan with investors looking for a higher rate of return ... so everyone is better off'. Such claims are at the core of the public face of platform lending. At an international online lending industry conference, a CEO of a major platform insisted that their model allowed for a certain kind of equality between fund providers and borrowers (anonymous interview 2016). They framed this in terms of both sides of the creditor-debtor relation benefitting from the supposed efficiency gains of directly matching investor funds with borrower need.

The apparent simplicity of platform lending echoes more longstanding notions of informal lending and community finance. In a study of early forms of online P2P lending, Michael Hulme and Collette Wright (2006: 7) suggested that 'notions of the individual within community, transparency and broader ethicality are fundamental to Social Lending schemes'. They drew parallels between P2P lending as a form of social lending and the activities of the friendly societies dating back in Britain to the 1630s (Hulme and Wright 2006: 13). What is notable about such comparisons, and those that could also be considered between P2P lending and other forms of credit associations, savings cooperatives, and so on, is that it is the *digital platform* aspect of the lending process that is primarily identified as representing difference here. In other words, the type of interaction between lenders and borrowers that platform lending facilitates has a much longer history than the activity of P2P or platform lending, per se. The core claim made by enthusiasts is that the particular character of the platform technologies enables more 'horizontal' forms of lending as compared to the 'vertical' relations of powerful financial institutions and their consumers (Coeckelbergh 2016: 169). To be clear, this is the claim of industry insiders and sympathetic commentators prevalent at major international conferences and public events. Yet it is one

that should be problematised in the context of discussions of the place of platform lending within debates about emergent financial infrastructures.

Taking up the invitation offered by the editors of this special issue (see Bernards and Campbell-Verduyn, this issue) the lending platform be considered in light of debates about how socio-technical systems become imbued with a certain infrastructural character, as well as who and what drives such a process. Crucially, approaching infrastructures in this way as a heuristic device, allows for an analysis of how the digital platform interacts and combines with other old and new socio-technical systems. Recent work across a number of disciplines has made important contributions to understanding the online platform concept. ‘Platform capitalism’ more broadly across a range of economic circuits has recently been investigated (Langley and Leyshon 2016; Srnicek 2016), with implications for conceptualising the platform in financial practices. In this article, I focus specifically on platforms as socio-technical systems in the context of debates about emerging financial infrastructures. While I do not attempt to provide a comprehensive conceptual account of what is meant by infrastructures here, there are at least three reasons why an infrastructural lens is a useful approach to adopt.

First, an emphasis on infrastructure – and claims to infrastructural status – allows for an exacting evaluation of the merits of arguments about the novelty of platform lending. Through the lens of an analysis of financial infrastructures, it is possible to assess what, if anything, the socio-technical formation of the platform changes about the politics of global finance. As ‘the infrastructure of the infrastructure’, the power of finance stems in part from its pivotal position in facilitating other circuits of economic activity (Cerny 1994). Such a conceptualisation avoids a narrow methodologically individualist perspective that treats finance as a set of actors that can be formally modelled and instead focuses

attention on infrastructures of power based on observation of the crucial role finance plays in the contemporary world economy (Palan 2009: 391). While in a sense metaphorical in its mode of analysis, this interpretation of the role of financial intermediation in particular *as* infrastructural is useful for understanding the potential power of platform lending. In other words, there is a certain *centrality* to finance in contemporary capitalism conceived as infrastructure because it is vitally important in shaping how core political economic functions are undertaken. It is precisely the question of who and what gets to play the enabling role of facilitating other economic activity that is central to the design and functioning of the business models of platforms as they attempt to disintermediate banks. To study infrastructures in this way is thus to ask *what they are made of* and *what kinds of social relations they 'bundle together'* (Bernards and Campbell-Verduyn, this issue).

Second, paying attention to the potential infrastructural quality of platform lending allows for the complex relational position of the platform, as a set of actors, technical objects and socio-economic practices facilitating the core function of extending credit, to be better understood. Conceived as infrastructure they are social and 'technological projects' performing organisational and governmental functions, while at the same time they are containers of 'desire and fantasy' that can be 'wholly autonomous from their technical function' (Larkin 2013: 328-329). On the one hand, the platform is a central enabler of economic activity with all the positional power this grants the operating firm. For instance, the platform performs the social conventions and practices associated with credit assessment and valuation, as well as providing the organisational technical devices for connecting users. In simple terms, it generates fee revenue from its position in financial circuits. On the other hand, platform lending as a practice is supposed to disintermediate banks, to allow the direct matching of surplus funds to borrower need. In this sense, the



platform does not so much perform an economic activity but allows others to do so, the *facilitation* characteristic of infrastructures, to ‘perfect’ market exchange by providing a marketplace for interaction. They are, at least in principle, part of the silent background system, the *obscurity* characteristic of infrastructures (Bernards and Campbell-Verduyn, this issue).

Finally, building on the first issue of their socio-technical formation and the second their relational position, a focus on infrastructures allows for platforms to be better understood with regards to how other old and new financial infrastructures might facilitate and hinder that formation and positioning. While infrastructures are typically conceived as ‘built systems’, it is perhaps more useful to think about the characteristics of infrastructures in more expansive terms according to their materiality, spatiality and power (see Bernards and Campbell-Verduyn, this issue). The systems of standardisation, valuation and convention that surround financial practices could hold just as much infrastructural quality as the electricity grids, computer networks and technical systems that make digitally-mediated finance possible in a ‘physical’ sense. In terms of power, the ‘categorizing moment’ of defining what counts as infrastructure represents particular ‘epistemological and political commitments’ (Larkin 2013: 330). I want to stress that it is the political commitment made by state, non-state actors and private firms concerning the centrality of access to credit in contemporary society that grants platforms a certain infrastructural quality. This includes in large part financial inclusion initiatives that implicitly or explicitly seek to promote access to credit.

The STS-inspired approach to infrastructures invites an analysis of how new and old socio-technical systems combine to constitute basic enabling functions that tend to be taken for granted and assumed (Bowker and Star 1994; Star 1999; Edwards 2003). This

lens allows for a move away from the narrow study of actors in finance, such as private firms or state institutions, who can straightforwardly be modelled as rational actors whose decisions produce outcomes that are directly observable with the correct empirical lens. Rather, as in this article, the STS approach to infrastructures can be mobilised to consider the complex ways in which financial activity is assembled through people, practices and non-human objects, including but not limited to new financial technologies. This speaks to the important starting point that markets are *made* through specific market-making practices and technologies and do not naturally or spontaneously occur. This latter argument is well-established in IPE, particularly in work inspired by the Social Studies of Finance and related fields that analyses how finance is performative (MacKenzie 2006; Clarke 2012; Lockwood 2015; Braun 2016). The productive conversation with STS-inspired approaches here can help scholars avoid collapsing back into conceptual entanglements associated with the material-ideational dualism, and take seriously the complex ways in which new financial infrastructures come to be assembled.

The empirical pay-off of conceiving platforms as infrastructures is two-fold. First, the lens applied here shows how platform lending provides an enabling function conventionally associated with longer-standing banking systems. It is a combination of different old and new socio-technical systems, rather than a revolutionary ‘break’ with existing financial forms as much of the hubristic discourse surrounding the industry would suggest. Consequently, claims to the ‘disruptive’ potential of platform lending as a new technology-enabled set of practices are problematised and given a more skeptical interpretation. This frames the issue less in terms of ‘novelty’ and ‘uniqueness’ and more in terms of contextualising apparent innovation within previous ‘finnovations’ and the ‘installed base’ in which they tend to integrate rather than completely replace. Second, the

financial inclusion policies that are entangled with the design and operation of platform lending are conceived less in terms of actors ‘doing things’ and more in terms of a set of discourses, practices *and socio-technical systems* that can, but do not necessarily, serve to reproduce contemporary financialised capitalism. This draws attention to what tend to be the backgrounded or obscured politics of claims to infrastructure, in the sense that the socio-technical systems that are deemed to constitute *the infrastructure* are not so inherently due to their nature, but are the result of political argument over what is categorised as ‘basic’ to society (Larkin 2013).

In sum, the infrastructure lens invites analysis of platform lending in terms of: (1) its socio-technical formation, in particular with regards to the potential *centrality* of financial practices; (2) its relational position as a set of actors, technical objects and socio-economic practices with regards to the potential *facilitation* and *obscurity* characteristics of infrastructures; and (3) its integration within other socio-technical systems with regards to the apparent *durability* of existing financial infrastructures. The potential of platform lending to embody these specific features of infrastructure enable financial inclusion initiatives conceived as a key function to be undertaken. In the next section I explore how the formation and positioning of platform lending is shaped by how it is applied to financial inclusion.

### **The formation and positioning of platform lending**

The socio-technical formation of the platform in online lending is built on the proposition that the process of financial intermediation can be made more efficient through the

application of new digital and mobile internet technologies. Such a claim fits quite neatly with (neoliberal) financial inclusion discourses, broadly understood, as they emphasise how new ‘disruptive’ financial technology firms can improve the terms of access to financial services in order to ‘empower’ consumers and build ‘economic resilience’ (e.g. Carney 2017; Davis and Brauholtz-Speight 2016). This is typically associated with the notion that established banks are, and ought to be, subject to ‘disruption’ so that consumers can receive better treatment as both lenders and borrowers. For instance, an IMF staff report suggests that mobile access and the internet mark a ‘massive decentralization [that] is opening the door to direct person-to-person transactions’ and have ‘profound implications ... for financial inclusion by permitting “unbanked” consumers in low income countries to access financial services for the first time’ (IMF 2017: 11).

Financial inclusion policy discussions tend to stress the desirability of access to credit across economies in the Global North, especially in the US and the UK, as well as in development contexts in the image of Muhammad Yunus’s (2006) claim that there exists a fundamental human right to credit. While financial inclusion policy initiatives have been circulating since at least the mid-2000s, there has been a more recent qualitative shift in the apparent reach of such policies in light of the emergence of new financial technologies. This can be directly linked to the pronounced optimism surrounding alternative finance growth in terms of total volumes, albeit from a very low base, in places such as the Middle East and Africa (CCAF 2018a: 8). A key development in this area, as Daniela Gabor and Sally Brooks (2017: 425) point out, is the way in which ‘the rapid diffusion of mobile technologies in developing countries provides the technological infrastructure through which financial providers ... can “reach the unbanked” and shape financial subjectivities’. Platforms operating in the Global North also operate with business models built on

broadening the pool of potential borrowers as customers for online lending products. Indeed, major international conferences on platform lending, such as the LendIt Fintech series that holds annual conferences across the US, Europe and China, have research and presentation streams exclusively focused on the issue of how new financial technologies can address the ostensible problem of financial exclusion on a global scale.

The line of reasoning that drives such a narrative, prevalent in business and much academic commentary on alternative finance, is essentially that new firms enter a market which drives down costs and helps improve market-based competition. In a general and popular sense, ‘digital disruption’ echoes a very familiar line of argument about Schumpeterian creative destruction. The banks were in crisis, the reasoning goes, and out of that crisis a new set of credit providers are emerging. The socio-technical formation of the platform simply adds a techno-utopian edge to the claim that competitive financial markets are desirable and achievable. The utopianism here is that markets can be perfected in terms of providing more complete information, associated with the ostensible advances to be made in pricing credit risk discussed below, and in terms of automating human decision-making in ways that overcome existing inefficiencies. Moreover, while banks have been criticised for their role in expanding the money supply through the fractional reserve model, in turn fuelling credit bubbles, platform lending is celebrated for more efficiently distributing as opposed to expanding the money supply (Steve Keen cited in Tuckwell 2017).

However, the strategic claim to disintermediation is one that has been put forward numerous times over several recent decades. As Shaun French and Andrew Leyshon (2004: 265) point out, the concept of disintermediation was used to describe processes of financial service restructuring in the 1980s and featured prominently in discussions of the ‘new

economy' in the 1990s. The way in which platform lending is produced in conceptual terms is significant here, akin to how the earlier idea of 'e-commerce' was produced by a network of particular actors harnessing novel technologies for new market practices (Leyshon *et al.* 2005: 440). Narratives that were prevalent in the late 1990s questioned the future of banks based on the premise that the existence of intermediaries is a sign that markets are inefficient. Given that new technologies of the time could help 'complete' markets, brokerage and maturity transformation were expected to be rendered redundant (French and Leyshon 2004: 281). A very similar narrative surrounds the platform lending industry (see, for instance, PWC 2015).

Several key developments in platform lending deserve recognition at this stage. First, it is important to acknowledge the diversity of platform lending models. Platforms operating across retail, small business and property lending have distinctly different lending practices and target different borrowers. Their socio-technical formation and precise techniques of credit assessment (discussed below) vary based on these features, as well as their geographical location. Second, as mentioned above, the 'pure' P2P lending model centred on investors directly allocating their funds by selecting individual borrowers and firms has been replaced. As platforms are now mostly responsible for setting interest rates, P2P loans have been increasingly produced as a new investor asset class (Aitken 2015a: 212). Third, the means that platforms use to raise investor funds continue to evolve quite rapidly (Aitken 2015b: 846). Institutional funds have replaced 'ordinary' individual investors on a number of platforms and the growth of secondary markets has been substantial, which is celebrated for providing liquidity but which also alters the nature of the lending practices. For example, in the US the share of funding sourced from institutional investors has overtaken that of private individuals and in 2016 securitisation

issuance by platform lenders reached US\$9 billion, suggestive of the fact that platform lending tends to operate much more like other kinds of conventional lending. Collectively these developments change the socio-technical formation of the platform but, in general terms, the disintermediation claim remains largely the same. The point still holds that firms behind platform lending seek to harness the latest wave of supposed disintermediation and their infrastructural qualities, or lack thereof, can be understood within long-standing debates about this issue.

If financial intermediation is conventionally taken to mean the practice of linking investors and borrowers to facilitate a 'going-between' surplus and deficit economic sectors and agents, then disintermediation is the 'side-stepping' of these established intermediaries themselves (French and Leyshon 2004: 267-268). Platform lending appears to move lending circuits off balance sheets and essentially produces platforms as a new type of broker. Echoing French and Leyshon's analysis of the supposed disintermediation associated with the new economy, what is more apparent is a process of what they call 'reintermediation'. As they put it, 'new entrants ... become intermediaries within value chains, albeit more efficient and/or competitive intermediaries than the businesses they displaced' (French and Leyshon 2004: 277). Paralleling the mantra around the new economy, platforms appear to be not so much disrupting established financial intermediaries through disintermediation as they are reconstituting forms of brokerage reintermediation. This is actually quite a simple process of reintermediation, 'displacing and replacing existing intermediaries within value chains' (French and Leyshon 2004: 280). Particularly illustrative of this dynamic is the recent expansion of a balance sheet model of platform lending (it represented 78% of US platform debt-based business volume in 2016),

which marks a shift in the underlying model that further cements the platform's central role in the loan origination process (CCAF 2017b: 41-42).

Consequently the relationship between platforms and established financial institutions is a complex one in light of the hubristic yet misleading discourses surrounding platform lending. On the one hand, platforms attempt to position and differentiate themselves from banks by claiming to establish new socio-technical formations that replace conventional intermediation. This is certainly the line that industry enthusiasts take who dominate discussions of how financial intermediation is changing through the application of digital technologies. On the other hand, their actual operation is more like a process of reintermediation, not so much replacing banks and other asset managers but working in parallel to them. In this latter case, it is perhaps not surprising that several established banks are involved in partnerships with platforms, as well as setting up platforms themselves. While its emergence is oriented around a discourse of disrupting banks, this might not be the most useful way to conceptualise the actual practices involved in platform lending. The STS-inspired approach to infrastructures allows for a more sceptical analysis of such claims to disruption and invites instead consideration of how new financial technologies and the practices they enable are a combination of old and new socio-technical systems.

Going beyond a narrative about digital disruption reveals how platform lending is becoming instituted as a set of financial practices that replicate how many financial intermediaries already attempt to capture a certain powerful infrastructural quality. As Adam Harmes (1999: 100) suggests, critical scholars of finance should not blindly follow the neoclassical view that essentially implies that disintermediation erodes the 'financial hegemony' of banks because what is equally as likely is a reconfiguration of investment decision-making towards other forms of centralisation. Indeed financial reintermediation



has been called ‘a highly charged political process that favours some (richer) actors over others’ (French and Leyshon 2004: 277). This is seemingly also applicable to the case of platform lending.

It is here where it is possible to identify the crucial intersection between the emergence of apparently novel financial technologies and financial inclusion initiatives. As has been well-documented, financial inclusion promises a world of ‘empowerment’, ‘democratisation’ and ‘financial security’ (Bernards 2016; Marron 2013; Soederberg 2014). Such discourses work with and alongside interest in platform lending in the ways it is positioned as a new means through which to democratise credit access and empower financial consumers (e.g. Carney 2017). National financial regulators and international financial institutions have a large role to play in furthering this positioning (e.g. BIS/FSB 2017). A notable example of this trend is the use of ‘regulatory sandboxes’ with the explicit intention of ‘live testing’ financial innovations by private firms that might improve financial inclusion (CCAF 2018b; IMF 2017: 17; Jenik and Lauer 2017). Housed at the World Bank, the Consultative Group to Assist the Poor (CGAP) documents and promotes their use because, according to them, ‘[i]n the financial inclusion arena, a regulatory sandbox can open space for positive change through innovation’ (Jenik and Lauer 2017: 10). Specifically, the CGAP lists countries as diverse as Bahrain, India, Malaysia and Sierra Leone as having set up such regulatory schemes specifically on the issue of fostering financial inclusion through financial innovation (Jenik and Lauer 2017: 10). The very use of regulatory sandboxes in this way suggests there is a degree of state-firm cooperation over the goals of financial inclusion policies and the sorts of strategies that should be pursued to try to achieve them.

The crucial issue is that this specific set of relations gives the platforms significant state-endorsed power in the financial circuits that they enable. It is of course no secret that regulators see part of their role as legitimating financial innovation. For instance, the IMF (2017: 15) recognises that ‘regulation plays a central role in establishing trust’ including but not limited to the signalling of the ‘resilience of counterparties, markets, and infrastructure’. Likewise, the BIS/FSB (2017: 35) see the rationale of regulation to be to ‘support confidence, growth and innovation in FinTech credit over the longer term’. However, while done in the name of competition and ‘free[ing] up the forces that drive innovation in the interests of consumers’ (Woolard cited in CCAF 2018b: 9), the firms involved are being granted a large degree of power. This matters because rather than working to provide financial democratisation and consumer empowerment, which are foundational organising principles in financial inclusion policy initiatives attempting to allow equal access for all to financial services, platform lending appears to be tending more towards centralisation and monopoly.

This issue relates to the broader tension between the apparent ‘invisibility’ of the platform and the economic interactions that it facilitates as infrastructure (Langley and Leyshon 2016). Critical readings of platform and mobile app organisation point to how they follow a logic of centralisation of ownership (Rosamond 2016: 114). Three core observations can be made about the centralising tendencies in platform lending. First, the ‘scaling-up’ of operations is drastically changing those who are able to participate in the networks enabled. As the FCA (2016: 35) reports, the influx of institutional money – including from asset managers, banks, hedge funds, insurance companies and pension funds – is squeezing out the individual lenders who pool their ‘modest contributions’ in the original P2P lending model. In this sense, the socio-technical formation of the platform

reproduces the social relations found in other financial market activities and removes the supposed levelling effect of harnessing online networks. Second, despite relatively low barriers to entry, there is evidence to suggest that the platform lending sector itself is highly concentrated. In the countries where it is most established, the UK and the US, the market share of the largest platforms is 68% and 80% respectively (BIS/FSB 2017: 9). Third, the rise of the securitisation of platform lending loans increases the ‘interconnectedness’ between platforms, banks and capital markets (BIS/FSB 2017: 32). Platforms are involved in standardising their credit obligations in such a way as to make them available for active trading. Consequently, irrespective of the original specific design, purpose or unique technology that an individual platform might use, the securitisation process turns platform lending into a more traditional asset class.

However, notably, platforms still appear to succeed in producing a polished veneer that detracts from these underpinning transactions at play. Platform lending firms use dashboard interfaces to associate themselves with a Silicon Valley aesthetic and the user-consumer experience is invested in heavily in order to create forms of platform brand attachment. This is part of how in ‘app-based’ banking there is ‘the potential to allow the social and even affective or emotional relationship between banks and their creditors and debtors to become deeper, more profound, more granular, more personal’ (Tiessen: 2015: 875). This can be understood as a crucial aspect of infrastructure’s ‘political address’; that is, ‘the way technologies come to represent the possibility of being modern, of having a future, or the foreclosing of that possibility and a resulting experience of abjection’ (Larkin 2013: 333).

In sum, the rise of the platform in the digital economy is typically understood in policy and regulatory circles to be to benefit of the consumer. This is celebrated because it

is deemed to be advancing financial inclusion. Platforms appear to provide a socio-technical formation at the heart of a disintermediation drive and position themselves against incumbents as ‘disruptors’. However, crucially, while the business models associated with platform lending promise a marketised process of disruption, what they actually deliver is a form of reintermediation that has potentially centralising tendencies. In this sense, platforms depend on capturing infrastructural qualities for their continuing success, even if those qualities are largely derived from state-sanctioned financial inclusion initiatives as opposed to anything else. In the final section of this article I turn to the most significant consequences of their formation and positioning as part of the ‘necessary infrastructure’ of credit provision.

### **Platform lending as financial inclusion**

*All data is credit data.* This increasingly common phrase (see Aitken 2017; Rosamond 2016) was uttered – and indeed featured as the animating principle that informed the majority of company presentations, demonstrations and keynote talks – at a major online lending conference in San Francisco in 2016. For the majority of attendees this was a fundamental and enticing idea for their industry and one that was to ensure the rapid expansion and lasting success of their businesses. Operating on the assumption that access to credit is an infrastructural issue, platforms were keen to position themselves as uniquely capable of promoting the financial inclusion goal of improving access to credit using a vast array of credit data. Platforms emphasise their ability to generate new digital data sources for credit-scoring, even for those potential borrowers with little or no conventional entries into

credit-scoring systems. Mirroring the exuberance of many early stage industries associated with technological change, the industry claims to be at the forefront of what can be ‘known’ about credit allocation.

Previous research on credit-scoring identified a ‘quantitative revolution’ in the ways that retail banks were able to visualise their potential customers (Leyshon and Thrift 1999: 440; see also Bernards, this issue). In short, the emphasis shifted from local branch-based knowledge to the construction of risk profiles ‘at-a-distance’ using databases and credit-scoring software. Central to this process was an appeal to the possibility of developing ‘universal measures of social action’, which were in turn dependent on ‘a strong attachment to positivism and a belief in the power of predictive science’ (Leyshon and Thrift 1999: 451). While retail banks developed strong links with credit-scoring consultancies, platforms have developed their own credit-scoring technologies in-house based on the digital data sources they can capture directly from their users. The particular socio-technical formation of the platform means that credit-scoring technologies have been at the heart of their operations since their inception. As primarily online entities, this has been accompanied with innovations in the collection, use and manipulation of ‘new’ digital data. These innovations are associated with the rise and deployment of the possibilities of Big Data and depend on both a broadening and deepening of access to information produced by online and mobile activities, including but not limited to those that would normally be considered ‘economic’ or ‘financial’ (see Langevin, this issue).

The STS-inspired approach to infrastructures guards against interpretations that fetishize the socio-technical formations themselves and helps to situate how the use of new forms of digital data collection relates to previous periods of advances in quantitative credit-scoring. Platform lending perhaps involves an adaptation rather than a revolution in

existing practices, as the platform operates as an additional layer in the calculative process of managing credit. As the BIS/FSB (2017: 4) working group point out, platform lending is making ‘more intensive use of digital innovations’ than incumbent lending institutions. Traditional banks and other lenders are also continually updating their credit-scoring practices, but the extent to which platform lending and emerging digital data sources are intertwined is significant. As Zopa (2017 emphasis added) outlines: ‘We’ve earned our reputation as an innovator by *obsessing about tech [and] data*’. Certainly, discussions at major online lending conferences such as LendIt Fintech are often oriented about the inventive use of digital data generated through Internet activity. The platform lending industry has embraced the move towards ‘real-time’ analysis of customer behaviour in this regard, such as of online spending decisions or current account balance status, so that payment ‘capability’ can be measured ostensibly with ever-more accuracy. Two important implications of these practices are intertwined with financial inclusion initiatives. First, adaptations in techniques of credit-scoring and, second, an intensification of the ‘financialisation of everyday life’ (Langley 2008) based on credit provision as basic infrastructure.

### *Credit-scoring infrastructures*

The BIS/FSB (2017: 26) working group reports that a crucial determinant of the success of platform lending is its ability to provide assessments of credit risk that can deliver acceptable risk-adjusted returns. It also states that proponents of platform lending boast of how ‘an effective use of big data analytics – including certain non-traditional mass data

sources – can improve borrower screening’ (BIS/FSB 2017: 26). Such a claim should be immediately problematised given that some industry insiders also openly admit that the data sources they are working with are not necessarily most appropriately conceived as Big Data, though the loose association helps to build a platform’s brand nonetheless. Meaningful evidence of the success of platform credit-scoring practices are difficult to ascertain, especially given that platform lending has not gone through a full ‘credit cycle’, but one notable indicator is that some established banks such as JPMorgan, BBVA and ING have arrangements whereby they can use proprietary platform lending credit risk models for their own lending (BIS/FSB 2017: 26).

Platform lending is arguably adapting current practices of credit-scoring. Emily Rosamond (2016: 115) usefully points out that: ‘In an era of fintech, quantitatively assessing “character,” institutionalized as risk assessment, takes on new proportions and new algorithmic witnesses’. In this sense, ‘algorithmic governance’ becomes an important concept (Campbell-Verduyn, Goguen and Porter 2017) and a recognition that computer code is ‘simultaneously technical and social, and material and symbolic’ (Berry 2012: 282). The novel use of digital data sources is often replacing FICO scores and credit bureaus. The positioning of the consumer as a ‘virtual entity, defined by a set of information fields’ (Leyshon and Thrift 1999: 440), appears to be emulated and augmented in platform lending practices. Just as the commercial success of retail bank lending operations came to rely on the ability to generate information that could identify ‘good’ borrowing customers, platform lending has come to be oriented around the harnessing of digital data sources for ever-more fine-grained analysis of borrower capability. Such analysis is built on the use of non-standard data for credit decisions, such as analysis of online social networks, digital footprints and mobile smartphone use. The premise is that improved access to data sources

and the mass of information that people willingly give to others through their internet use can help platforms make better credit decisions. The following vignettes help illustrate the use of digital data sources in credit-scoring procedures in platform lending.

A former employee working as a data scientist at a UK platform explained how their role was heavily focused on analysing how potential borrowers interacted with their website. In part, this analysis was put towards the design of marketing strategies that could target borrowers to convince them to use the site to apply for credit. Yet it was also put towards the task of assessing borrower risk through what is described as the incorporation of ‘non-traditional’ data. This was the key technological innovation that the platform saw itself as pursuing as a digital data rich company. Similarly, on a panel at a major US online lending conference dedicated to the theme of innovating business models, the core point of agreement amongst panellists was that while the first phase of platform lending was the proposition that lending could be taken online to make it cheaper through improved efficiencies, the second and crucial growth phase was based on the value proposition that as online firms they are uniquely positioned to exploit the ‘data-based technology’ on which they are built.

In critical terms, these trends can be interpreted in the context of previous attempts to improve credit-scoring methods. The longer-standing narrative surrounding the adoption of such technologies was one of a ‘triumph of the unquestionable efficiency of risk scoring over the relative inefficiency of human “judgmental” decision-making’ (Marron 2007: 113). Notably, these shifts towards ‘technocratic’ and ‘statistical expertise’ were ‘given official sanction by the state through legislation as a means of guaranteeing equality of opportunity to the market according to the individual’s capacity for self-government’ (Marron 2007: 104).



In this context, the US platform Upstart provides a particularly illuminating example of the use of digital data analytics. Started by ‘ex-Googleers’, Upstart claims to be ‘the first lending platform to leverage artificial intelligence and machine learning to price credit and automate the borrowing process’ and has originated more than US\$2 billion in loans (Upstart 2018). At a conference panel on consumer lending in 2016, the Upstart presentation opened with the announcement ‘Welcome to a Post-FICO World’. This claim was built on the idea that consumer credit modelling data and methods ‘haven’t changed in decades’ and could be improved through a ‘disruptive credit model’ based on ‘unique predictive data, better math, and faster learning’. Upstart claims to have ‘assembled a collection of variables that are more predictive than the entire credit bureau file’, which includes listed variables that related to fine-grained details about training and education such as ‘employer, work experience, degrees, schools, GPA, test scores, job offers and cost of living’. The credit model apparently goes beyond the ‘black/white decision logic’ and ‘simple regression’ of traditional methods to include ‘continuous decision logic, cross-validated logistic regression, higher-order variables, random forest, Monte Carlo methods, [and] ensemble learning’. The headline claim about such innovation is that ‘success in our case means reducing the price of credit to 65 million underserved borrowers’. To be clear, this is a claim that should be treated with scepticism. The point is to show the degree of exuberance attached to the ability to master credit risk, which builds on previous hubris surrounding risk management technologies, and how this is framed in terms of being able to apply financial technologies to the goal of furthering access to credit.

However, undoubtedly some of the costs of social provisioning will overflow the calculative practices contained within the risk models used by the platforms. I borrow the term ‘provisioning’, activities intended to meet social needs, from Dave Elder-Vass’ (2016:

32) consideration of the digital economy. The use of differentiated pricing for borrowers does very little to alter or challenge pre-existing social problems and hierarchies, and under such circumstances the policing of defaults is exceptionally important. In this regard, while little is known about how defaults are managed in platform lending, most indications point to similar systems as those found in other forms of consumer credit. Notably, industry events tend not to talk about the process of dealing with defaulting customers, instead focusing on default rates in general terms and any associated techniques that might protect investors from potential losses. Meanwhile platforms seem to do their utmost to cover losses to avoid the negative publicity that comes with higher default rates. What is known is that in the context of promoting financial inclusion, incorporation will remain limited because it is more often than not contradictory and uneven (see Bernards, this issue).

Online digital constructions of credit-scoring have the ability to both empower and disempower certain individuals and groups. The use of non-traditional mass data sources certainly allows for previously excluded populations to become financially included. As Gabor and Brooks (2016: 425) suggest, though, personal data becomes a market in its own right as people use their technology to become financially included. Research with those involved with the platform lending industry specifically suggests that this is the case, especially when it comes to designing business models that encourage people to allow their data to be used for digital credit-scoring. Consumers may willingly allow their personal information to be collected if this helps them accrue creditworthiness, but as with practices in the data broker industry more broadly, ordinary people ‘do not have a lot of choice in what or how much personal information is gathered, its accuracy, or how it is being used and protected’ (Roderick 2014: 731).

### *Credit provision infrastructures*

The prospects for financial inclusion through platform lending take on an additional dimension in the Global South. For instance, credit bureau coverage is often incomplete in many low-income countries and primarily cash-based economies tend to have limited tax records, which present problems in terms of ‘including’ people into the formal financial realm if credit risk cannot be assessed using such information sources. As a result, the data associated with and generated by platform lending allow for platforms to build datasets from scratch. The range of non-traditional digital data that can be used for such a task is vast and is not an area of growth limited to platform lending alone. Accion (2017: 29-33) provides a global mapping of business models that are based on harnessing such data sources, which include digital footprints on sites such as Alibaba, smartphone application scans, call data records, mobile repayment behaviour, social media activity, and real-time business performance and assessment of individual applicant behaviour. The perceived key promise for advancing financial inclusion for organisations such as CGAP is that they provide ‘the possibility of assessing credit risk of people for whom no information or formal records exist, allowing many to establish a formal credit history and to eventually engage more broadly with formal financial service providers’ (Chen and Faz 2015: 1). This outlook was corroborated by a founder and CEO of an Indian platform lending firm who suggested that new borrowers could be served by their firm who would not have access to bank loans because of a lack of formal traditional data about them (anonymous interview 2016).

Moreover, faith in forms of ‘smarter’ credit-scoring technology allows firms to increase their number of borrowing customers while claiming to lower rather than increase default rates. A former investment banker expressed concern that there were *no* limits to the risk levels platform lenders would take on: *you just have to get the risk-based price right* (anonymous interview 2016). The only barrier is seemingly data ‘quality’ and ‘cleanness’. Sympathetic commentators celebrate a shift from ‘negative’ to ‘positive’ borrower selection practices on these terms: using the credit assessment models to find a reason to say ‘yes’ to extending a loan. As a form of risk pricing, such practices go beyond a binary conception of acceptance or rejection, towards a scale on which interest rates and terms are set based on the applicant’s risk attributes (Marron 2007: 122). In such an approach, there are no longer ‘bad’ risks, so lending firms should become more ‘entrepreneurial’ in their ‘downward targeting of consumers’ such that previously excluded consumers can be brought into formal mechanisms of debt ‘on differential terms’ (Marron 2007: 124).

Finally, it is notable that platforms tend to operate on a fee-based model that requires them to capture the network effects of online activity and essentially facilitate more and more loans. In simple terms, they have huge reason to seek to expand their potential pool of borrowers. This is particularly the case given that ‘the demand for P2P loans by institutional money is far outstripping supply’ and despite rapid growth ‘loan volumes are not growing fast enough to keep up with yield-hungry investors’ (FCA 2016: 35). Platform lending has an in-built tendency to encourage borrowing, potentially further fuelling debt growth in a number of already heavily indebted national economic contexts such as in the US where household indebtedness continues to grow. Whether financial inclusion is desirable and achievable or not, what is remarkable is the way in which access to credit conceived as infrastructure allows platforms to attach themselves to particular cultural

trends. In this case, they are able to pursue both an intensification of credit-scoring technologies so that they penetrate an increasing amount of everyday life and an expansion of a potential pool of borrowers needed for their model by drawing on the state-endorsed policy goals of financial inclusion. The politics of emergent financial infrastructures are laid bare when one can begin to unpack their socio-technical formation and relational positioning: they profit greatly from the widespread assumption that credit provision *is* infrastructure.

## **Conclusion**

In this article, I have provided a critical engagement with the technologies, practices and firms involved with the so-called digital disruption of finance, with particular reference to platform lending. I have suggested that: first, an infrastructural lens is a useful approach to adopt when attempting to account for the socio-technical formation of platform lending and its positioning in finance; second, financial inclusion, broadly understood, plays an important role in attempts by platforms to situate themselves as ‘infrastructural’, based on notions of how credit providers are foundational to contemporary modes of living; and, finally, the entanglement of platform lending and financial inclusion produces potentially harmful developments in credit-scoring technologies and facilitates the intensification of the financialisation of everyday life and social provisioning. If traditional financial infrastructures are correctly deemed to be productive of social distance and inequality, then more recent digital technologies have, *in principle*, the ability to decrease that distance and enable more responsible forms of finance (Coeckelbergh 2016: 169). However, the

particular connections between the socio-technical formation and relational positioning of platform lending and other longstanding infrastructures might be at least in part responsible for limiting this potential. Financial inclusion initiatives present certain opportunities and constraints for backers and designers of emerging financial technologies. I submit that financial inclusion has helped skew those technologies towards perfecting problematic and potentially harmful forms of credit-scoring techniques, as well as towards attempts to expand the pool of potential borrowers with little regard for the sustainability of those credit-debt relations.

Furthermore, it is worth reflecting on how IPE studies of platform economies in general and platform lending in particular might evolve, particularly in light of the productive conversations to be had with the STS-inspired studies of financial infrastructures. One area of note, which has been left largely in the background of this article, is the potential *openness* characteristic of infrastructures. That is, as the editors of this special issue outline, infrastructures ‘do not have to be reinvented each time or assembled for each task’ (Star cited in Bernards and Campbell-Verduyn, this issue). They are ‘open’ to be used, with varying capabilities, by a range of different people with diverse political and normative commitments in mind. In this sense, it is important to acknowledge that the socio-technical formation of the platform is not fixed, but open to repurposing and reuse in experimental and sometimes inventive ways (Tooker and Clarke 2018). Further avenues for IPE research thus include for instance efforts to develop more ‘pro-social’ platforms, such as those found within platform cooperative networks. While platforms are likely to be involved in a degree of integration with the ‘installed base’ of existing capitalist socio-technical devices and social relations, there is also always the possibility of reimagining their design outside the narrow financialised outlook promoted by financial inclusion initiatives.

## References

Accion (2017) 'Unlocking the Promise of (Big) Data to Promote Financial Inclusion',

*Accion Insights*. Available online:

[https://owncloud.accion.org/index.php/s/qvdagaTHKM074nN%20?\\_ga=2.103274884.581024812.1530522227-1284746768.1530522227#pdfviewer](https://owncloud.accion.org/index.php/s/qvdagaTHKM074nN%20?_ga=2.103274884.581024812.1530522227-1284746768.1530522227#pdfviewer) [accessed 30/06/18]

Aitken, R. (2015a) *Fringe Finance: Crossing and Contesting the Borders of Global Capital* (New York: Routledge)

Aitken, R. (2015b) 'Everyday Debt Relationalities', *Cultural Studies*, 29 (5-6), 845-868

Aitken, R. (2017) "'All Data is Credit Data": Constituting the unbanked', *Competition and Change*, 21(4), 274–300

Bank for International Settlements and Financial Stability Board (2017) 'FinTech Credit: Market Structure, Business Models and Financial Stability Implications'. Report prepared by a Working Group established by the Committee on the Global Financial System (CGFS) and the Financial Stability Board (FSB). Available online:

<http://www.fsb.org/2017/05/fintech-credit-market-structure-business-models-and-financial-stability-implications/> [last accessed 30/07/17]

Bernards, N. (this issue) 'Psychometric Credit Scoring, Infrastructures, and the Limits of Financialization', *Review of International Political Economy*

Bernards, N. (2016) 'The International Labour Organization and the Ambivalent Politics of Financial Inclusion in West Africa', *New Political Economy*, 21 (6), 606-620

Bernards, N. and Campbell-Verduyn, M. (this issue) 'Introduction: Understanding Technological Change in Global Finance through Infrastructures', *Review of International Political Economy*

Berry, D. (2012) 'The Relevance of Understanding Code to International Political Economy', *International Politics*, 49 (2), 277-296

Bowker, G.C. and Star, S.L. (1996) 'How Things (Actor-Net) Work: Classification, Magic, and the Ubiquity of Standards', *Philosophia* 25 (3-4): 195-220.

Braun, B. (2016) 'From Performativity to Political Economy: Index Investing, ETFs, and Asset Manager Capitalism', *New Political Economy* 21 (3): 257-273.

CCAF (2017a) *Entrenching Innovation: 4th UK Alternative Finance Industry Report* (Cambridge Centre for Alternative Finance)

CCAF (2017b) *Hitting Stride: Americas Alternative Finance Industry Report* (Cambridge Centre for Alternative Finance)



CCAF (2017c) *Cultivating Growth: The 2nd Asia Pacific Region Alternative Finance Industry Report*  
(Cambridge Centre for Alternative Finance)

CCAF (2018a) *The 2nd Annual Middle East & Africa Alternative Finance Industry Report*  
(Cambridge Centre for Alternative Finance)

CCAG (2018b) *Guide to Promoting Financial and Regulatory Innovation: Insights from the UK* (Cambridge Centre for Alternative Finance)

Campbell-Verduyn, M., Goguen, M., & Porter, T. (2017) 'Big Data and algorithmic governance: the case of financial practices', *New Political Economy*, 22 (2), 219-236

Carney, M. (2017) 'The promise of FinTech – something new under the sun?', speech at the Deutsche Bundesbank G20 Conference on Digitising finance, financial inclusion and financial literacy, Wiesbaden, 25 January. Available online: <http://www.bankofengland.co.uk/publications/Documents/speeches/2017/speech956.pdf> [last accessed 30/07/17]

Carney, M. (2018) 'New Economy, New Finance, New Bank', Speech given by Mark Carney, Governor of the Bank of England The Mansion House, 21 June. Available online: <https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/new-economy-new-finance-new-bank-speech-by-mark-carney.pdf> [last accessed 25/06/18]

Cerny, P. G. (1994) 'The Infrastructure of the Infrastructure? Toward "Embedded Financial Orthodoxy" in the International Political Economy', in Palan R., Gills B. (eds) *Transcending the State-Global Divide: A Neostructuralist Agenda in International Relations*, (Boulder, CO: Lynne Rienner), pp. 223-249

Chen, G. and X. Faz (2015) 'The Potential of Digital Data: How Far Can It Advance Financial Inclusion?', *CGAP Focus Note*. Available online: [http://www.cgap.org/sites/default/files/Focus-Note-The-Potential-of-Digital-Data-Jan-2015\\_1.pdf](http://www.cgap.org/sites/default/files/Focus-Note-The-Potential-of-Digital-Data-Jan-2015_1.pdf) [accessed 30/06/18]

Clarke, C. (2012) 'Financial engineering, not economic photography: popular discourses of finance and the layered performances of the sub-prime crisis' *Journal of Cultural Economy*, 5(3), 261-278.

Clarke, C. (2015) 'Learning to Fail: Resilience and the Empty Promise of Financial Literacy Education', *Consumption Markets and Culture*, 18 (3), 257-276

Clarke, C. and Tooker, L. (2018) 'Social Finance Meets Financial Innovation: Contemporary Experiments in Payments, Money and Debt'. *Theory, Culture & Society*, 35 (3), pp.3-11

CNBC (2017) 'CNBC Exclusive: CNBC Transcript: Goldman Sachs Chairman & CEO Lloyd Blankfein Speaks with CNBC's Jim Cramer on "Mad Money" Today', Available online: <http://www.cnbc.com/2017/06/19/cnbc-exclusive-cnbc-transcript-goldman->

[sachs-chairman-ceo-lloyd-blankfein-speaks-with-cnbc-jim-cramer-on-mad-money-today.html](#) [last accessed 30/07/17]

Coeckelbergh, M. (2016) *Money Machines: Electronic Financial Technologies, Distancing, and Responsibility in Global Finance* (Abingdon; New York: Routledge)

Davis, M. and Brauholtz-Speight, T. (2016) *Financial Innovation Today: Towards Economic Resilience*. Report. Bauman Institute, University of Leeds.

Edwards, P. (2003) 'Infrastructure and Modernity: Force, Time, and Social Organization', in T.J. Misa, P. Brey, and A. Feenberg, eds., *The History of Sociotechnical Systems: Modernity and Technology*, Cambridge: MIT Press, pp. 185-226.

Elder-Vass, D. (2016) *Profit and Gift in the Digital Economy* (Cambridge University Press)

FCA (2017) 'Market-Based Finance: Its Contributions and Emerging Issues', *Occasional Paper 18*, March (Financial Conduct Authority)

French, S. and A. Leyshon (2004) 'The New, New Financial System? Towards a Conceptualization of Financial Reintermediation', *Review of International Political Economy*, 11 (2), 263-288

Gabor, D. and S. Brooks (2017) 'The Digital Revolution in Financial Inclusion: International Development in The Fintech Era', *New Political Economy*, 22 (4), 423-436

Gamble, A. (2009) *The Spectre at the Feast: Capitalist Crisis and the Politics of Recession* (New York: Palgrave Macmillan)

Harmes, A. (1998) 'Institutional Investors and the Reproduction of Neoliberalism', *Review of International Political Economy*, 5 (1), 92-121

Hulme, M. and C. Wright (2006) *Internet Based Social Lending: Past, Present and Future*. London: Social Futures Observatory

IMF (2017) 'Fintech and Financial Services: Initial Considerations', *IMF Staff Discussion Note SDN/17/05*

Jenik, Ivo, and K. Lauer (2017) 'Regulatory Sandboxes and Financial Inclusion', *CGAP Working Paper* (Washington, DC: CGAP)

Langevin, M. (this issue) 'Big Data for (Not So) Small Loans: Technological Infrastructures and the Massification of Fringe Finance', *Review of International Political Economy*

Langley, P. (2008) *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America* (Oxford: Oxford University Press)

Langley, P. and A. Leyshon (2016) 'Platform Capitalism: The Intermediation and Capitalisation of Digital Economic Circulation', *Finance and Society*, online first

Larkin, B. (2013) 'The Politics and Poetics of Infrastructure', *Annual Review of Anthropology*, 42, pp. 327-43

Lazzarato, M. (2012) *The Making of the Indebted Man: An Essay on the Neoliberal Condition*, Translated by Joshua David Jordan (Los Angeles, CA: Semiotext(e))

Leyshon, A., S. French, N. Thrift, L. Crewe and P. Webb (2005) 'Accounting for E-Commerce: Abstractions, Virtualism and the Cultural Circuit of Capital', *Economy and Society*, 34 (3), 428-450

Leyshon, A. and N. Thrift (1999) 'Lists Come Alive: Electronic Systems of Knowledge and the Rise of Credit-Scoring in Retail Banking', *Economy and Society*, 28 (3), 434-466

Lockwood, E. (2015) 'Predicting the Unpredictable: Value-at-Risk, Performativity, and the Politics of Financial Uncertainty', *Review of International Political Economy* 22 (4): 719-756.

Lyman, T. (2014) 'The Seismic Implications of Digital Financial Inclusion', Consultative Group to Assist the Poor (CGAP) Blogpost, 4 November. Available online: <http://www.cgap.org/blog/seismic-implications-digital-financial-inclusion> [accessed 29/06/18]

MacKenzie, D. (2006). *An engine, not a camera: How financial models shape markets*. (MIT Press).

Mader, P. (2016) *The Political Economy of Microfinance: Financialising Poverty* (London: Palgrave Macmillan)

Marron, D. (2007) 'Lending By Numbers': Credit Scoring and the Constitution of Risk Within American Consumer Credit', *Economy and Society*, 36 (1), 103-133

Marron, D. (2013) 'Governing Poverty in a Neoliberal Age: New Labour and the Case of Financial Exclusion', *New Political Economy*, 18 (6), 785-810

Oxera (2016) 'The Economics of Peer-To-Peer Lending', *Report Prepared for the Peer-to-Peer Finance Association*

Palan, R. (2009) 'The Proof of the Pudding is in the Eating: IPE in Light of the Crisis of 2007/8', *New Political Economy*, 14 (3), 385-394

PWC (2015) 'Peer pressure: How peer-to-peer lending platforms are transforming the consumer lending industry'. Report available online

<https://www.pwc.com/us/en/consumer-finance/publications/peer-to-peer-lending.html> [last accessed 30/06/17].

Roberts, A. (2013) 'Financing Social Reproduction: The Gendered Relations of Debt and Mortgage Finance in Twenty-first-century America', *New Political Economy*, 18 (1), 21-42

Roderick, L. (2014) 'Discipline and Power in the Digital Age: The Case of the US Consumer Data Broker Industry', *Critical Sociology* 40 (5), 729-746

Rogers, C. and C. Clarke (2016) 'Mainstreaming Social Finance: The Regulation of the Peer-to-Peer Lending Marketplace in the United Kingdom', *The British Journal of Politics and International Relations*, 18 (4), 930-945

Rosamond, E. (2016) "'All Data is Credit Data": Reputation, Regulation and Character in the Entrepreneurial Imaginary', *Paragrana*, 25 (2), 112-124

Roy, A. (2012), 'Subjects of Risk: Technologies of Gender in the Making of Millennial Modernity', *Public Culture*, 24 (1 66), 131–55

Soederberg, S. (2014) *Debtfare States and the Poverty Industry: Money, Discipline and the Surplus Population* (New York: Routledge)

Srnicek, N. (2016) *Platform Capitalism* (Cambridge: Polity)

Star, S. L. (1999) 'The Ethnography of Infrastructure', *American Behavioural Scientist* 43 (3): 377-391.

Tiessen, M. (2015) 'The Appetites of App-Based Finance', *Cultural Studies*, 29 (5-6), 869-886

Tooker, L. and C. Clarke (2018) ‘Experiments in Relational Finance: Harnessing the Social in Everyday Debt and Credit’, *Theory, Culture & Society*, 35 (3), 57–76

Tuckwell, D. (2017) ‘Steve Keen: banks create money, fintechs don’t’, AltFi News website, June 7<sup>th</sup>. Available at: <http://www.altfi.com/article/3044> [last accessed 30/07/17]

Upstart (2018) ‘This is Upstart’, website. Available at:  
<https://www.upstart.com/about#who-we-are> [accessed 30/06/18]

WEF (2017) *Beyond Fintech: A Pragmatic Assessment of the Disruptive Potential in Financial Services*  
(World Economic Forum)

Yunus, Muhammad (2006). “Nobel Lecture.” 10 December,  
[http://nobelprize.org/nobel\\_prizes/peace/laureates/2006/yunus-lecture-en.html](http://nobelprize.org/nobel_prizes/peace/laureates/2006/yunus-lecture-en.html) [last  
accessed 30/07/17]

Zopa (2017) ‘How Zopa Works’, website. Available:  
<https://www.zopa.com/about/how-zopa-works> [last accessed 17/05/17]