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'Hack/Make the Bank':
The Everyday Politics of Fintech

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A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy in Politics and International Studies

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Contents

Introduction ........................................................................................................................................... 1
Research Problem: How to engage fintech critically? ................................................................. 3
Research Approach: Mobilising 'the everyday' as an analytical starting point .................. 9
Core Argument: The everyday politics of fintech ................................................................. 11
Chapter Outline .......................................................................................................................... 13

Chapter one: Current perspectives on fintech ............................................................................ 18
Part One: Three business narratives about fintech ................................................................. 19
Banking the unbanked: fintech in the development sector ................................................. 20
Banking on smartphones: fintech and the digital tech giants ............................................. 23
Banking in crisis: fintech and the disruption of 'old finance' ........................................... 31
Part Two: Two social scientific critiques of fintech ................................................................. 34
Signposts in the literature .......................................................................................................... 35
Fintech as financialisation .......................................................................................................... 37
Fintech as digital surveillance ................................................................................................... 41
What 'matters' in fintech research? ......................................................................................... 43
Conclusion .................................................................................................................................... 46

Chapter two: Towards an everyday approach of fintech ....................................................... 52
The everyday as an analytical device, not an empirical field ............................................ 54
The everyday as a challenge to International Political Economy ....................................... 55
From gender bias to regulatory bias ......................................................................................... 59
The everyday as a pragmatic opening ..................................................................................... 62
Embracing emergence, heterogeneity, and incommensurability ..................................... 63
Valuing mundane subjects, sites, and means .......................................................................... 66
Fintech research as everyday politics ....................................................................................... 67
Choosing a starting point .......................................................................................................... 69
Collecting empirical material .................................................................................................. 70
Conclusion .................................................................................................................................... 78

Chapter three: The everyday politics of app-based banking ................................................. 83
A short introduction to app-based challenger banks ............................................................ 86
App-based banks as an investor hype ....................................................................................... 89
App-based banks as pioneers of the platform economy ..................................................... 91
The mundane capabilities of apps .......................................................................................... 94
<table>
<thead>
<tr>
<th>The everyday politics of apps</th>
<th>99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building a bank as smart as your phone</td>
<td>99</td>
</tr>
<tr>
<td>Banking as a social and affective practice</td>
<td>109</td>
</tr>
<tr>
<td>Banks as companions in daily market life</td>
<td>113</td>
</tr>
<tr>
<td>Conclusion</td>
<td>114</td>
</tr>
<tr>
<td>Chapter four: The everyday politics of hacking finance</td>
<td>120</td>
</tr>
<tr>
<td>What are hackathons?</td>
<td>122</td>
</tr>
<tr>
<td>Hackathons and/as creative disruption</td>
<td>126</td>
</tr>
<tr>
<td>Hackathons and/as ideology</td>
<td>128</td>
</tr>
<tr>
<td>The everyday politics of 'hacking' finance</td>
<td>132</td>
</tr>
<tr>
<td>Hacking global banking – with five lines of code</td>
<td>133</td>
</tr>
<tr>
<td>Hacking as an entrepreneurial practice</td>
<td>139</td>
</tr>
<tr>
<td>Hacking the financial ecosystem</td>
<td>144</td>
</tr>
<tr>
<td>Conclusion</td>
<td>145</td>
</tr>
<tr>
<td>Chapter five: The everyday politics of fintech podcasts</td>
<td>150</td>
</tr>
<tr>
<td>Part One: Fintech Insider and the performativity of fintech media</td>
<td>152</td>
</tr>
<tr>
<td>The mass media and the dotcom boom</td>
<td>154</td>
</tr>
<tr>
<td>Social media and fintech hype</td>
<td>156</td>
</tr>
<tr>
<td>Fintech Insider and the demotic turn</td>
<td>159</td>
</tr>
<tr>
<td>Part Two: Fintech Insider and the 'embodied' performance of fintech</td>
<td>162</td>
</tr>
<tr>
<td>What's the price of getting 5H1T done?</td>
<td>162</td>
</tr>
<tr>
<td>Growing through pain</td>
<td>166</td>
</tr>
<tr>
<td>The Revolut revelations rumble on</td>
<td>169</td>
</tr>
<tr>
<td>Fintech as lively, iterative, and social practice</td>
<td>171</td>
</tr>
<tr>
<td>Conclusion</td>
<td>172</td>
</tr>
<tr>
<td>Conclusion</td>
<td>177</td>
</tr>
<tr>
<td>Main argument and findings</td>
<td>178</td>
</tr>
<tr>
<td>Challenger banks and the mundane capabilities of apps</td>
<td>179</td>
</tr>
<tr>
<td>Hackathons and the re-thinking of entrepreneurial practice</td>
<td>181</td>
</tr>
<tr>
<td>Podcasts, marketing, and public debate</td>
<td>183</td>
</tr>
<tr>
<td>Fintech research as everyday politics</td>
<td>186</td>
</tr>
<tr>
<td>Scope and future research</td>
<td>187</td>
</tr>
<tr>
<td>References</td>
<td>190</td>
</tr>
</tbody>
</table>
List of figures

Figure 1 - Challenger bank adverts, March 2018 ................................................................. 84
Figure 2 - Onboarding Screenshots, Monzo, May 2018 ......................................................... 102
Figure 3 - Current account screenshots, Monzo, August 2016 ............................................. 103
Figure 4 - Overdraft screenshots, Monzo, October 2015 ....................................................... 106
Figure 5 - Travel Money, Monzo, August 2016 ................................................................. 107
Figure 6 - 11:FS - Better banking business models ................................................................. 109
Figure 7 - #OpenBankHack17 ............................................................................................ 134
Figure 8 - Registration & Swag ............................................................................................ 135
Figure 9 - Challenge Wall ...................................................................................................... 136
Figure 10 - Prototyping .......................................................................................................... 137
Figure 11 - Team Coverdraft wins Best Pitch at the #OpenBankHack17 ................................. 138

List of tables

Table 1 - Fintech events ........................................................................................................ 72
Table 2 - Fintech media ......................................................................................................... 75
Table 3 - Fintech reports ...................................................................................................... 77
Table 4 - Fintech interviews................................................................................................. 78
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Declarations

This thesis has not been submitted for a degree at another university.

This thesis is entirely my own work.
Abstract

This thesis is a contribution to recent efforts in the social sciences of developing a critical perspective on 'fintech', a subsector of finance promising to disrupt the financial services industry by leveraging advanced digital and mobile technologies. Proponents of fintech see the industry as the pivot of a financial revolution, delivering smart solutions for any number of salutary ends: 'financial inclusion' in the development sector, 'increased convenience' in the banking sector; 'peer-to-peer' networks for borrowing and lending; 'de-centralisation' of monetary infrastructures; increased 'resilience' of the global financial system; and so forth (King, 2014; Chishti and Barberis, 2016; Blakstad and Allen, 2018; King, Nesbitt and Desmarais, 2020; Wewege and Thomsett, 2020). They advance a benign view of fintech variously framed as a political response to the low levels of trust in financial institutions, promoting empowerment, democratisation, and social responsibility; as a technological fix to global issues, such as poverty, migration, global warming, and public health; or as an exciting business opportunity creating new efficiencies by digital means (United Nations, 2016; World Economic Forum, 2015; UK Government, 2015).

In contrast to the seemingly unbounded optimism of fintech enthusiasts, social scientific scholars in the research traditions of International Political Economy (IPE) and cognate disciplines have begun to unpick the political and economic ramifications of fintech in more critical terms. They have drawn out two lines of critique in particular that resonate widely across specialist and public audiences. One situating fintech within the context of 'financialised capitalism' and thus within the extant dilemmas of the growing influence of finance and debt in contemporary market life (Martin, 2002; Epstein, 2005; Krippner, 2005; Graeber, 2011; Lazzarato, 2012). Another placing fintech within the context of the 'platform economy' and thus within the contested politics of digitalisation and the growing power and influence of big tech companies (Srnicek, 2016; Langley and Leyshon, 2017b; Zuboff, 2019).

This thesis extends these existing critical perspectives on fintech by uploading onto previous accounts a sensitivity to the theoretical and methodological limits articulated by recent scholarship on the everyday in the disciplinary research tradition of IPE (Hobson and Seabrooke, 2007; Langley, 2008; Elias and Roberts, 2016). The latter has
promoted a focus on mundane and everyday aspects as irreducibly significant to traditional IPE concerns such as the structural imperatives of capital, the dynamic interplay of states and markets, the power of national hegemons, international organisations, multinational corporations, and global civil society. Following this tradition, this thesis advances a critical approach to the study of fintech that mobilises the everyday as a conceptual tool for emphasising how seemingly unremarkable aspects of the industry can complicate prevailing assumptions about what fintech is, or — better — what it 'does'.
Introduction

The politics of global finance has long been one of the primary research concerns for scholars of the global economy. Yet, the formation of ‘fintech’, a rapidly growing subsector of finance, has only recently begun to attract scholarly attention. After five years of sustained media and investor hype (The Economist, 2015; The Economist, 2016; The Economist, 2017a; Financial Times, 2018a; Financial Times, 2019c), widespread support amongst national and international policymakers (HM Treasury, 2016; HM Treasury, 2018; HM Treasury, 2020; European Commission, 2018; United Nations, 2016), and an influx of enormous amounts of capital from $6bn of worldwide investment in 2011, to $51.2bn in 2014, to $135.7bn in 2019 (KPMG, 2019), fintech has established itself as the chief driver of technological change in finance today. But what are the broader political and economic ramifications of the industry?

Proponents of fintech suggest that the industry spearheads a 'digital revolution' in financial services, delivering any number of salutary ends: 'financial inclusion' in the development sector, 'restoration of trust' in the banking sector; 'de-centralisation' of monetary infrastructures; and more (King, 2014; Chishti and Barberis, 2016; Blakstad and Allen, 2018; King, Nesbitt and Desmarais, 2020; Wewege and Thomsett, 2020). But rampant speculation, blatant opportunism, and unapologetic profiteering in the industry render such claims, to put it mildly, questionable. This thesis contributes to a small but growing body of social scientific research, which has begun to study, analyse and theorise fintech in more critical terms. It suggests that while claims about fintech’s revolutionary impact are certainly overblown, the sector has prised open a space to ask questions about its politics anew: who benefits, why, and could things be different?

When writing critically about fintech, two things are difficult to avoid. First, it is difficult not to adopt a dismissive stance. The peculiar combination of pseudo-revolutionary rhetoric and undisguised avarice that characterise the industry can seem naïve and clueless at best, cynical and corrupt at worst, making it easy to write off fintech as the latest toxic example of casino capitalism gone mad. But this misses the point. Despite its excesses, fintech has led to genuine efforts to rethink and rebuild finance in view of emerging technological possibilities. These efforts span multiple projects with various aims, and their wider effects are only gradually taking shape. Thus, fintech provides an
emerging political space, where different ideas and practices are argued for and contested, and which can provide insightful reflections on the politics of finance, technology, and the global economy.

Second, it is hard to escape depictions of fintech as a battlefield between corporate giants. In view of the spectacular team-ups between Amazon and JP Morgan<sup>1</sup>, Google and Citibank<sup>2</sup>, and Apple and Goldman Sachs<sup>3</sup> in the US, and in view of the equally spectacular rivalry between Tencent and Ant Financial<sup>4</sup> in China, the aims and the goals of fintech can appear to be largely dominated by the interests of high finance and big tech companies. This, however, overlooks not only how fintech accommodates actors, projects, and companies that explicitly seek to escape the grip of large financial and digital tech conglomerates, but also how the ‘digital revolution’ has far more uneven and differential effects than its proponents assume. There is no uniquely determining impact of fintech, rather there are multiple impacts across various constituencies. So, to understand the variegated impacts of fintech it remains crucial to account for this diversity.

While fintech professionals like to conjure up the notion of a global fintech community, the industry is very much grounded in place. Global fintech hubs, such as Beijing, San Francisco, New York, Shanghai, London, Singapore, Shenzhen, and Hangzhou, have established themselves as central nodes of an expansive and expanding global fintech network, each with their own set of actors, practices, and technologies (Findexable, 2019; Global Fintech Hub Report, 2020). This thesis presents material collected in London, during four years of research from October 2016 to March 2020. When the project started, fintech was not yet fully stabilised as an idea of a sector or as a professional identity. In fact, as chapter one shows, the term still remains somewhat indeterminate, referring to multiple developments simultaneously that can appear

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almost too different to be part of the same industry. The project began with an interest in the strange contrast between the revolutionary rhetoric of London based fintech startups, on the one hand, which railed against the past vices of traditional finance, and their multiple tie-ins with venture capital, on the other, which suggested a limited potential to create a departure from finance's traditional ways. This dilemma remained a core concern of the thesis, which asks how we might contend with the pseudo-utopianism of fintech companies without shunning the possibility that things might be different and with an ongoing curiosity towards the negotiations over such differences in the industry.

In what follows, this introduction situates the research question within existing debates on fintech and outlines the specific approach of this thesis and its main arguments. Section one introduces the research problem: how to engage fintech critically? Section two presents the approach of this thesis, to mobilise 'the everyday' as an analytic for studying fintech critically. Section three outlines the main argument of the thesis, which insists that a critique of fintech must take the industry seriously as a political and politically contested domain. Finally, section four gives an outline of the thesis chapters and its overall structure.

**Research Problem: How to engage fintech critically?**

When entering into conversations about fintech, one is quickly surrounded by myriad arguments, opinions, hopes, hypes, and concerns. On the one hand, the industry is rife with outrageous claims about the disruptive impact of the 'digital revolution' in financial services. In a widely reported 2015 Chatham House speech, Antony Jenkins, former CEO of Barclays, predicted that banking was approaching its "Uber Moment" (Reuters, 2015b). Just like Uber had leveraged digital technology to "disrupt" the taxi hailing industry, he argued, new startup companies were on the brink of disrupting the financial services industry. A similar tone was struck by Jamie Dimon, CEO of JP Morgan, who wrote in a letter to shareholders: "Silicon Valley is coming. There are hundreds of startups with a lot of brains and money working on various alternatives to traditional banking" (Dimon, 2015). Both financial veterans had startup companies such as Transferwise in mind, which proclaimed that: "Inspired by the Occupy Wall Street movement, we want to address the real issues and help create game changing solutions
to some of the industry's biggest problems" (Business Insider, 2015). Underlining its revolutionary ambitions, the company had organised a protest the previous year: a hundred people gathered naked in front of the Bank of England with the slogan "nothing-2-hide" written on their bare skin. "Flash mob strip to their underwear to protest against bank charges" wrote the Evening Standard (2014) the next day.

Yet, on the other hand, these revolutionary gestures are so blatantly opportunistic that it can be hard to avoid a mocking stance. Commentators were quick to point out, for example, that at the time of his speech Anthony Jenkins had founded a startup company himself and that his cautionary note about fintech startups to fellow bankers was literally identical with his marketing pitch for that company (Financial Times, 2019a). A company he had named unironically "10x" to suggest that it was "10 times better for the bank, 10 times better for its customers, and crucially, 10 times better for society" (Citigroup, 2019, p. 19). Similarly, it turned out that Transferwise's so-called protest had been organised by a marketing firm, in cooperation with professional filmmakers, to produce a 'viral' publicity stunt for social media (Reuters, 2015a). So, the company's self-professed duty to protest against bank charges conveniently coincided with its self-interested promotion of a 'revolutionary peer-to-peer' solution for foreign transactions – a solution that began to look less revolutionary and less peer-to-peer, once it became clear that it ultimately depended on bank liquidity and banks' compliance checks to conduct operations (Financial Times, 2016).

But simply mocking or debunking the revolutionary pretences of tech entrepreneurs is old hat. It has famous antecedents in Barbrook and Cameron's (1996) polemic against the 'Californian Ideology', which memorably described venture driven startup culture as "a bizarre fusion" of the "cultural bohemianism of San Francisco with the hi-tech industries of Silicon Valley" and of the "free-wheeling spirit of the hippies and the entrepreneurial zeal of the yuppies" (p.44); in Frank's (2000) thorough take-down of the 'New Economy', which ironically described the 1990s dotcom boom as a "long summer of corporate love" wondering "how we ever came to believe this stuff" (p. 356); and in Lorusso's (2019) more recent critique of the startup 'entreprecariat', which

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5 The protest was organised by the production company House of Experience, see: https://www.houseofexperience.co.uk/the-day-we-got-naked (Accessed 31 March 2021).

6 The film was produced by the movie makers from 1185films, see: https://www.1185films.com/portfolio/transferwise-2/ (Accessed 31 March 2021).
succinctly contrasts the aspirational platitudes of startup entrepreneurs with their profoundly precarious life circumstances.

It has done little, however, to curb the growing political and economic impact of the fintech industry. Only five years after Jenkins' speech, Jamie Dimon’s JP Morgan signed a contract with 10x to launch its digital banking products in Europe (City A.M., 2020). By that time, Transferwise had raised a total of $1.1 billion dollars and boasted a private market valuation of $5 billion dollars.\(^7\) The global fintech sector had more than doubled its yearly investments from $65 billion dollars invested in 2015 to $135 billion dollars invested in 2019 (KPMG, 2019). Numerous cities and countries had identified fintech as a key source of future economic growth (Findexable, 2019; UK Government, 2015), and global institutions, such as the World Economic Forum and the United Nations, had recognised fintech as one of the key factors in solving the world’s biggest problems (World Economic Forum, 2015; United Nations, 2016). The unwavering growth of the industry's political and economic influence therefore demands further reflection. How, other than mocking or debunking it, should we engage fintech critically?

One popular critique of fintech suggests that the industry should be thought of as an 'excess' of financial speculation, an inflated asset price bubble, or investor hype. Such a critique links fintech to the broader enthusiasm for digital tech companies on global stock markets, which has prompted comparisons to the speculative frenzy of the 1990s dotcom boom (Reuters, 2020c). Back then, talk of the supposedly unlimited business opportunities of the Internet had made it possible for startup companies to raise billions of dollars on capital markets, based on little more than the promise of spectacular future returns (Feng et al., 2001). Many commentators think that today's talk of an ongoing 'digital revolution' has allowed fintech startup companies to do the same. They point, for example, to the very high number of fintech startups that have attained 'unicorn' status, i.e. a private market valuation of $1bn dollars,\(^8\) despite continuous loss-making.\(^9\) In fact, Transferwise is a case in point. It attained unicorn


\(^8\) The term 'unicorn' is commonly traced back to journalist Aileen Lee, who used it in a 2013 article to emphasise the rarity of start-up companies with such a high valuation as well as the 'mythical and playful feeling' amongst startup entrepreneurs and founders 'who have big dreams and are on a mission to build things that the world has never seen before', see: [https://www.ibtimes.com/real-reason-everyone-calls-billion-dollar-startups-unicorns-2079596](https://www.ibtimes.com/real-reason-everyone-calls-billion-dollar-startups-unicorns-2079596) (Accessed 31 March 2021).

\(^9\) Chris Skinner’s blog (2020) 'Are these fintech unicorns worth it?', 10 December, see: [https://thefinanser.com/2019/08/are-these-fintech-unicorns-worth-it.html/](https://thefinanser.com/2019/08/are-these-fintech-unicorns-worth-it.html/) (Accessed 31 March 2021).
status in 2016 after five years of continuous loss-making. It became profitable the year after, but this remained a rarity amongst its peers (Penser, 2020). There are, then, good reasons to address fintech as another example of market euphoria spiralling out of control, and such a critique is appealing, because it speaks to a long-standing interest in regulating 'mad money' (Strange, 1998) and restoring the 'productive economy' (Lapavitsas, 2013). However, this thesis argues that there are also several limitations to such a view. First, it severely downplays the extent to which financial speculation has become an integral part of the global political economy: a feature and not a bug of the system. Marking out fintech as an 'excess' of financial speculation can therefore normalise 'non-excessive' financial speculation. It reduces what should be addressed as a systemic problem to a relatively minor issue of a relatively small industry. Second, it can also downplay the profound material consequences brought about by speculative investments. While many fintech companies may be overvalued or forever unprofitable, they nevertheless pose serious challenges to traditional banking. They pioneer new practices, new business models, and new technologies, and the sheer scale of investments suggests that these developments will have far-reaching effects. Thus, rather than writing fintech off as 'merely' a speculative bubble, this thesis insists that the industry has significant material consequences that demand critical attention.

Another, arguably more challenging, critique of fintech suggests that the industry should be addressed at once as a cause and a symptom of the broader 'financialisation' of the global political economy (Martin, 2002; Krippner, 2005; Froud, Leaver and Williams, 2007; Montgomerie and Williams, 2009; Christophers, 2015; Mader, Mertens and van der Zwan, 2020). Such a perspective takes seriously the argument that speculative finance is a systemic condition and highlights how fintech extends the power and reach of the financial sector beyond previous limits. For instance, a number of scholars have analysed how fintech companies leverage mobile data to provide credit to marginalised groups 'at the fringes' of the global economy, e.g. migrant workers, refugees, or the rural poor (Aitken, 2015; 2017; Gabor and Brooks, 2017; 2021). The Economist (2020) 'Exit unicorns, pursued by bears: Technology startups are headed for a fall', 4 April, see: https://www.economist.com/briefing/2020/04/04/technology-startups-are-headed-for-a-fall (Accessed 31 March 2021).


Langley et al., 2019; Bhagat and Roderick, 2020). Where such companies hold that improved access to credit is 'empowering', because it helps marginalised people financing their daily needs, the more critically-minded scholars have pointed out that it also creates profitable opportunities for global investors whose interests are systematically prioritised over, and protected against, those of the purported beneficiaries (Gabor and Brooks, 2017; Gabor, 2020b). Other scholars have analysed fintech companies that leverage the behavioural data of the already financially included to help them improving their credit scores (Rosamond, 2016; Bernards, 2019). Where fintech companies, again, emphasise empowerment, because a better credit score can yield significant savings for individuals, financialisation scholars argue that it may be problematic, because it encourages people to adjust their daily behaviour and even re-think their personal life choices according to financial values and norms (Rosamond, 2016). In this sense, fintech not only extends finance to untapped consumer markets, it also contributes to the adoption of financial measurements, techniques, ideas, metaphors, and narratives, well beyond the financial sector, in other areas of society (Martin, 2002; Langley, 2008; Haiven, 2014). There is, then, ample evidence to support the critique that fintech contributes to the deepening power and influence of the financial sector in the global political economy. Such a critique is politically attractive because it powerfully aligns with a broader set of resistances against the unprecedented levels of debt and inequality in contemporary societies (Graeber, 2011; Lazzarato, 2012; Piketty, 2014). However, this thesis argues that addressing fintech as a cause and/or symptom of financialisation entails certain important limitations, too. In particular, it argues that financialisation arguments tend to downplay those developments in fintech that clearly exceed the imposition of financial interests onto other domains. In this sense, financialisation perspectives entail a real risk of overstating the power of finance whilst diminishing those developments that undermine it or force it to change. Thus, in the following chapters, the thesis advocates a heightened attentiveness to the contingency of fintech. The industry certainly extends the power of finance in many ways; but it also generates unexpected and unpredictable outcomes. While it continues to unfold, its politics should therefore not be taken for granted.

A third prominent critique of fintech focuses on its role in restructuring finance as a platform economy (Srnicek, 2016; Langley and Leyshon, 2020). Such a perspective links
fintech to a broader set of concerns regarding the ostensible rise of ‘surveillance capitalism’ (Zuboff, 2019). Here, fintech is often understood to signal an upcoming battle between high finance and big tech, or else, an unholy corporate alliance between the two (Hendrikse, Bassens and van Meeteren, 2018). For example, a burgeoning literature of business and consultancy reports has warned tirelessly that digital platform companies such as Amazon, Apple, Google, or Facebook may no longer view financial services as a source of profit. Instead, they may offer them cheaply or for free on their respective platforms to lock clients into their business ecosystems and generate profit from advertising, data mining, e-commerce, and other activities (Accenture, 2016; Accenture, 2019; Capgemini, 2019; Citigroup, 2016; Citigroup, 2018). These reports have pointed especially to recent developments in China, where digital tech companies such as Alibaba and Tencent have become major players in the financial services sector within a very short time period (Zhang and Chen, 2019; Citigroup, 2019). Here, fintech appears as the corporate vanguard that combines financial revenue models (charging fees on payments, collecting interest on debt, etc.) and digital revenue models (targeted advertising, e-commerce, etc.), as financial and digital economies gradually merge (Maurer and Swartz, 2018; O’Dwyer, 2019; Westermeier, 2020). Such a perspective, too, is politically attractive because it provides a clear and critical perspective that links fintech to the growing power of big tech companies, algorithmic governance, and corporate surveillance (Amoore and Piotukh, 2016; Moore, 2017; Zuboff, 2019). But again, this thesis urges caution against a tendency in current scholarship to overstated these points. Just as financialisation arguments risk exaggerating the powers of high finance, a focus on platforms tends to exaggerate the powers of big tech companies. Technological changes are messy – a triumph of the unfinished, unintended, and unforeseen, as much as a result of strategic corporate planning (Goggin, 2011). It may well be that the industry is largely driven by and towards digital platforms, or financial firms. But in the process, technical compromises are struck, cultural differences persist, and political disagreements remain. Keeping this difference at the core of fintech scholarship is a central ambition of this thesis.

Drawing these points together, this thesis is animated by a growing interdisciplinary body of social scientific research that has begun to study, analyse, and critique fintech from different perspectives. While invested in and indebted to these perspectives, this thesis emphasises certain shared limitations that demand critical attention. Especially,
it suggests that current research has been marked by a latent and limiting tendency to render fintech a discrete process; a singular, internally consistent, economic domain. This conjures up certain longstanding dilemmas around the question of ‘what matters?’ in the critical study of the global political economy. For instance, fintech scholars have tended to focus on success stories rather than failures, on big businesses rather than small companies, and on male coders rather than female entrepreneurs. Though not necessarily a problem, a heightened sensitivity to these analytical choices, and to the inevitable silences they produce, spotlights a certain totalising, and indeed, de-politicising potential of existing accounts. All too often they seem to take the meaning of fintech for granted, so that surprising or unexpected outcomes recede from view. This provides the central point of departure for this thesis, which asks whether there is more to be gained from an analysis that renders fintech as a more ambiguous process, whose political and economic impact remains contested, incoherent, and incomplete.

Research Approach: Mobilising 'the everyday' as an analytical starting point

While sympathetic to existing theorisations of fintech, this thesis develops an approach that significantly departs from previous accounts. Against those who simply mock or dismiss fintech, it highlights the influence and sophistication of the industry. In view of the more comprehensive critiques, that place fintech within the contexts of financial capitalism and/or the platform economy, it emphasises a risk of reducing the politics of fintech to a singular, presubscribed understanding, whereby the contingency and heterogeneity of the industry recede from view. Hence, to add a more plural and open-ended perspective, this thesis mobilises 'the everyday' as an analytical starting point.

The everyday is not a trivial concept. It has been mobilised numerously across research traditions – in varying contexts, and to various ends (Highmore, 2008; Guillaume and Huysmans, 2018). To situate the specific approach of this thesis, it therefore builds on a number of interventions in the disciplinary research tradition of International Political Economy (IPE) which have previously suggested that the everyday provides a useful analytical concept to extend conventional notions of ‘what matters’ in studying the global political economy. Especially, in a widely cited edited volume, Everyday Politics of the World Economy (2007), Hobson and Seabrooke suggested that there was a serious neglect of ‘everyday actors’ in IPE. The failure to account for these actors, they
argued, led to flawed explanations and the exaggeration of structural and elite power to near absolute. Others have shifted the focus from everyday actors to everyday practices to examine in detail how global economic processes are constituted in mundane economic circumstances. They have focused, for example, on saving and borrowing (Langley, 2008), investing (Aitken, 2007), shopping (McCracken, 2013), watching movies (Aitken, 2010; Brassett and Rethel, 2015), and even playing Bingo (Bedford, 2019) or Pokémon (Haiven, 2012). Jointly, these studies have done much to widen the research focus of traditional theories and approaches in IPE which had long been characterised by an exclusive focus on the power of 'elite' actors in shaping the world economy.

This thesis uses these everyday studies as a starting point. But it also departs from them in significant ways. In contrast to previous theorisations, it proposes to use the everyday not as an empirical category – as in everyday actors, or everyday practice – but as a critical concept that yields a certain research orientation. The reason for this is that the idea to simply 'add-on' the everyday as an empirical research concern runs into conceptual difficulties. On one level, it upholds a problematic assumption that by adding the everyday scholars may arrive at some more 'complete' picture of fintech. As if shifting the focus from structures or elites to the everyday was not predicated on new silences, new biases, new blind spots, etc. On another level, the question of who or what counts as 'the everyday' becomes a contentious issue. For instance, a popular distinction between elite actors and everyday actors cannot be upheld, if we take seriously the common-sense observation that elite actors also have everyday lives. Thus, instead of mobilising the everyday as an empirical category, the thesis develops it as a critical concept that yields a distinct research approach: a critical methodology. Here the thesis follows the work of feminist IPE scholars, who have similarly argued against simply 'adding-on' women as an empirical research concern; and who have proposed instead to use women's daily lives as a fruitful vantage point for re-thinking well-rehearsed theories, concepts, arguments, and debates (Gibson-Graham, 1996; Felski, 2000; Peterson, 2003; Griffin, 2007). By analogy, the thesis suggests that the point of studying fintech from the perspective of the everyday is not to 'add' everyday cases in order to provide a 'more complete' picture of the industry. Rather, it is to mobilise seemingly mundane aspects of the industry as a vantage point for reading a
politics back into issues that seem settled or solved, or – more often – seem not to contain a political question at all.

A key intervention of this thesis is then to articulate an original methodological framework, an 'everyday approach' to the study of fintech, which rests on three broad methodological commitments. First, an ontological commitment to invest in the notions of emergence, heterogeneity, and incommensurability, rather than the notions of stability, uniformity, and internal consistency (Gibson-Graham, 1996; 2006; 2008). Second, an epistemological commitment to temporary and situated knowledge claims, rather than an insistence on enduring 'objective' understandings built from an external vantage point (the proverbial 'god's eye view') (Haraway, 1988; Montgomerie, 2017). Third, an analytical commitment to engage and develop the political significance of seemingly ordinary matters, even if they are fragile, fleeting, forever kept on the margins, or at the brink of collapsing (Scott, 1987; Guillaume and Huysmans, 2018). The everyday approach presented here therefore pivots on a notion everyday research as everyday politics: an ongoing dialogue between the researcher and the research field that creates new knowledges through the simultaneous rethinking of conventional assumptions in both (Maurer, 2005; Maurer, 2008). In this sense, the thesis offers a thinking alongside rather than about fintech, that cultivates a heightened sensitivity to the generative potentials of the industry, in order to extend or complicate conventional assumptions about where or what the politics of fintech are.

**Core Argument: The everyday politics of fintech**

The central argument of the thesis is to take fintech seriously as a political arena itself – one that produces valuable arguments and debates, and one that the researcher enters rather than observes from the outside. On this view, fintech is not merely an excess of financial speculation, not merely an extension of financial capitalism, not merely another platform economy, and not merely a domain of pure instrumentalism, opportunism, profiteering, or greed. Rather it is an evolving field of socially situated practice, a generative political economic domain, that can provide insightful reflections on the politics of finance, technology, and the global economy. This argument does not necessarily contradict previous theorisations of fintech, but it complicates them in
significant ways. Because it insists that the meaning of fintech cannot be taken for

To make this kind of argument, the thesis uses three seemingly mundane aspects of
fintech as vantage points — apps, hackathons, and podcasts — for raising broader
political economic questions. It illustrates, first, how *fintech apps* point to a widespread
ambition amongst fintech startups to harness the 'mundane capabilities' of

Where this is commonly understood as an attempt to commodify personal data and
introduce platform business models into finance, it also raises questions regarding the

The thesis illustrates, second, how *fintech hackathons* transpose the skills, the

In particular, it indicates how fintech enthusiasts have begun to embrace the social
situatedness of markets as a business opportunity. This extends conventional critiques
of fintech as a platform economy which tend to focus on the monopolistic powers of
financial and digital tech conglomerates.

The thesis illustrates, third, how *fintech podcasts* foreground the performative role of
the media in 'conjuring up' the fintech industry. On the one hand, they contribute to

In podcasts, fintech enthusiasts not only advertise their wares, they
also debate contentious political issues, such as precarious working conditions, gender
inequality, and more. At best, they can serve as a kind of public sphere where insiders debate the social and economic value of fintech. This belies a common tendency in social scientific critiques to reduce fintech to mere opportunism, self-interest, and greed.

Jointly, these three interventions underwrite the broader argument of this thesis and its three main contributions to the current debate. First, on a theoretical level, they highlight the contingency and heterogeneity of fintech. They emphasise that fintech is more than a mere battleground between high finance and big tech companies and necessarily exceeds the power and influence of big corporations and/or regulatory elites. They show that despite the importance of financialisation and digital surveillance critiques, there is more to be said about fintech, and that the political meaning of fintech remains contested, contradictory, and incomplete. Second, on a methodological level, the interventions highlight the value of 'the everyday' as a critical concept rather than an empirical category. They showcase how seemingly mundane aspects of fintech can open up questions and generate insights about fintech that extend, disrupt, or unsettle conventional assumptions about where or what the politics of fintech are. They give shape to the notion of everyday research as everyday politics, a form of critique that attends to, engages, and develops political contents where one might least expect them. Third, on an empirical level, the interventions present a wealth of empirical material collected over a period of four years, which sheds light on select aspect of fintech politics during the years of its formation as an industry.

Chapter Outline
The thesis unfolds in five substantive chapters. Chapter one introduces fintech as a research concern. In the first part it presents three origin stories of fintech that form the background to most discussions between those who seek to understand, shape, or profit from the industry: one that links fintech to the rise of 'mobile money' in the development sector; one that links it to the rise of smartphones and app-based 'mobile payments'; and one that links it to the rise of the 'digital revolution' in response to the North-Atlantic financial crisis of 2008/9. While not exhaustive, these stories usefully establish the broader empirical terrain of the thesis. In the second part the chapter then introduces the small but growing social scientific literature that has begun to study,
analyse, and theorise fintech. This literature has gravitated towards two lines of critique: one placing fintech within the context of the continued power of finance and debt in contemporary capitalism; and one placing it within the context of the rising power of big tech companies. Without wanting to challenge the importance of these critiques, the chapter points to certain shared limitations between the two. Most notably, a shared tendency to depict fintech as a singular entity, an undue emphasis placed on the role of high finance and big tech companies, and a resulting tendency to exaggerate the power of the ‘top dogs’ of fintech to near absolute. This provides the central point of departure for this thesis, which seeks to promote a heightened sensitivity to the contingency and heterogeneity of the industry.

Chapter two develops an 'everyday' approach to that end, which forms the methodological framework of the thesis and the theoretical lens through which the empirical content of later chapters is interpreted. It engages the 'everyday turn' in IPE that has sought to reformulate conventional issues from a bottom-up perspective. While this is commonly understood as a simple corrective to prevailing approaches that helps to 'make count' the lives and the voices of those side-lined by prevailing discourse, the chapter argues that such an understanding runs into conceptual difficulties. Simply shifting the analytical focus to the everyday does not resolve existing biases but merely performs an inversion: Prioritizing the experiences of 'normal' people over those of elites, the role of small states over that of hegemons, the micro over the macro, the particular over the abstract, the private over the public and so forth. As a result, the question of what counts as the everyday becomes a contentious issue in existing theorisations because the experience of moving between the registers of the everyday and the extraordinary is obviously shared between all people, notwithstanding their specific position within the global economy. The chapter turns to feminist IPE to suggest a way forward, which has already moved on from the idea of simply shifting the focus to women to correct the long-standing gender bias in IPE. Building on the feminist tradition, the chapter recasts the everyday not as an empirical field but as a critical concept that yields a distinct research orientation, or critical methodology, which confidently frames fintech research itself as an everyday politics: an ongoing dialogue between the researcher and the research field that creates new knowledges through the simultaneous rethinking of conventional assumptions in both.
Chapter three puts this framework into action. It begins by discussing the prominent rise of so-called 'neobanks' or 'challenger banks', who have become poster children of the UK fintech industry. The self-declared mission of these companies has been to re-build retail banking for the digital age by delivering retail banking products such as current accounts, savings accounts, credit cards, loans and investment, on smartphones via mobile applications, or 'apps'. Challenger banks are usually depicted as heralds of an epic battle between big tech and high finance, or indeed, of an all-powerful alliance between the two. This chapter, by contrast, draws attention to a subtler politics that relates to the ease with which apps are accepted by fintech enthusiasts and also the broader public as a seemingly natural solution to all manner of financial problems. Proponents of app-based banking tend to praise the effortlessness and the convenience afforded by mobile technologies, in particular. But why is it that the call for effortlessness and convenience has attained such force in the industry? What explains the rise of convenience as a marketable category? Against prevailing assumptions, the chapter argues that challenger banks are not driven primarily by the pursuit of novel business models, but by an attempt to harness the distinct 'mundane' capabilities of mobile apps to embed banking more dynamically within the daily operations of market life. It draws on a small but growing body of 'critical app studies' to highlight how apps are intentionally designed to feel natural and how their import into banking has inaugurated a systematic attempt in the industry to embrace the social situatedness of markets as a source of competitive edge.

Chapter four shifts the focus from fintech apps to fintech events and draws attention to the proliferation of 'hackathons' in the fintech industry. These are voluntary multi-day events dedicated to the ad-hoc development of provisional software solutions. The existing literature usually ascribes an 'ideological' function to corporate hackathons. They appear as a corporate strategy designed to exploit the voluntary labour of participants, who produce tweets, comments, and other form of social media content; who pose on event pictures that will later be used for marketing purposes; and who provide technical assistance to test datasets, platforms, applications, and APIs without ever expecting material compensation. However, while such a perspective remains vital, the chapter argues that it leaves intact several striking questions regarding the specific attraction of 'hacking' at fintech hackathons. Why, of all things, do fintech companies turn to hacking to solicit donated work? The chapter points to a function of
fintech hackathons that is usually ignored: hackathons do not simply exploit voluntary labour; they also transpose the skills, the pleasures, and the informal conventions of 'hacking' into corporate registers to produce a stance to the world that is both entrepreneurial and experimental. It suggests that this stance is attractive to participants, because it presumes a world that is governed by temporary, often accidental configurations, rather than universal regularities.

Chapter five shifts the focus from fintech events to the fintech media. It focuses on one fintech medium in particular that has become one of the most influential voices of the UK fintech community – the Fintech Insider podcast. The chapter suggests that the podcast is 'performative' of fintech in two different ways. On the one hand, it contributes to 'calling forth' or 'conjuring up' fintech by boosting expectations about its future profitability. For instance, it may help fintech entrepreneurs to 'bootstrap' their business, i.e. to make credible promises about future profitability that attract investor interest or venture funding, which in turn allows them to fulfil their initial promises. Here the podcast is performative of fintech in the sense theorised by the Social Studies of Finance: It is implicated in creating an industry it purports to merely represent (Callon, 1998; MacKenzie and Millo, 2003). On the other hand, Fintech Insider contributes to constituting – and challenging – how fintech is 'socially' practiced and known. It invites a broad audience to listen to a rotating cast of fintech professionals commenting on news items and debating contentious political issues. Here the podcast is performative of fintech in the sense theorised by cultural political economists: It 'embodies' fintech in reiterative and lively practices that constitute its social and economic value (de Goede, 2005; Aitken, 2007; Clarke, 2012; Morris, 2016). The performativity of Fintech Insider raises broader questions for fintech scholars about the role of the fintech media in the industry. First, there is a sense in which social media has magnified the self-fulfilling tendencies in the industry. Second, there is a sense in which fintech media inflects the industry with a degree of reflexivity to political problems; at its best providing a kind of 'public sphere', where the social and economic value of fintech is up for debate.

Chapter six concludes by highlighting the main contributions and limitations of the thesis. It highlights how the three 'everyday politics' articulated in chapters three, four, and five, complicate current critical frameworks for thinking about fintech in an attempt
to augment rather than undermine them. It further reflects on the limits and possibilities of an everyday approach that seeks out political contents where they are not usually expected. It highlights the importance of moving beyond a notion of 'the everyday' as a fixed category, but also discusses certain risks that derive from a reliance – to some extent – on serendipity. Finally, it provides a brief outlook on future research directions.
Chapter one: Current perspectives on fintech

Although fintech is now routinely taken for granted as an industry and as a subsector of finance, it encompasses a very heterogeneous set of developments — technological, political, economic, and cultural. These can appear somewhat disparate, almost too different to be part of the same industry. They span the development sector in the Global South and the retail banking sector in the Global North. They include mobile wallets and blockchain technologies, alternative credit scoring, digital crowdfunding, and algorithmic trading. In their introduction to a recent special issue on fintech, Lai and Samers (2020) speculated whether its 'unwieldy' and 'confusing' nature may have previously prevented social scientists from researching the industry. More accurately, perhaps, scholars have been researching select aspects of fintech but did not yet anticipate that these would eventually be counted as part of the same, standalone industry. The aim of this chapter is to introduce fintech as an industry and as a research field in a manner that is broadly reflective of this diversity, before it situates the specific argument of this thesis within existing literatures. To that end, it is divided in two parts.

In the first part, the chapter presents three influential historical narratives about fintech, that journalists and fintech professionals use to introduce newcomers to the field. In each of these narratives, the year 2007 proved decisive for the industry. First, because it witnessed the launch of 'M-PESA', an electronic payment system based on mobile phones in Kenya, that quickly turned into a worldwide reported success story. Second, because it saw the launch of the first generation of iPhones that inaugurated a turn to mobile and cloud-based computing and catapulted digital tech giants in lightspeed to the top spot of most valuable companies of the world. And third, because the first US securitisation markets collapsed, which foreshadowed the shock of the North-Atlantic financial crisis that profoundly eroded public trust in the global financial services industry and led to massive diversions of capital from traditional investment opportunities into the fintech startup industry. The formation of fintech as an industry can be – and often is – read as a result of these three impulses intertwining. Each point to a historically and geographically distinct lineage of fintech with a specific set of actors, technologies, and concerns. The three narratives therefore offer a useful heuristic to introduce fintech as a global industry whilst retaining a sense of its heterogeneity.
In the second part, the chapter moves on to introduce a small but growing body of social scientific research that has begun to unpick fintech in critical-analytical terms. After providing a quick overview of that research, the chapter introduces two critiques that have proven particularly influential: one that places fintech into the context of financialisation and emphasises how fintech deepens the continued power of finance and debt in contemporary 'financialised capitalism' (Mader, Mertens and van der Zwan, 2020); and one that places fintech into the context of digitalisation and argues that fintech accelerates the growth of 'surveillance capitalism' (Zuboff, 2019). The chapter shows how both of these critiques offer an important counterpoint to the unlimited optimism of business circles. But it also suggests that they are marked by a latent tendency to downplay the contingency and heterogeneity of the industry. This provides the central point of departure for this thesis, which emphasises a need to complicate existing theorisations of fintech and explore possibilities to mobilise critical viewpoints without relying upon and reproducing universalising assumptions about where or what the politics of fintech are.

**Part One: Three business narratives about fintech**

This first part of the chapter recounts the emergence of fintech as a global subsector of finance, by presenting three popular historical narratives that journalists and fintech professionals use to introduce newcomers to the field. One of them links fintech to the rise and success of mobile money in the development context; another one links fintech to the rise of smartphones and the emergence of app-based mobile payments; and a last one links fintech to the repercussions of the North-Atlantic financial crisis of 2008/9. It is important to note that these narratives are drawn out heuristically, here, from various sources – journalistic accounts, consultancy reports, conversations – rather than descriptive of any particular narrative presented by any specific article, book, or individual. Yet, most people concerned with fintech will have encountered these narratives and indeed will have recounted the emergence of fintech in these or similar terms.
Banking the unbanked: fintech in the development sector

One of the most popular origin stories of fintech revolves around the launch of M-PESA in Kenya, an electronic payment system that allowed people to send money via mobile phones. Its unexpected popularity proved a watershed moment for microcredit schemes – then the paradigmatic tool of poverty alleviation in the development sector, which after a period of enthusiastic support\(^\text{12}\) had come under attack for pushing the supposed beneficiaries into over-indebtedness and for not delivering on its key promise to reduce poverty (Rai, 2010; Mader, 2013). Initially developed to distribute microcredit via mobile phones, M-PESA broadened the focus of development discourse from microcredit to all manner of other financial services. Based on the observation that not only a lack of credit, but also the lack of secure means to store and send money, posed a significant problem to the country’s poorest population (Hughes and Lonie, 2007; Batchelor, 2012). In rural areas, banks were often absent or demanded a minimum balance to open a bank account that excluded the very poor. City workers wanting to send money to their families in the country were therefore forced to entrust travelling acquaintances with their finances. Their journeys sometimes took weeks and, with high levels of crime, were a risky undertaking. The proposition of M-PESA, then, was to leverage the extensive use of mobile phones in remote areas of the country to compensate for the lack of bank branches and offer poor populations ‘mobile money’, a way to store, send, and receive money digitally, via simple text messages on cheap feature phones (Jenkins, 2008; Morawczynski, 2009).

Mobile money had been trialled previously, most notably in the Philippines, but only with limited success (Buenaventura, 2014). When M-PESA launched in Kenya, by contrast, the number of its users exploded to 1.2 million active subscribers within the first year (Vodafone, 2017). The surprise success turned what was initially a small experiment, into a widely reported success story, gradually turning mobile money into the emblematic image of the development sector. Mobile money was different enough from microcredit to eschew previous criticisms, shifting the focus from the supposed benefits of funding entrepreneurial activities amongst the world’s poor to the potential benefits of providing financial services to poor populations \textit{per se}. But it was consistent enough with the predominant ‘bottom of the pyramid’ (Prahalad, 2005) approaches in

\(^{12}\) In 2006, the micro-credit pioneer Muhammad Yunus was awarded the Nobel Peace Prize for pioneering microcredit as a means of poverty alleviation.
the development sector that postulated that abject poverty\textsuperscript{13} should be addressed by turning the 'billions at the bottom' of the global income distribution into (financial) customers, generating huge profits at scale (Schwittay, 2011; Elyachar, 2012). If one billion people paid fifty cents per month to transfer their money to remotely living families, so the idea, there was a 500-million-dollar market to be served. Thus, 'banking the unbanked' became the powerful slogan of a new alliance of public and industry actors who were determined to explore mobile technologies as a means to profitably extend the reach of the financial services industry to those markets at the bottom of the income distribution that had previously been considered to be commercially unattractive (Baptista and Heitmann, 2010; Maurer, 2012).

At the forefront of the new alliance was the GSM Association (GSMA), an industry consortium representing the world's biggest telecommunication networks. Mobile money presented a huge opportunity for the network companies, not only because it promised to increase the volume of data traffic, but also because it afforded a financial role for the networks as payment providers that was traditionally held by banks. M-PESA itself had been launched by Safaricom and Vodafone, two mobile networks, who effectively took on this role and captured associated revenues. GSMA was joined by other major players in the payments industry, such as the card networks Visa and Mastercard; by national and international development agencies, such as the UK Department for International Development and the World Bank's International Finance Corporation; by influential think-tanks, such as the Consultative Group to Assist the Poor; and finally, by the Bill and Melinda Gates Foundation, the world's largest philanthropic investor, that played a decisive role in steering political and investor attention to the 'banking the unbanked' agenda (Jenkins, 2008; Dolan, 2009; Baptista and Heitmann, 2010).

There was a notable reticence of banks in the alliance, perhaps for obvious reasons. They were the scapegoats of the banking the unbanked narrative, supposedly only serving the wealthy, urban parts of the developing world, whilst turning a blind eye on those poor, rural populations most in need. They were also the much-anticipated losers of the mobile money revolution, whose privileged position as payment providers was under attack from the telecommunication networks. Despite this, banks remained

\textsuperscript{13} Defined as less than US $1.25/day.
important supporters of the agenda (Citigroup, 2020). On the one hand, because they still benefited from the growing balances on the mobile network companies’ bank accounts. On the other hand, because in most countries, the latter failed to take on the dominant role played by Safaricom and Vodafone in Kenya. So that banks were able to make an entry with their own mobile and digital solutions, adding formerly unbanked consumers to their customer bases.

The political and economic weight of the ‘banking the unbanked’-alliance allowed mobile money to rapidly travel across jurisdictions and to diversify (GSMA, 2019; Citigroup, 2020). Mobile money projects soon spanned Kenya’s East African neighbour countries Tanzania and Uganda, as well as Ghana and Nigeria on the other end of the continent; South American countries such as Bolivia, Brazil, Paraguay, and Peru; South Asian countries such as Bangladesh, India, and Pakistan; and Southeast Asian countries, such as Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, and Vietnam (GSMA, 2019). Jointly the mobile money projects in these countries became the global testing ground for mobile-enabled finance, which consequently expanded in sophistication and reach. Mobile phones promised to improve the operational efficiency of existing micro-credit schemes, and they promised to lower transaction costs between peers, between workers in the city or foreign countries and their families at home. But they also promised to boost the sales numbers of merchants and retailers through mobile payments, and to improve the welfare provision of local governments such as social security transfers (Citigroup, 2020). Hence, mobile-enabled finance came to include peer-to-peer, business-to-consumer, and government-to-consumer services, and indeed, increasingly also the whole suite of consumer finance products, now delivered on mobile phones to the unbanked. Not only microcredit and mobile transfer, but also mobile savings, mobile insurance, mobile overdrafts, and so forth.

In the process, new kinds of data were produced and seized. Mobile phones created a digital register not only of airtime usage, but also of the frequency and the volume of mobile money transfers. These digital registers were targeted by micro-finance institutions, mobile network operators, and start-up companies as a means to build up credit risk profiles of potential borrowers without formal credit histories, employment records, and/or tax documentation. They also paved the way for digital identification processes. Banks needed them to comply with Know-Your-Customer legislation. And
governments wanted them to minimise fraudulent activities in their welfare programmes and to increase governmental reach into informal parts of the economy. Out of these various developments ‘fintech’ emerged as a term to describe the new industry that formed around the various profitable opportunities offered by mobile money. Mobile network companies selling financial products to the unbanked. Start-up companies selling risk profiles based on mobile data to lenders. Consultancies selling advice to governments on the implementation of digital tools for their welfare programmes. And so on.

To sum up these points, there is an important historical lineage of fintech that is rooted in the alliance of corporate, philanthropic, and public development actors committed to ‘banking the unbanked’ in emerging market economies. This alliance mobilised enormous amounts of political and economic capital to inaugurate the incorporation of mobile phones and mobile phone generated data into developmental practice. And though the actual welfare benefits of mobile money remain contested, its commercial success is undisputed. As the 2019 mobile money flagship report of the GSM Association suggests, within only a decade, over one billion people became mobile money customers; the industry grew to process nearly $2 billion mobile transactions per day; with annual transactions expected to surpass $1 trillion dollars by 2023 (GSMA, 2020). A defining aspect of this lineage of fintech is that it is centred on the use of cheap feature phones, often by people living on only a few dollars per day. As a result of this, there is a certain geographical specificity to this fintech story that resonates most powerfully in African countries, where the use of feature phones is most widespread.  

Banking on smartphones: fintech and the digital tech giants

A second popular origin stories of fintech revolves around the rise of smartphones and the rapid adoption of app-based mobile payments. Only three months after M-PESA was launched in Kenya, Apple released its first generation of iPhones in the US. Similar to M-PESA, the rapid uptake of iPhones came as a surprise to many observers. And likewise, it shifted the trajectory of an entire industry, making data- and web-enabled

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14 Eastern Africa remains the unchallenged leader in mobile money, both in terms of monthly number and value of transactions at 1.5 billion transactions worth $26.7 billion dollars. It is followed by West Africa at 436 million transactions worth $11.6 billion dollars and South Asia at 663 million transactions worth $10.9 billion dollars. See: [https://www.gsma.com/mobilemoneymetrics/](https://www.gsma.com/mobilemoneymetrics/) (Accessed 31 March 2021).
services, rather than voice calls and text messaging the mainstay of mobile telephony. Apple caught out not only the world’s biggest mobile phone manufacturers, Nokia and Blackberry, but also its main rivals in software development, Google and Microsoft. For smartphones began to substitute both, conventional mobile phones as primary communication devices, and personal computers as the primary access devices to internet connectivity.  

Key to the iPhone was its deliberate design as an interface for various novel activities that had previously not usually been associated with mobile phones. Initially the range of new activities was pre-defined by a number of pre-installed options: voice calls, emails, texts, maps, browser, music, camera, calendar, contacts, notes, stock prices, weather, calculator, and clock. But in June 2008, Apple introduced its 'app store' together with the release of its iPhone 3G, which allowed users to individually pick and choose new additional features and functionalities.  

Already in March, Apple had released a Software Development Kit (SDK) that allowed third-party developers to build their own applications, or 'apps', and offer them on the app store to other iPhone users. The successive release of these two features, the SDK and the app store, proved momentous for the nascent smartphone market in ways that their creators did not anticipate. Developers worldwide flocked to the new challenge of re-thinking the daily role of smartphones, causing an outburst of experimentation with new functionalities. Using the phone as a torch, for example. Or using it as a fitness companion. Using the phone to compare prices. Or using it to find a date.

The app store became simultaneously both a cause and a symptom of the phenomenal commercial success of the iPhone itself. By January 2011, the number of available apps on the app store had swollen to 350,000, as Apple celebrated the 10 billionth app-download worldwide. By 2019, the number had grown even further to 3.96 million apps on offer and the app store was estimated to generate economic activity in the region of 500 billion dollars (Borck, Caminade and von Wartburg, 2020). Meanwhile,

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15 Sales of internet-connected smartphones overtook those of personal computers in 2011, and those of basic feature phones by 2013.
iPhone sales grew from one million units by the end of September 2007, to 150 million units sold in 2013, suddenly generating more than half of the company’s revenues. Sales figures further grew to 211 million units in 2016, effecting the one billionth sale of an iPhone that year. Consumers’ embrace of the iPhone forced rivals to rapidly enter the market and mimic Apple’s product strategy. Alternative smartphones poured from the previous market leaders Nokia and Blackberry. But also, from new entrants such as Samsung and HTC. Additional manufacturers, such as Lenovo, Huawei, and Xiaomi entered the race with low-priced and unbranded devices capturing large parts of consumers in emerging market economies. Meanwhile, both Google and Microsoft launched their own mobile operating systems to draw developers and consumers to their alternative software environments.

As smartphones swept global consumer markets, they not only profoundly transformed the mobile phone industry. They also began to have a widening impact on the contours of the global political economy more broadly (Shiller, 2014, p. ch. 6). Their enormous popularity and versatility opened up prospects of reaching consumer markets rapidly numbering in the billions. Disparate companies, rooted in everything — from entertainment to advertising, from food to fashion, from tourism to mobility — raced to gain an advantage by adjusting their product offering and delivery to the new mobile reality. Mobile network infrastructures were rolled out and upgraded from second (2G), to third (3G), and then fourth generation (4G), to meet the surge in demand for mobile internet connectivity. ‘Cloud-computing’ infrastructures were erected, in the form of vast proprietary server farms, to capitalise on the limited storage capacity of smartphones compared to previous desktop computers. And thus, almost inevitably, the financial services sector too was forced to re-think and adjust its role in the mobile-driven economy.

Competitive pressure hit — again — in the payments industry first. In this instance, however, it was not driven by the promise to profitably extend payment services to the

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20 Google decided to license its system freely, allowing especially competitors on the low-end to enter the market and in the process push Google’s Android to the top of the mobile operating systems market. A position it holds by a commanding majority, today. In July 2020, 74.6 percent of global smartphones ran on Google’s Android, compared to 25.15 percent of smartphones running on Apple’s iOS. The two companies jointly possess almost 99 percent of the global market share. See: [https://gs.statcounter.com/os-market-share/mobile/worldwide](https://gs.statcounter.com/os-market-share/mobile/worldwide) (Accessed 31 March 2021).
world’s poorest households. It was driven by the promise to profitably simplify payments for the world’s wealthier ones. As Maurer (2011) has noted, it is an often overlooked peculiarity of payments that they incur a cost to the receiving merchants. Paying in cash incurs the cost of ‘cash handling’, e.g. counting the cash by the end of the day and storing it safely. Paying by card, in turn, incurs the cost of maintaining card terminals and paying transaction fees to the card issuing bank. These fees are small, usually below one percent of transaction volumes. But they are highly profitable at scale. In 2018, they generated roughly $480 billion in revenue for the global payments industry (McKinsey, 2019).

Before the advent of smartphones, payments providers had focused on online payments as the new frontier for business. Who would capture the payment fees from fast-growing e-commerce platforms? PayPal became the widely reported success story in the US, when it was acquired by online retailer eBay in 2002 (Kane, 2002). With the advent of smartphones, the sudden demand for mobile payment solutions reshuffled the industry, allowing new companies such as Adyen, Klarna, and Stripe to make an entry. But the most decisive impact of smartphones was not to heighten competition over payment proceeds in the online business. Rather, it was to blur the very distinction between online and in-person payments, itself. What if consumers started to pay not just for online orders or in-app purchases with their mobile phones, but also — just like in Kenya — for their daily groceries at the local shop?

In the US and in Europe, this prospect posed a serious threat to the great gatekeepers of payments, i.e. the banks and the card networks, whose privileged position in the industry came under permanent attack. In 2010, a consortium of telecommunication networks announced plans to develop a network-owned mobile payment system for US consumers, named — somewhat unfortunately — Isis. In 2012, a group of large US retailers followed, revealing similar plans for a merchant-owned mobile payment system named Current-C. In 2014, Apple launched its mobile payment system Apple

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21 Supposedly in exchange for enhanced sales and convenience.
22 The name attained a negative connotation with the rise of an eponymous terror organisation in Syria and Iraq and was later renamed into ‘Softcard’.
Pay. In 2015, Google launched Android Pay. In 2019, Amazon announced an expansion of Amazon Pay. Yet, despite these continuous efforts to shake up the payments market, smartphone-induced change in the US and in Europe remained incremental. Consumers only gradually warmed to the idea of using their smartphones for financial purposes. And regulatory rules presented significant barriers for newcomers to enter the industry. Usually forcing them to partner with banks and/or card networks, who defended their privileged position as the main beneficiaries of payment related fees.

In China, by contrast, the uptake and impact of smartphone payments was immediate — and nothing short of extreme. Coinciding with the explosive growth of its middle class, smartphones virtually shifted the entire economy from predominantly cash-based transactions to mobile-based payments. Fintech professionals often use the term 'leapfrog' to describe the process. For China’s newly emerging middle classes jumped directly from using cash to using their smartphones to pay, skipping credit and debit cards in the process, and boosting a fintech sector driven largely by digital tech companies, rather than financial institutions, development agencies, or large telecommunication networks. The two main protagonists in this context were Alibaba, a Chinese e-commerce platform, and Tencent, a social media platform. Both launching payment apps that came to dominate payments in China, relegating cash payments to second and card payments to a distant third place (Zhang and Chen, 2019).

Founded in 1999 as an e-commerce platform to rival eBay, Alibaba launched its online payments provider AliPay in 2005, in a move that paralleled eBay’s acquisition of PayPal. AliPay addressed what was widely perceived as a ‘trust-problem’ between online vendors and online buyers on Alibaba’s consumer-focused platform, Taobao, by introducing an escrow: It collected buyers’ money and transferred it to the vendors only

27 This narrative is slightly misleading as China de facto operates the largest card network in the world. State-controlled Union Pay has 7 billion credit, debit and prepaid cards in circulation, compared to 5.6 billion by Visa and MasterCard combined. Yet, the narrative is right to suggest that mobile payments dominate transaction volumes, as a significant share of offline vendors do not accept card payments, due to higher associated costs.
once receipt of the goods had been confirmed. In 2009, AliPay launched its mobile app, initially to enable users to make online purchases on Taobao. In short order, however, the app's functionality expanded. In 2011, AliPay added QR-scanning functionality to the app, enabling users to make offline payments to anyone with a respective QR code at hand.\(^2\) In 2013, it added investment tool 'Yu’e Bao' (which translates into 'leftover treasure') to the app, allowing users to hold their spare cash 'in-app' at generous interest rates and redeemable on demand.\(^3\) In 2014, it added Huabei to the app, offering consumer loans. And in 2015 it added Jie Bei, offering cash loans. Thus, within only a few years, AliPay grew from a simple payments provider to a full 'financial hub' on the smartphone. Allowing users not only to pay for online and offline products, but also to access a wide spectrum of savings and investment products. The popularity of the app was spectacular and by the end of 2019 boasted 900 million monthly active users.

Tencent, followed a similar path, although from an entirely different starting point. Founded in 1998, it had previously built a chat service for desktop computers named QQ, which became the preferred chat service of online gamers in China, who heavily depended on the ability to communicate with each other on the web. Building on its success with QQ, the company established itself first as a successful gaming company. In 2011, Tencent launched its smartphone app Weixin, again as a mobile messenger service, which soon transformed into China's preferred social networking app, with various functions for following celebrities and interacting with friends. Like Alipay, the functionality of the app rapidly expanded to include payments and financial services, too. In 2012, Tencent renamed the app into WeChat. In 2013, WeChat attained mobile payment- and QR-functionality.\(^3\) In 2014, it launched in-app Taxi hailing with company

\(^2\) QR codes had come into fashion in China, initially as a marketing tool, an easy way to befriend or follow people on social media platforms with a simple scan. But they soon became a popular means of accepting payments for merchants who could not afford expensive card terminals or even an online connection. Taxi drivers, street vendors, medics, but also supermarkets, utility providers, and more, all began to accept QR-payments, paving the way for smartphone-enabled in-person payments at scale.

\(^3\) The service would later come into the headlines for accruing $211 billion dollars within less than four years, incidentally – and somewhat accidentally – overtaking JP Morgan's fund to become the largest money-market fund in the world.

Didi\textsuperscript{32} and in-app shopping with China’s second-biggest e-commerce retailer and direct competitor of Alibaba, JD.\textsuperscript{33} In that year, it also famously created a digital version of the traditional red envelope gift — a common cash-gifting practice in China, especially during Lunar New Year — which boosted the app's nation-wide popularity. In 2015, WeChat added two loan products to the app named Weilidei and Weichedai, offering cash loans and loans for second-hand cars, respectively. Hence, the popularity of WeChat as a social network spilled over, making it a popular shopping app, and then, a popular financial app, too. Again, the customer reach of WeChat was enormous, counting 800 million monthly active users, by the end of 2019.

All told, AliPay and WeChat spearheaded the mass adoption of smartphone-enabled finance in China. And thereby, the smartphone lineage of fintech worldwide. With a combined user base of 1.7 billion monthly active users they created a mobile payments market estimated to generate 75 percent of all payments in 2016, which they dominated at a combined market share of 94 percent by the end of 2019. In August 2020, Alibaba filed for a public listing of its financial arm Ant Financial, parent company of Alipay, anticipated to be the largest Initial Public Offering (IPO) of all times (Reuters, 2020a). The IPO was spectacularly prevented last-minute by the Chinese regulators, which have since begun to curb the adoption of financial business models by e-commerce firms (Reuters, 2020b). But the figures released in the process offer a glimpse at the sheer economic power of the digital tech company: Alipay had processed $17 trillion worth of transactions in the year ending in June 2020 (Reuters, 2020a). It further had charged merchants $3.76 billion of fees in the second half of the year, which it claimed accounted for only a third of its total revenue with the other two thirds deriving from other financial products: consumer credit, investment products, small business loans, health insurance, and more (Reuters, 2020a).

These figures directly point to the two paradigmatic concerns of the smartphone focussed fintech story. First, they point to the huge gravitational pull that China’s blockbuster apps exert on China’s and increasingly its neighbouring country’s fintech


industries. Most of the 'other' financial products offered by the app are delivered in cooperation with third-party providers that operate in the background. Placing the company at the centre of a large network of corporate partnerships, orbited by an even larger number of specialised challenger companies, all vying for access to the app to quickly reach customers at scale. Similarly to Apple and Google with their respective operating systems and app stores, Alipay and WeChat have thus established themselves as powerful gatekeepers or 'platforms' of mobile enabled web services. But they have exceeded their US counterparts in establishing such a role beyond software in the financial services industry, too.

Second, they point to the growing realisation of fintech professionals and observers that fee-based revenue may not be the prime interest of the digital tech giants, after all. The fees declared by Alibaba, at least, are negligible (< 0.03%) compared to its transaction volumes. And a considerable fraction of fintech scholars and practitioners have begun to pay attention to the value that lies in the transactional data produced in the payment process, because it opens up an entire new line of business in which digital and financial industries gradually merge. From this perspective, the migration of finance to mobile channels may only be a minor step in the broader ambition to embed finance within data-leveraged business strategies. More radical than simply blurring the distinction between online and offline payments, smartphones may additionally blur the distinction between financial and nonfinancial commercial activities, rendering them as merely one specific subsets of the overarching 'data-as-a-service' industry.

There are then several similarities, but also notable differences, between the two narratives that focus on mobile money and app-based mobile payments, respectively. Both tell a story about the dynamic integration of mobile technologies into payments. First enabling value transfer between peers; then adding further use cases to enlarge and diversify profit opportunities. Both include a decisive step of large nonfinancial corporations into finance, telecommunication networks in one instance, digital tech giants in another. And both relate an ongoing experimentation with new kinds of data produced by mobile devices within financial contexts. But where the mobile money narrative is shaped by the African experience of fintech, which is inextricably linked to a development discourse that seeks to 'eradicate poverty through profits' (Prahalad, 2005); the mobile payments narrative is shaped by the Chinese experience of fintech
that has contributed to speculations that 'the world's most valuable resource is no longer oil, but data' (The Economist, 2017b).

Banking in crisis: fintech and the disruption of 'old finance'

A third popular origin stories of fintech revolves around the political and economic shocks created by the North Atlantic financial crisis of 2008/9. The crisis proved a key juncture for the formation of fintech, especially in Europe and in the US. First, because it led to far-reaching regulatory measures that tarnished the profitability of banks and encouraged the competition from tech savvy entrepreneurs. Second, because it caused a massive influx of capital into venture investment firms hunting above average returns in a low interest rate world. And third, because it pushed huge swaths of financial professionals out of their jobs and into the tech sector, supposedly to 'fix' all that was wrong with finance after it had failed.

The response of regulators to the crisis was not uniform across countries or regions. But there was a general demand for stricter regulation, especially of global banks: higher capital and liquidity standards and more rigorous supervision by the relevant authorities (Bank for International Settlement, 2018). In Europe, where banks were hardest hit, there was an additional push from the regulators to reduce implicit public subsidies and promote competition in the sector, especially on the retail banking side. The EU passed the Payments Service Directives, PSD and PSD2, which encouraged – again – nonbanks to enter the payments market by removing regulatory barriers for competitors without credit risk. They also established a right for consumers to share their financial data with third parties, combined with a duty for banks to provide the technical infrastructure needed to do so. The UK regulators even surpassed these steps. Introducing higher capital and liquidity standards and stricter regulatory oversight, but also passing further legislation to foster competition in retail banking. The Financial Services Authority (2013) effected legislative changes that made acquiring a banking license easier, and the Competition and Markets Authority (2016) passed Open Banking — a legislative ruling mandating the UK’s nine biggest retail banks to provide a technical infrastructure, based on so-called APIs, for sharing financial data with third parties.

35 API is short for Application Programming Interface. APIs are connection points, which enable separate software programs to exchange information automatically, without human intervention, thus
For European banks, these regulatory changes merely added to a long list of legacy problems. For nonbank competitors, however, they provided an opening. And indeed, the new legislation proved a watershed moment, especially for the European fintech industry. Somewhat unexpected, the immediate beneficiaries of the new legislations were neither the much-anticipated telecommunication networks, nor the digital tech giants. Rather, it was small start-up companies, often founded by former bankers, that established themselves as the main challengers. Companies that focused on specific niche aspects of banking, rather than the whole spectrum of financial services. A first group of fintech start-ups began to address the 'legacy' IT systems of big banks (e.g. 10x Technologies, Leveris, Mambu, or Thought Machine), which they claimed, were simply not built for the PSD2/Open Banking world. Their outdated software architectures often went back to the 1960s and forced them to dedicate disproportionate parts of their budget on IT maintenance whilst constantly falling short of customer expectations regarding digital and mobile innovation. Hence, these start-ups offered 'modular' digital solutions that were designed to successively replace select processes in the backend with cloud-based alternatives, so as to create efficiency gains in terms of operational cost and speed, at a time when banks were under severe funding pressures.

A second group of fintech start-ups targeted the consumer facing side of retail banking. They tended to be very vocal about the damaging role of the banks in the crisis, whose dramatic consequences continued to reverberate through Europe’s austerity ridden economies. And they presented themselves as a radical alternative. 'Banking is broken', they proclaimed and offered digital solutions to fix it. These start-up companies typically focused on specific retail banking products, such as online and mobile payments (e.g. Checkout, Klarna, Rapyd), foreign transactions (e.g. CurrencyFair, Transferwise, WorldRemit), current accounts (e.g. Monzo, Revolut, Starling), crowdfunding (e.g. Seedrs), peer-to-peer lending/borrowing (e.g. RateSetter, Zopa), savings (e.g. Atom, OakNorth, Raisin), investment (e.g. eToro, Nutmeg, Robinhood), insurance (WeFox, Cuvva), mortgages (e.g. Habito, Mojo, Trussle), and pensions enabling data to flow. The EU does not explicitly require banks to use APIs to meet their PSD2 obligations. But following the UK ruling, APIs have become the most popular technology to that end.

(Pension Bee, Penfold). Though superficially diverse, the digital solutions of these companies were in fact remarkably uniform and orbited around a rethinking of financial products as 'user experience' (Tkacz, 2019). This typically included three propositions: to ease the use and accessibility of financial products; to offer greater transparency of fees and more competitive pricing; and to radicalise customer centricity and boost the 'ordinary' appeal of financial services.

For example, the start-up company Zopa, a prominent peer-to-peer lender in the UK, offered a way to circumvent incumbent banks by matching people in need of credit with people in excess of funds on a digital platform. Zopa claimed to be more inclusive than banks, because of its simple and automated online application process: No forms, no paperwork, and rapid response rates. It also suggested that it could offer better interest rates than banks (for borrowers and lenders), thanks to superior technology: No 'legacy' IT systems, and no information stuck in 'data silos'. Finally, it carefully curated its appeal to 'normal people' by cultivating a casual tone of language that departed significantly from the formal and bureaucratic communication style usually encountered with traditional banks. In almost identical terms, Transferwise became one of Europe's most popular fintech start-ups by promising a way to bypass the 'hidden fees and mark-ups' of banks in international transactions, supposedly by matching complementary peer-to-peer payment streams on its digital platform. It promoted increased transparency by automatically showing users the fees and the exchange rate for any given transaction upfront. And it actively sought to appeal to those 'ordinary' people and citizens who wanted to opt out of the system run by banks by cultivating a media image of bottom-up movement through radical anti-bank rhetoric and grassroots Occupy Wallstreet iconography in its marketing campaigns.

The 'banking is broken' line initially proved very popular. But it rapidly lost its countercultural purchase, as several fintech start-ups grew into multi-billion-dollar companies, and as banks began to acquire start-up companies or to replicate their most promising ideas. Gradually, fintech became normalised, as a term, as an industry, and as a mainstream policy concern. Financial professionals, who had once mocked and ridiculed the 'move fast and break things' culture of entrepreneurs, began to hail the efficient cost structures, organisational agility, and creative spirit of start-up companies. Fintech entrepreneurs who had once attacked the tedious and expensive bureaucracy
of big banks started to appreciate the need for prudent risk management and cautious safeguarding against fraud. A growing number of cities, countries, and regions launched political initiatives to become part of the 'fintech journey', e.g. by providing 'regulatory sandboxes' or urban 'fintech innovation hubs'.

Drawing these points together, if the mobile money narrative about fintech focusses on the experience of M-PESA's success in the development sector, and if the mobile payments narrative about fintech focusses on the successes of Alipay and WeChat in China, then this third narrative about fintech is rooted in the experience of the North Atlantic financial crisis primarily in Europe and the US. Fintech, here, is presented as an entrepreneurial response to the perceived failure of global banking, enabled by far-reaching regulatory interventions, which at once curbed the profitability of global banks and proactively fostered competition in retail banking, especially in Europe. This story is also linked to the profitable prospects of migrating payments and finance onto mobile and digital channels, but the main protagonists are not mobile networks or digital tech giants. Rather, the actors that gain all the attention are proactive regulators and small, venture-backed, start-up firms.

**Part Two: Two social scientific critiques of fintech**

Having outlined three paradigmatic narratives about fintech, that journalists and fintech professionals tell to introduce newcomers to the field, this second part moves to a small but growing body of social scientific research that has begun to unpack the industry's causes and consequences in more critical-analytical terms. This section begins by demonstrating that this research spans various disciplines before it introduces two theorisations of fintech that resonate widely across existing work: one that frames fintech as an instance of financialisation, and one that approaches it as an extension of surveillance capitalism. Both theorisations offer powerful critiques of the one-sided optimism of fintech professionals. But they also share a latent and limiting tendency to reduce its politics to a singular, circumscribed understanding and thus risk to downplay the contingency and heterogeneity of the industry. The chapter argues that this raises a broader dilemma for fintech scholars regarding the question of 'what matters' in critical fintech studies, and it suggests that one way of dealing with that dilemma is by exploring possibilities for mobilising critical viewpoints without relying
upon and reproducing universalising assumptions about where or what the politics of fintech are. Thus is the focus of subsequent chapters.

**Signposts in the literature**

Although fintech is only beginning to attract critical social scientific inquiry, a considerable number of works across disciplinary traditions has started to pay attention to financial technologies for some time. Most prominently, perhaps, has been the research conducted by Bill Maurer, Taylor Nelms, and others at the Institute for Money, Technology and Financial Inclusion (IMTFI) of the University of Irvine, who first established the “Cambrian explosion” (Maurer, 2017) in payments as an important line of social scientific inquiry. Their work, broadly situated in the tradition of anthropology, documents the eruption of a sudden frenzy of innovation in payments and its continued influence on the financial sector today (Maurer, 2011; Maurer, 2012; Maurer, 2015; Maurer, Nelms and Rea, 2013; Nelms et al., 2018; Maurer and Swartz, 2018). Further studies focused primarily on the ‘fintech-philanthropy-development complex’ (Gabor and Brooks, 2017) provide succinct critiques of the philanthropic pretences of ‘mobile money for the poor’ (Mader, 2016; Mader, 2018), and a nuanced analysis of the new ‘remittance rails’ that have been rolled out across developing countries in recent years (Rodima-Taylor and Grimes, 2019).

Scholars of International Political Economy have also begun to critically question the implications of digital innovation in finance for the broader politics of money, finance, and debt. Existing work questions the role of mobile and digital technologies at the ‘fringes’ of finance (Aitken, 2006; Aitken, 2017; Bernards, 2019; Bhagat and Roderick, 2020; Gabor and Brooks, 2017; Langevin, 2019). It emphasises their role in refracting and extending the operation of state-power (Gruin, 2019; Gruin and Knaack, 2020; Jain and Gabor, 2020) and their role in marketising and politicising ‘the social’ at once as a source of profit and resistance (Rogers and Clarke, 2016; Tooker and Clarke, 2018). Finally, a number of recent works have begun to unpack how fintech forces attention on the politics of infrastructure and ownership over the ‘socio-technical arrangements’ that allow money, data, and value to flow (Bernards and Campbell-Verduyn, 2019; Clarke, 2019; Westermeier, 2020).
Arguably the most prolific source of critical fintech research has been economic geography, where scholars have been documenting the uneven evolution of various 'fintech ecologies' (Langley and Leyshon, 2017a) across the global political economy. Two recent introductory articles situate fintech within the broader research concerns of financial geography (Knight and Wójcik, 2020; Lai and Samers, 2020). Other works analyse the accommodation of fintech through innovation hubs in global financial centres (Hendrikse, Bassens and van Meeteren, 2018; Hendrikse, Meeteren and Bassens, 2020) and the digitalisation of various financial products, from payday lending (Langley et al., 2019), to crowdfunding (Langley, 2016; Gray and Zhang, 2017), to asset management (Haberly et al.; Fields, 2019). Langley and Leyshon (Langley and Leyshon, 2017b; Langley and Leyshon, 2020) have provided one of the most influential theorisations of fintech as a 'platform' political economy (see also: Srnicek 2016).

There are two further strands of literature that stand out in their contribution to the critical study of fintech. First, the work of legal scholars that critically weigh the societal benefits of fintech innovation with its societal risks, primarily in view of potential regulatory interventions (Arner, Barberis and Buckley, 2016; Yadav and Brummer, 2019; Omarova, 2018; Pistor, 2020). And second, the growing body of cultural and media studies that offer reflections on the 'remediation' of money and finance and the various ramifications of this for the 'rhizomatic operations' of mediatised power in contemporary societies (Ash et al., 2018b; Dieter and Tkacz, 2020; O'Dwyer, 2015; O'Dwyer, 2019; Tiessen, 2015; Tkacz and Velasco, 2018; Tkacz, 2019).

Having outlined the emerging body of research on fintech, the chapter now turns to two critical perspectives that have emerged from this literature: one that frames fintech as an instance of financialisation and one that approaches it as a platform economy. The two perspectives have become two of the most popular academic critiques of fintech in recent years, and they each provide compelling reasons to be sceptical of the one-sided optimism emanating from business circles. But they also share a certain universalism that will be outlined and critically questioned at the end of the chapter.
Fintech as financialisation

As Brett Christophers (2015) has noted, if 'globalisation' was the overriding concern of critical social science debates in the 1990s, followed by 'neoliberalisation' in the 2000s, then 'financialisation' was the successor term in the debates of the 2010s. Its rise to prominence broadly reflects the explosion of academic interest in the financial sector after the North Atlantic financial crisis and the growth of a sophisticated body of research documenting the power and influence of that sector across various political and economic domains.

At the very basic, the term 'financialisation' refers to the re-emergence of global finance in the twentieth century, inaugurated by the creation of Eurodollar markets in the 1950s, and accelerated by the dismantling of the Bretton Woods system in the 1970s (Braun, Krampf and Murau, 2020; Helleiner, 1994; Konings, 2007; Strange, 1998). More specifically, it refers to the rise of a dollar- and market-based financial system from the 1990s onwards, which — uninterrupted by successive financial crises — led to the dramatic growth of global securities and derivatives markets whose notional values tower in the hundreds of trillions37 of dollars, today (Hardie and Howarth, 2013; Mehrling, 2017; Tooze, 2018; Gabor, 2020a). Financialisation, in this sense, refers to the mass-expansion of debt-based financial assets and the attendant rise of 'innovative' practices of speculation and arbitrage (Leyshon and Thrift, 2007).

On the flipside, financialisation frames these developments as the result of the gradual conscription of governments, companies, and individuals into financial markets. Through debt instruments ranging from sovereign debt to corporate bonds, to student loans and pension funds (Hardie, 2011; Soederberg, 2014; van der Zwan, 2017). In more political terms, then, financialisation scholars critically question the unwitting exposure of actors as large as nation states and as small as ordinary pensioners to the volatilities of the financial markets, and also, their often coerced acculturation to financial ideas, techniques, and practices. As Haiven (2014) described it:

“We live in an age when student loans, mortgages (prime or subprime), consumer debt, credit cards and concerns about retirement investments

(should we be fortunate enough to have them) preoccupy daily life and shape economic realities as never before. It is an age when, for all intents and purposes, debts and deficits have become the key and most important arbiters of policy, not only at the level of nation-states but at the level of sub-state actors, including cities, public transportation firms, school boards, universities, hospitals and more. It is an age when financial markets essentially dictate corporate strategy, with the major firms that command the global economy beholden to the anonymous superego of “the shareholders” and their ruthless representatives (fund managers, bank executives, etc.). It is an age when the vast majority of the world’s most basic materials (oil, corn, wheat, rice, lumber, water) are traded dozens, perhaps scores, of times before they are ever consumed, thanks to the frenetic speculative trade in “commodities” futures and derivatives contracts; an age when the value of money has little to do with the economic vitality of the issuing nation but is, rather, determined by the vicissitudes of transnational currency exchanges” (p.2).

Taken together, this amounts to the shared proposition of numerous articles, special issues, and edited volumes: that contemporary ‘financialised’ capitalism, from its highest echelons to its lowest depths, is pervaded by a politics of finance and debt, that not only brings the power to issue credit and enforce debt into view, but also brings the generalisation of financial worldviews into focus that encourage actors to address the world in financial registers of risk and return (Lazonick and O’Sullivan, 2000; Williams, 2000; Martin, 2002; Krippner, 2005; Froud, Leaver and Williams, 2007; Montgomerie and Williams, 2009; Christophers, 2015; Storm, 2018; Mader, Mertens and van der Zwan, 2020).

Fintech is often understood in this context, as a modality of financialised capitalism, which extends the power and reach of financial markets beyond previous limits. For Gabor and Brooks (2017), for example, mobile money is a development driven by the structural demand for new 'asset classes' by global investors. In this telling, philanthropy can only ever be a secondary concern of fintech actors, whose primary goal is to profit from tapping hitherto unavailable financial streams for 'securitisation', i.e. for converting them into financial assets to be sold to and traded by international
investors. This flips the narrative over who grants access to whom. Where proponents of M-PESA, for instance, celebrate the fact that they grant poor and/or rural people access to financial services, the more critical view of Gabor and Brooks (2017) highlights in reverse how M-PESA grants Vodafone and Safaricom access to the poor and/or rural as a potential source of income. And although proponents of fintech may argue that this produces equal benefits (win-win!), the institutional arrangements set up in the process typically prioritise investor interest over that of the poor (Bhagat and Roderick, 2020). Political agendas such as 'banking the unbanked' thus appear as ultimately profit-oriented policy frameworks, designed to 'de-risk' the financial streams of vulnerable populations for global investors through mobile and digital technologies. A process that Aitken (2017) theorised as a process of rendering financial streams 'legible' in the eyes of investors. The empirical question then becomes what the social and economic costs of de-risking are, who has to deal with them, and who in turn captures the gains.

A second line of argument shifts the focus from the role of fintech in expanding financial markets to its role in financialising state power. For scholars such as Gruin (2019), Gruin and Knaack (2020), and Jain and Gabor (2020), fintech refracts the power of state-actors, as they actively seek to seize fintech for state-craft objectives. This creates complex interdependencies that are typical of states' attempts to govern 'through' markets (Braun, 2020). Not only is fintech mobilised as a vehicle of state-power to achieve state-craft objectives. Fintech also gains leverage over state actors as a gate keeper to the knowledge, technology, and expertise on which they depend. The use of data-leveraged credit scoring is the paradigmatic example. Gruin (2019) details how in China new methods for credit scoring were pioneered by Ant Financial and other fintech companies to evaluate the creditworthiness of untapped consumer segments. These methods came to play a much broader role in the strategy of the Chinese government to foster 'algorithmic governance' as a means to evaluate the socio-political trustworthiness of its citizens. "Big data algorithms' functions as market devices", Gruin observed, "are both supplemented by and transmuted into tools of political power" (2019, p. 85). Such a perspective usefully foregrounds the complex entanglement of corporate and state actors that is too often side-lined by congratulatory narratives about China’s Ant Financial and WeChat, and indeed, India’s Aadhar Pay (Jain and Gabor, 2020). It also urges caution with regards to the potential
complicity of fintech companies in anti-democratic politics and with authoritarian regimes. Yet it arguably understates to some extent how credit-scoring techniques have political consequences even in their function as market devices. As Aitken (2017), Bhagat and Roderick (2020), and Gabor and Brooks (2017) have pointed out, one of the major social costs of ‘de-risking’ the financial streams of poor, rural, and even refugee populations has been to enforce and enable the digital surveillance of their mobile and financial activities to build up a credit score. Exposing them to a latent demand for conscious self-projection of ‘trustworthy’ mobile and financial behaviour.

In this sense, a third line of argument relates fintech to the ways in which finance imposes financial norms and pressures on the daily experience of market life (Rosamond, 2016). Randy Martin (2002) famously observed that the transformation of financial markets into mass markets during the 1990s had resulted in a universal ‘invitation to live by finance’ that subtly altered conceptions of market subjectivity and market life. In continuation of previous neoliberal modes of governing – through the ‘self-regulating’ capacities of market subjects (Miller and Rose, 1990) – the pervasive presence of finance seemed to instil a new form of self-regulation onto people that encouraged them to embrace indebtedness and precarity by treating them as a path to empowerment rather than as a burden; as an opportunity for personal gain and self-betterment rather than an unwanted outcome (Lazzarato, 2012). Martin’s dictum of an ‘invitation to live by finance’ thereby captured precisely that this was not necessarily a repressive or oppressive process, but was made to feel compelling, even empowering, to individuals, within a broader political context in which long-term security and collective guarantees had been thoroughly dismantled. On this view, data-leveraged credit scoring appears as another financial technique where disciplinary and post-disciplinary forms of power entwine, pushing and pulling people towards embracing financial worldviews and making them their own (Rosamond, 2016). Especially in the context of European and US fintech, where hip start-up companies frame debt as an aspiration, investment as a lifestyle, and saving as a form of caring for one’s mental health, the financialisation perspective therefore serves as a powerful critical device. Revealing how fintech continues to force people in varying degrees to embrace financial subjectivities and at the same time constantly ‘invites’ them to rethink their life choices in financial terms.
Fintech as digital surveillance

In 2019, Shoshana Zuboff coined the term 'surveillance capitalism' to draw attention to the proliferation of increasingly sophisticated corporate strategies to mine value from the analysis of, and intervention in, behavioural data (Zuboff, 2019). Fuelled by the sustained journalistic reporting of, and public outrage over, the successive Snowden and Cambridge Analytica revelations, and moreover, by the meteoric rise of digital tech companies to the top of the most valuable companies of the world, the term rapidly caught on as a watchword for academics to frame the pervasive production, collection, aggregation, and analysis of data across political and economic domains. As Tiessen (2015) astutely summarised:

"One thing that is becoming increasingly clear – especially post-Snowden – is that the Internet and the potential of the data and patterns generated by networked mobile devices and digital code is most valuable not because it enables tweets, wayfinding, mobile banking and Instagraming, Googling, tweeting or Facebooking, but because this data produces a useful resource for finance, business and government – institutions interested in manufacturing opinions and consent" (p. 872).

Fintech, in this context, is often understood as a capitalist vanguard at the intersection of the most powerful sectors of the global political economy – financial services and digital tech. Constituting the corporate 'space' for fintech entrepreneurs to experiment with new business models and technologies that gradually integrate the two sectors. Thus allowing surveillance capitalism to grow. Scholars have demonstrated, for example, how fintech companies link financial revenue models (charging fees on payments, collecting interest on debt, etc.) with digital revenue models (targeted advertising, e-commerce, etc.) by mining transactional data as a source of behavioural insight that is valuable to financial and digital companies (O'Dwyer, 2015; O'Dwyer, 2019; Maurer and Swartz, 2018; Langley and Leyshon, 2017b; Langley and Leyshon, 2020; Jain and Gabor, 2020; Westermeier, 2020). O'Dwyer (2019) usefully distinguishes between three uses of transactional data. First, as a means of market segmentation, "where transactional data is used to classify customers for advertising and sales purposes"; second, as a means of streamlining merchandise and supply chain
operations, where companies "use big data and machine learning to forecast inventory, demand and supply"; and third, as a means to build better risk models for financial services, where – as per above – "purchase histories become a proxy for trust and creditworthiness" (ibid.).

Developing on the insight that transactional data is valuable to finance, business, and government, fintech scholarship has countered the widespread enthusiasm in the industry for surveillance capitalism, and specifically for the commodification of transactional data, by depicting control over data and over the 'infrastructures' that allow data to flow as a pivotal locus of excessive power (Bernards and Campbell-Verduyn, 2019; Clarke, 2019; Hendrikse, Bassens and van Meeteren, 2018; Hendrikse, Meeteren and Bassens, 2020; Westermeier, 2020). On this view, the fact that one of the core infrastructures of the world economy is entrusted to a select number of global conglomerates is rendered problematic (Pistor, 2020). Not least, for how it is likely to accelerate the concentration of wealth and power in the hands of only a few. A key conceptual proposition in the discussion has been to frame fintech in the terms of a 'platform' economy (Langley and Leyshon, 2017b; Langley and Leyshon, 2020), which serves to highlight how fintech companies try to seize the datafication of financial transactions as an opportunity for restructuring the global economy as a network of quasi-monopolistic companies, placed at the heart of some multi-sided markets (Gawer, 2014), using their control over data and/or data infrastructures in order to leverage small interactions to huge financial gains (Parker, Van Alstyne and Choudary, 2016). A vision that consistently runs through fintech’s most popular business metaphors, from that of the 'ecosystem' to that of the 'hub-and-spoke' model. From this perspective, the radical marketing rhetoric of fintech start-up companies is sharply exposed. Companies claiming to 'cut out the middleman' likely seek to take that very position themselves.

Another set of arguments relates fintech to broader conversations about the 're-mediation' of power through algorithms and interfaces under the condition of data abundance, ubiquitous computing, and permanent connectivity (Amoore and Piotukh, 2016; Halpern, 2015). Key to this line of inquiry are Deleuze's theorisations of the shift away from 'society of discipline' towards 'society of control' (Deleuze, 1992). And especially, the argument that with the rise of data abundance and ubiquitous
connectivity, disciplinary forms of power are superimposed by new forms of power that operate in and through flexible movement and continuous change (Ash et al., 2018b). Here, the critical impulse is to understand how mass surveillance, just like debt or precariousness, is made to feel normal, even empowering, from an individual perspective, through fintech; why people agree to financial surveillance in exchange for convenience; and how, by accepting and adapting to mass-surveillance in this manner, people themselves may change. For scholars like Ash et al. (2018b) and Dieter and Tkacz (2020), the key site for critically studying these questions is design. Especially Human-Computer Interaction (HCI) design, which includes user interface (UI) design and user experience (UX) design. Here, fintech appears as a systematic attempt to import design techniques into finance that make it possible to target people on an intuitive and affective level, to 'nudge' and to 'funnel' them into certain behaviours. This prises open a space for critically questioning the enthusiastic celebration of 'effortless' finance by fintech practitioners and for interrogating the extent to which instrumentalism, opportunism, and profiteering are magnified by the use of transactional data for behavioural insight.

What 'matters' in fintech research?

The previous sections have demonstrated the variety and complexity of current social scientific research on fintech and have highlighted two critical perspectives on the industry. One which places fintech into the context of financial capitalism to argue that fintech represents an extension of the power of finance in the global political economy. And another which places fintech into the context of surveillance capitalism, to argue that fintech represents an extension of the commodification of data by oligopolistic corporate conglomerates. It is important to note that these two perspectives are not always mobilised separately by fintech scholars, but also often in a combination of sorts. They are not 'schools of thought', but rather form part of a wider critical repertoire from which scholars have drawn pragmatically to articulate the political stakes involved in fintech. However, despite their important role in forging a path for critical scholars to research, analyse and theorise fintech, this section argues that both perspectives remain too committed to depicting the industry as a discrete process — a singular, internally consistent, economic domain. In doing so, they conjure up certain longstanding dilemmas around 'what matters' in fintech research that are not easily
resolved. In what follows, this section will outline the problem, emphatically not to
diminish the significance or relevance of the above perspectives, but to promote a
degree of reflexivity to the issue and suggest a way forward.

To begin and outline the dilemma, it is helpful to consider a point made by Nick
Bernards (2019) in his study of the mobilisation of psychometrics by fintech companies
as a means to provide alternative data leveraged credit scores. Bernards observed that
the radical promises made by these companies, and indeed the fintech industry more
broadly, made "far more truncated and uneven progress than is often assumed either
in critical accounts or in optimistic narratives" (p.816). For Bernards, critical scholarship
focused too much on the successes of fintech whilst losing sight of how "fintech
applications are being developed and diffused as explicit responses to palpable limits
to financial accumulation, and (arguably) are likely to fail to transcend them" (p. 816,
emphasis added). He argued that this was precisely an effect of scholars' attempt to
couch fintech in the terms of financialisation. The iterative failures of fintech were
 muted, he suggested, because they did not correspond to the expected ever-more
pervasive spread of financialisation.

Whilst fintech failures are an interesting research topic in and of themselves (Carroll,
2014; see also: Best, no date), Bernards' point raises a more general question for critical
fintech scholars about the conspicuous coherence of financialisation and digital
surveillance perspectives with practitioner discourses. For fintech enthusiasts and
fintech sceptics strangely seem to agree that fintech — as per above — consists of a
series of corporate 'success stories' — M-PESA, AliPay, Transferwise, etc. Critical
scholars debunk and reject these success stories, to be sure. Yet they (re)produce them,
nonetheless, and with them, a sense of awe in face of the sheer power and
sophistication of financial and digital conglomerates. This raises three more general and
interlinked challenges for fintech scholarship at the current moment in time. First, a risk
of critical arguments about fintech effectively stagnating in permanent opposition to
the industry, mired in a trench warfare between fintech enthusiasts eternally citing the
social benefits of financialisation and digital surveillance and fintech sceptics invariably
and predictably responding by citing their social costs. Second, a danger of reinforcing
fintech as the preserve of only a few dominant players in a manner that exaggerates
the power of big tech and high finance (of coders and creditors, of data and debt) to
near absolute. And third, the risk of reducing the politics of fintech to singular, predefined logics, whether it be the extension of finance, the datafication of everything, the pursuit of profit, or else. So that empirical attention to the ways in which fintech exceeds these logics is effectively suspended.

This thesis seeks to address these challenges and inflect the critique of fintech with a heightened attentiveness to the heterogeneity and contingency of the industry. While it does not insist that financialisation and digital surveillance arguments are necessarily limiting, it suggests that there is a need to engage and articulate the specific blind-spots they inevitably produce. This provides the central point of departure for this thesis, which argues that there is much to be gained from a critique that mobilises 'the everyday' as a critical concept to address fintech in more ambiguous and open-ended terms. On one level, it argues, that approaching fintech through the lens of 'the everyday' may extend conventional assumptions about who or what counts as fintech 'proper'. So, beyond political and corporate elites, we may start thinking about those actors that otherwise tend to recede from view. Unsuccessful entrepreneurs, female coders, financial activists. On another level, it argues that such an approach may help complicate conventional assumptions about where or what the politics of fintech are. Especially, beyond financialisation and surveillance arguments, it may promote a degree of attentiveness and curiosity towards the political arguments and disagreements occupy fintech professionals themselves.

In advocating an everyday approach to the study of fintech, the thesis seeks to complement and amplify a recent move made by Bernards and Campbell-Verduyn's (2019) in a special issue to mobilise the concept of 'infrastructure' for studying and engaging fintech in more contingent and open-ended terms. The authors similarly argued that the concept of infrastructure could serve to unsettle at once the limits of International Political Economy and of Science and Technology Studies, inaugurating a productive dialogue between the two research traditions and highlight respective commonalities and incompatibilities. While the thesis shares their intention to complicate the adoption of traditional IPE frameworks for studying fintech and to highlight that developments in the industry do not neatly fall into pre-defined IPE categories, there are certain limitations to the concept of 'infrastructure' that leave ample space for further conceptual innovation. First, the term infrastructure, however
contingently situated, inherently prioritises the 'durable' over the evanescent. The structured overwrites the noise. Whilst it remains an important task to uncover how fintech attains stability over time, the concept of infrastructure steers scholars away from the ephemeral and temporary moments of fintech, which this thesis precisely seeks to include. Second, the focus on infrastructure tends to lose sight of the affective power of fintech, the manner in which the joys of hacking, tinkering and DIY have been imported into the industry and the sense of enthusiasm that abounds around the industry, based on a growing conviction that an outburst of creative experimentation may well change the world. And third, the mobilisation of infrastructure as developed by the authors can be read as a means to develop 'more accurate' analytical categories, resuscitating the problematic commitment universalising or reductionist assumptions about fintech rather than addressing it in contingent terms. As if the right analytical categories could deliver a whole – and wholly accurate picture – of fintech. Hence, this thesis chooses a slightly different direction. Adding to the concept of 'infrastructure' the concept of 'the everyday' as an analytical entry point for scholars to extend and complicate conventional assumptions about the politics of the industry.

**Conclusion**

The formation of fintech as a global industry has been a fast, multifaceted, and often unpredictable process that has included multiple disparate developments which continue to unfold. This chapter has offered an introduction to fintech based on three narratives that fintech professionals tell each other and two critical theorisations of fintech that resonate widely across social scientific debates. Jointly, these current perspectives on fintech establish the empirical and theoretical terrain of the thesis, from which subsequent chapters proceed. It is worth pointing out that the aim of the chapter was avowedly not to 'define' fintech as a research field, but rather to flesh out certain key issues and debates that at once serve to situate the research and arguments of later chapters and to highlight the diversity, reach, and relative novelty of the industry. This conclusion briefly recounts the main points of the chapter before it provides a quick outlook on how they inform the manner in which the subsequent chapter proceeds.
The first professional narrative presented by the chapter traces the origins of fintech back to the surprise success of M-PESA in Kenya, which inaugurated a powerful alliance between corporate, philanthropic, and public development actors committed to "bank the unbanked" in emerging-market economies worldwide (Jenkins, 2008; Dolan, 2009; Baptista and Heitmann, 2010). This alliance was spearheaded by mobile network operators that sought to expand their business into financial services by promoting mobile phones as financial devices (GSMA, 2013; GSMA, 2014; GSMA, 2015). Initially, the idea was to use mobile phones to facilitate monetary transfers between people who lacked access to traditional bank accounts. But once a financial role for mobile phones was established an expansion of purpose unravelled, from mobile transfers to mobile credit, mobile savings, mobile insurance and so forth. Banks began to explore the use of mobile phones to verify customers, and governments began to use them to increase the reach and efficiency of welfare programmes (Citigroup, 2020). In the process, new professional networks developed which began to adopt the label of fintech to describe their field of activity. It is hard to overstate the influence of these developments. The narrative rightly suggests that it was in the development sector where a financial role for mobile phones was first imagined, where it first attained a sense of profitability, and where it first inspired an alliance of public and private actors with a stake in developing fintech into a standalone industry.

The second professional narrative presented focusses on the adoption of smartphones as a key driver of the global fintech industry. It suggests that the rapid uptake of smartphones changed consumer expectations and opened up a space for digital tech companies to enter the financial services industry. Companies such as PayPal, Klarna, or Stripe positioned themselves as payment providers, while major internet platforms, such as Google, Apple, and Amazon began to launch financial offerings to their enormous customer bases. However, nowhere was the impact of smartphones more radical or extreme than in China, where two apps – AliPay and WeChat – came to dominate payments, overtaking cash and card payments within less than a decade. Similar to the development sector, the popularity of mobile phone enabled payments led to the multiplication of use cases, and the two apps quickly went from offering digital and QR-based payments to offering a whole suite of retail banking products, from savings to investments, loans, insurance, and so forth. In marked contrast to the cheap feature phones in the development sector, however, smartphones produced
much more granular data concentrated within the hands of two enormous digital conglomerates. This spotlighted the commercial value of transactional data for digital tech giants and the potential reduction of finance to a mere subset of the overarching 'data-as-a-service' industry. Recently, Chinese regulators have taken decisive steps to curb the financial role of Tencent and Alibaba, the payment apps’ parent companies. But whatever the outcome, the rise of the two 'super-apps' in China has had a formative impact on the rise of fintech as a global industry. It established a financial role for smartphones, and a vision that saw fintech not only extend financial services to the unbanked but also deliver financial services digitally to the affluent middle classes in the wealthier parts of the world.

The third professional narrative of the chapter presents the North-Atlantic financial crisis of 2008/9 as a pivotal moment in the formation of fintech as a global industry. It emphasises, first, the role of post-crisis regulation, which curbed traditional banks' profitability and promoted competition in retail banking, especially in Europe and the US. It highlights, second, the massive diversion of capital from traditional investment into venture investments, which sparked entire industries which otherwise would never have seen the light of the day. It underlines, third, the massive job cuts in the financial sector, which pushed financial veterans and college graduates into the digital tech sector, where they founded venture-backed startup companies that promoted digital technologies as a means to 'fix' finance after the old systems had failed. These companies can be broadly divided in two major groups. One group targets the 'backend' of banking and promises to create efficiency gains in terms of operational cost and speed. The other group targets the 'user experience' of banking and promises to ease the use and accessibility of financial products; to offer greater transparency of fees and more competitive pricing; and to radicalise customer centricity. While these were initially couched as radical challenges to old finance, the new companies soon discovered the need to cooperate and explore synergies with established companies. So, gradually, fintech moved from posing a threat to established banks to providing an opportunity: to restore public trust and to build 'better' banking for the digital age. This narrative tells a story of 'creative destruction', where a new generation of digitally savvy entrepreneurs began to induce finance with a 'new spirit' by challenging its supposedly outdated practices after a disastrous collapse.
To underline, each of these narratives point to a distinct lineage of fintech that remain somewhat disconnected, even as they are turned into foundational stories today. Yet, they are not separate or mutually exclusive. Rather, they complement and animate each other and, in this manner, form the background to most discussions between those who seek to understand, shape, or profit from fintech. It is perhaps worth emphasising again that these narratives are not meant to describe fintech 'as it really is'. Rather, they are used here as a heuristic to establish the specific empirical terrain of this thesis. They highlight certain trends, hopes, hyps, concerns, and debates that circulated amongst fintech practitioners during the time of research, and that attracted the attention of a broader social scientific scholarship, which began to unpack the political and economic ramifications of fintech in more critical analytical terms. This scholarship was introduced in the second part of the chapter, with particular importance placed on two influential critical perspectives that resonate widely across social scientific debates.

The first of these perspectives places fintech within the context of the financialisation of the global economy and highlights how the industry extends the power and reach of financial markets beyond previous limits, both by tapping underserved consumer markets and by promoting the adoption of financial worldviews well beyond the financial sector, in other areas of society. But where fintech enthusiasts may welcome this extension as a sign of progress and opportunity, financialisation scholars render it problematic, because it places ever more actors in dependency of financial markets in a manner that does not necessarily benefit them and often inflicts violence on them. Where proponents of mobile money celebrate the financial inclusion of poor populations, for instance, financialisation scholars highlight how this is a profit-driven process that creates profits for global investors whose interests are systematically prioritised over, and protected against, those of the purported beneficiaries. Similarly, where proponents of smartphone-enabled finance hail the possibility to leverage transactional data to help individuals improve their credit scores, financialisation scholars highlight how this leads ever more individuals to adjust their daily behaviour and even re-think their personal life choices according to financial values and norms. Thus, the financialisation perspective powerfully flips the narrative over who grants access to whom through the financial use of mobile phones. Rather than celebrating
people's improved access to finance it emphasises finance's improved access to people – to do business, but also to promote the adoption of financial values and norms.

The second social scientific perspective presented by the chapter places fintech within a broader set of concerns regarding the ostensible rise of surveillance capitalism. Here, fintech is understood as a novel corporate space where financial and digital tech conglomerates experiment with the commodification of transactional data, as financial and digital economies gradually merge. Where fintech enthusiasts, again, think of this as an exciting opportunity to think about profitable business strategies, the surveillance perspective raises crucial political questions regarding the control over data and data infrastructures. On the one hand, it raises concerns regarding the generation, collection, aggregation, analysis, and usage of financial data by private and profit-oriented companies. Where business narratives highlight the efficiency gains created by data-leveraged finance, social scientists have highlighted the enormous power this grants private companies over individuals. On the other hand, it raises concerns regarding the operation of the digital infrastructures that allow data to flow. Where business narratives celebrate the provision of data infrastructures by digital tech companies, the surveillance perspective warrants caution regarding monopolistic tendencies that grant individual companies enormous powers to extract profits and to make themselves indispensable for significant parts of the global economy.

While both of these perspectives provide compelling critiques, the chapter has argued that they share a latent and limiting tendency to depict fintech as a discrete process – a singular, internally consistent, economic domain. They all-too-easily tend to accept the broader contours of fintech as outlined by professional discourses and thus merely challenge the supposedly beneficial impact of it. This limits their critical impact in significant ways. On one level, it places them in permanent opposition to the industry, predictably citing the social costs of fintech where proponents emphasise its social benefits. On another level, it conscripts them to the depiction of fintech as a playground of financial and digital conglomerates, which can exaggerate the power of the latter to near absolute. Finally, it reduces the politics of fintech to two rather limited predefined logics, so that empirical attention to the ways in which fintech exceeds financialisation and corporate surveillance is effectively suspended. This provides the central point of departure for this thesis, which emphasises a need to explore critical viewpoints that
do not rely upon or reproduce universalising assumptions about what fintech is, or — better — what it does.

The next chapter introduces ‘the everyday’ as a useful concept to that end. More specifically, it outlines an everyday approach to the study of fintech, based on a series of previous interventions in the disciplinary research tradition of IPE. It argues that such an approach can escape the difficulties outlined above. First by promoting a thinking alongside rather than about the industry, where the aim is not to reveal the ‘actual’ impact of fintech as much as to reading a politics into issues that seem settled or solved, or — more often — seem not to contain political questions at all. Second, by promoting a focus on seemingly unremarkable aspects of fintech that complicate analyses that reduce it to either the top-down imposition of powerful corporate interests or the extension of certain pre-defined logics, such as profit-motives, financialisation, or surveillance. This implies a critique that does not oppose or dismiss fintech but complicates it or renders it strange and thus promotes a heightened sense of the contingency and heterogeneity of the industry.
Chapter two: Towards an everyday approach of fintech

This chapter introduces 'the everyday' as a conceptual entry point for the study of fintech. It argues that the concept yields a distinct mode of research and critique that avoids the difficulties outlined in the previous chapter. It invites scholars to complicate conventional notions of 'what matters' in the social scientific study of fintech and to articulate critical viewpoints that do not rely on totalising assumptions about what fintech is or does. The chapter takes as a starting point a series of previous interventions in the disciplinary research tradition of IPE which have similarly argued that the everyday productively challenges conventional notions of 'what matters' in the social scientific study of the global economy. The first of these interventions was by feminist IPE scholars who emphasised how a focus on the everyday experiences of women could expose a latent and limiting gender bias in the study of IPE. Male CEOs, male workers, male politicians, male economists – it was as if the economy was made up by only one gender and the rest left with no impact, influence, or agency. Hence, feminist scholars began to emphasise the significant role of women in the global economy. The second intervention was by everyday IPE scholars who emphasised how a focus on the everyday could expose a latent and limiting regulatory bias in the study of IPE. International organisations and hegemons, governments, multinational corporations, central banks – it was as if the economy was made up of regulatory elites that could simply impose the rules of the game top-down and negotiate amongst each other its future trajectory. Hence, everyday scholars began to highlight the agency of non-elites in influencing global economic outcomes.

Both of these interventions shared the central concern of this thesis with the de-politicising ramifications of a too-narrow focus on only a few select actors, issues, and concerns. However, both interventions encountered a similar dilemma. While the everyday was a powerful analytical device to highlight specific biases, simply adding on 'the everyday' as a research concern to correct these biases – the so-called add-on and stir approach – did not help to move beyond the problem of bias, per se. It simply shifted the focus from one concern to the other, creating new blind-spots and silences in an attempt to escape the old ones. This is a central dilemma for this thesis, too. How to escape the too-narrow focus on financialisation and surveillance without promoting another too-narrow focus on the everyday of fintech? The chapter argues that one way
of addressing the issue is by using the everyday not as an empirical category to be added onto critical fintech studies but as a critical concept to foreground the necessary incompleteness of any critique of the fintech industry. Here, the chapter draws on the work of poststructuralist feminist scholars who have long moved on from the idea of simply 'adding-on' women to traditional IPE agendas and proposed instead to use women's daily lives as a fruitful vantage point for rethinking the global economy by keeping difference and incommensurability at the core of the analysis.

Developing on these insights, the chapter articulates an everyday approach to the study of fintech that rests on three broad methodological commitments. First, an ontological commitment to invest in the notions of emergence, heterogeneity, and incommensurability, rather than the notions of stability, uniformity, and internal consistency (Gibson-Graham, 1996; 2006; 2008). Second, an epistemological commitment to temporary and situated knowledge claims, rather than an insistence on enduring 'objective' understandings built from an external vantage point (Haraway, 1988; Montgomerie, 2017). Third, an analytical commitment to engage and develop the political significance of seemingly unremarkable aspects of the industry (Scott, 1987; Guillaume and Huysmans, 2018). In practical terms, this approach treats fintech as an expansive and expanding empirical archive rather than a discrete entity, which effectively implies an 'iterative reflexive research strategy' (Montgomerie, 2017) marked by the continuous back and forth between empirical observation, theoretical reading, and analytical writing. Moreover, it encourages an expansion of conventional notions of what counts as empirical sources. Next to expert interviews and document research, the chapter introduces industry events, blogs, app interfaces, and group chat applications, as valuable sources of empirical insight. Jointly, these methodological commitments yield an understanding of everyday research as everyday politics: a thinking alongside rather than about fintech, that cultivates a heightened sensitivity to the generative potentials of the industry so as to extend or complicate conventional assumptions about where or what the politics of fintech are.

The chapter is in three parts. The first part introduces the everyday as a research concept. It shows how feminist IPE scholars have used the everyday to highlight a gender bias in IPE scholarship and how everyday IPE scholars have used it to highlight a regulatory bias in IPE. It shows how both of these interventions encountered similar
difficulties in correcting the bias they had powerfully exposed. The second part draws on the work of poststructuralist feminists to suggest that rather than using the everyday as a corrective to specific biases, it may be more fruitful to use it as a pragmatic opening, to engage the economy explicitly in plural and open-ended ways. It highlights two conceptual moves afforded by the everyday. One that proposes to move away from the classical social scientific theorisation of the economy as a singular entity, or integrated system, rendering it instead an inherently contested reality, full of incommensurabilities and necessarily incomplete, and one that proposes to move away from classical theorisations of 'the political' as public policy, where powerful actors deliberate over collectively binding rules, towards an expansive notion of the political that includes everyday circumstance, in all its habitual, visceral, routine, repetitive, and mundane unfolding. The third part describes how the everyday approach has shaped—and evolved during—the research process and how it has framed the collection and interpretation of the empirical material presented in the chapters below.

The everyday as an analytical device, not an empirical field

The 'everyday' is a concept that is hard to define. As Highmore (2008) suggests, it is often underpinned by a problematic acceptance of everyday life as a transparent reality, readily available to be scrutinised. This is problematic because it can work to normalise and universalise what are but partial views on economic life. A vital task therefore remains to stress that invoking everyday life is not simply to describe a given terrain, but to invite a specific theoretical articulation of it that alters its boundaries in the process (Felski, 2000, ch. 3; Guillaume and Huysmans, 2018). To begin and explore how the everyday might be mobilised for the study of fintech, this section begins by recounting how it was previously mobilised in the disciplinary research tradition of IPE. Perhaps the most influential mobilisation of the everyday in the discipline in recent years has been by Hobson and Seabrooke (2007), who presented the everyday as a challenge to what they called the 'regulatory bias' in IPE, i.e. an overriding concern with the power to govern, with resulting attention steered towards only a few key institutions, groups, or persons that are thought to possess this power — international institutions and hegemons, states and governments, the transnational capitalist class, multinational corporations, and global civil society. But as Elias and Roberts (2016) have pointed out, an important precursor to their work has been the research of feminist IPE
scholars, who have long emphasised how a focus on mundane practices, routines, and rhythms can make visible, and therefore political, the everyday lives of women. These scholars mobilised the everyday as a challenge to what they identified as a 'gender bias' in IPE, i.e. an overriding concern with the structural power and agency of men. The next sections discuss these two mobilisations of the everyday in the context of IPE to highlight its limits and possibilities for the critical study of fintech.

The everyday as a challenge to International Political Economy

Perhaps the most famous feminist mobilisation of 'the everyday' was by Cynthia Enloe in her seminal study titled: Bananas, Beaches, and Bases (1989). The book's influential proposition was that by looking through the eyes of ordinary women, scholars could gain a better understanding of global economic processes. As Enloe wrote in the foreword to the second edition of the book:

"Women as Chinese businessmen’s mistresses, women sewing clothes for Tommy Hilfiger and washing pesticides off Chiquita’s bananas, women married to CIA operatives, women working in discos around military bases, women auditioning for the Miss World contest, women scrubbing floors in Saudi Arabia, and women lobbying delegates in the corridors of the UN—they observe, they cope, they calculate, they strategise, and sometimes they organise. Here is what I’ve learned from taking these women seriously: if we pay sustained attention to each and all of these unheadlined women, we will become smarter about this world, smarter than a lot of mainstream 'experts'" (2014, p. xiv).

Enloe powerfully addressed a widespread discontent with how political economic research had conceptualised the global political economy as a sphere of big business, high politics, and thus as a sphere of men: businessmen, CIA operatives, and UN-delegates. While this selective world of men was certainly important, she argued, there was a whole other world of women right next to it, inadequately understood as marginal, or, more typically, just not seen. Enloe called for more attention to the lived experience of these women, in order to unpack their systematic impact on the global political economy and vice versa. She thereby opened up a whole new field of political
economic research that documented in detail the systematic de-valorisation of women’s productive and re-productive labour (Bakker and Gill, 2003; Elias, 2004); the gendered injustices and inequalities inflicted on women by development programs (Rai, 2002), structural reforms (Marchand and Runyan, 2000), financial crises (Elson, 2013), global governance (Griffin, 2009), and central bank policies (Clarke and Roberts, 2014); and the ubiquity and pervasiveness of gendered power and privilege across political economic domains (Elias and Roberts, 2018; Rai and Waylen, 2014).

But if initially scholars thought that mounting evidence of women’s major role in the global political economy could be easily reconciled with predominant IPE perspectives by simply ‘adding on’ women as a research concern, they soon encountered difficulties in mainstreaming this view (Tickner, 1997; Steans, 2003). Accepted wisdom on political economic categories and processes simply did not hold when amended by an empirical sensitivity to women, to gender, and to everyday practice (Peterson, 2005; Griffin, 2007; Åhäll, 2018). So that adopting women as a central concern demanded a more fundamental re-thinking of established concepts and categories. As Georgina Waylen (2006) noted in her famous polemic against the enduring gender blindness (even) amongst critical political economists:

“As we have seen, any consideration of the significance of the unpaid economy and the costs of social reproduction is rarely included in their analyses. They focus almost entirely on the formal/public sphere without looking at the household and the private sphere and the connections between the productive and reproductive economies. The importance of the nature of the sexual division of labour, for example in the production decisions of TNCs [transnational corporations], is rarely acknowledged. In addition, the starting points of critical scholars (in common with mainstream ones) and feminist scholars can be very different. For example, feminist critiques often begin at the micro-level while IPE is primarily focused on the macro-level. The language and discourse used by both are often dissimilar. As a consequence of these factors, the trends and processes involved in globalisation are still talked about even in the majority of the critical IPE literature in top-down and abstract terms” (p. 153).
Supported by the spread of poststructuralist theories, Waylen and many other scholars suggested that the continued failure to recognise women as a political economic concern was linked to fundamental biases in the 'social construction' of the global political economy. Mainstream IPE seemed overly committed to 'top down' visions of economic order, stability, and development that simply could not account for the economic reality faced by women in their daily lives (Peterson, 2005; Griffin, 2007; Åhäll, 2018). The systematic exclusion of women from IPE research was at least partly a contingency of gendered academic discourses, actively sustained by IPE scholars themselves. And so the task became one of unpicking the global political economy as a discourse per se, a product of knowledge-power relations rather than a palpable reality waiting 'out there' to be found.

Instead of 'stirring women into the mainstream' (Carpenter, 2003) post-structuralist feminism steered towards a more fundamental critique of the make-up of international political economy as an analytical category (Griffin, 2007). Mainstream assumptions about what mattered – which subjects, objects, social relations, structures of power, etc. – could no longer function as an unproblematic background assumption, because they were now regarded as profoundly gendered themselves. Conventional IPE categories, such as 'states', 'markets', 'capital', and 'labour', were read as masculine constructions (Peterson, 2005). Formalistic approaches that modelled upon these concepts were debunked and rejected for simply abstracting women away (Elson, 1995). If it ever existed, previous consensus about what constituted International Political Economy proper, was gradually but thoroughly dismantled and deconstructed as an artificial construction, an abstract imaginary of men, which contributed to the reification of gendered hierarchies. Resulting from this was a widening gap in the perception of feminist scholars between the abstract 'top-down' constructions of the economy – a masculine sphere of states and markets – and the actual economic reality of (ordinary) women – a feminine sphere of concrete market practices.

Once it was established that the top-down abstractions of mainstream IPE were inextricably gendered and no longer adequate, reframing the global political economy 'bottom-up' from an everyday perspective became itself a formidable challenge. As Gibson-Graham (2006) noted:
“The achievements of second-wave feminism provide, […], the impetus for theorizing a new global form of economic politics […]. Its focus on the subject prompts us to think about ways of cultivating economic subjects with different desires and capacities and greater openness to change and uncertainty. Its practice of seeing and speaking differently encourages us to make visible the hidden and alternative economic activities that everywhere abound, and to connect them through a language of economic difference” (p. xxiv).

For Gibson-Graham an attentiveness to the concrete, everyday experiences of women translated into a broader attentiveness to the contingencies of market life.

Gendering traditional concepts such as 'capital', 'markets', or 'labour', in this sense, not only allowed for a less masculine understanding of the economy, but also for a far more plural one (Gibson-Graham, 1996; Gibson-Graham, 2006; Gibson-Graham, 2008). 'Capital' could be revealed to follow many profit-making strategies, from straightforward capitalist business models that appropriate labour time and/or extract rent, to communal or collectively owned businesses that share or return profits, to those businesses, philanthropic or ecological, located somewhere in between. 'Markets' could be shown to exceed any single logic of exchange, existing side-by-side with non-market arrangements (e.g. gift exchange, donation, private and household transactions, public provision) and alternative markets guided by ethics of reciprocity for example, or libertarian values (e.g. in local currency schemes, time banks, barter, sharing). Moreover, 'labour' could be shown to encompass all manner of arrangements. From wage labour at different levels of social security, flexibility, and self-determination (e.g. permanent, unionised, expat, self-employed, temporary, forced), to unpaid labour exposed to different levels of violence and exploitation (e.g., child-care, housework, internships, volunteering; but also, child labour, modern-day slavery). And so forth. This 'messy' view of the economy opened up a different kind of politics. Not simply the global governance of states and markets, or the global resistance against capitalism, but a grass-roots activism rooted in the messy and conflicted reality of everyday market life (Roelvink, St. Martin and Gibson-Graham, 2015). Not the programmatic top-down imposition of economic reforms, but the situated organisation of political dialogue and
resistance, based on the voices of those most affected by respective problems themselves (McKinnon, Dombroski and Morrow, 2018).

From gender bias to regulatory bias
Read against the intellectual achievements of feminist IPE, it is easy to find continuities in the mobilisation of the everyday by Hobson and Seabrooke in their widely cited edited volume 'Everyday Politics of the World Economy' (2007). The authors similarly sought to address certain longstanding biases in IPE. They likewise worried about a widening gap between the focus of IPE on "macro-level institutions and processes" and "the real lives of everyday people" (p. 2). And they also proposed a methodological shift towards "research puzzles" (p.3) to avoid theoretical reification. But when working through their analytical moves, it becomes clear that they equally ran into the same difficulties of an add-on approach of early feminist scholars, which spotlights the risk of reviving old difficulties in new mobilisations of the everyday (which an everyday approach to the study of fintech ought to avoid).

Perhaps the defining strength of Hobson and Seabrooke's volume was that it spelled out what they called the 'regulatory bias' in IPE with respect to the defining core of IPE mainstream theories. Namely, Realism, Neoliberal Institutionalism, Constructivism; but also, Structural Marxism and Neo-Gramscianism. Across these grand paradigms, Hobson and Seabrooke identified a marked limitation in their focus on only a few institutions, groups, or persons that were conventionally thought to possess the power to govern or the power to benefit from the global economy: international organisations and hegemons, states and markets, the transnational capitalist class, multinational corporations, and global civil society. The limited focus on these elite actors, they argued, led to significant distortions: "are we really to believe", the authors rhetorically asked, "that the ninety per cent of the world’s population who are conventionally ignored have no input into shaping their own lives, if not others around and beyond them?" (p. 12)

The similarities between Hobson and Seabrooke's "where are the ninety per cent?" and Cynthia Enloe's "where are the women?" are striking (Elias and Roberts, 2016) and juxtaposing the two elucidates both the strengths and the weaknesses of both
interventions. Similar to Enloe, the two authors demonstrated an untenable bias in IPE scholarship and challenged mainstream IPE to direct their intellectual energies not only to understand the very powerful but also the less powerful. Likewise they opened the door to an appealing body of work that documented in detail the economic significance of less powerful actors, especially in non-Western contexts (Elias and Rethel, 2016). But at the same time, they also revived the same difficulties associated with an add-on approach that post-structuralist feminists had so carefully and convincingly exposed.

The first of these difficulties resulted from their mobilisation of the everyday in dichotomous terms as the concrete opposite of some abstract other. Just as feminists had used the everyday to foreground a gap between the concrete experience of the global economy by ordinary women and the abstract top-down theorisations of the global economy provided by men, Hobson and Seabrooke used the everyday to foreground a gap between the concrete bottom-up agency of the ninety per cent and the abstract top-down theorisations of the governing power of political economic elites. The problem of such dichotomous thinking, as various scholars have pointed out (Felski, 2000, p. ch. 3; Davies, 2016), is that it has often served to naturalise a hierarchical relationship between the two opposites. So that the everyday would appear as always-already subordinated to some abstract other: e.g. the everyday of women as always-already subordinated to the abstract theories of men; the everyday of ordinary people as always-already subordinated to the abstract power of elites; or, as Davies (2016) added, the everyday of the local as always-already subordinated to the abstract forces of the global. And so forth.

Hobson and Seabrooke explicitly mobilise the everyday in dichotomous terms by defining everyday actions as "acts by those who are subordinate within a broader power relationship but, whether through negotiation, resistance or non-resistance, either incrementally or suddenly, shape, constitute and transform the political and economic environment around and beyond them" (p. 15). Here, everyday actors are by definition subordinated to elites. This is problematic, not only because it accepts a hierarchy as given that might otherwise be contested, but also because it runs against the simple common-sense observation that the experience of moving between the registers of the everyday and the extraordinary is obviously shared between all people – men and women, ordinary people and elites – notwithstanding their specific position
within the global economy (Felski, 2000, pp. 93-95). So, ultimately, no economic act could conceivably be excluded from Hobson and Seabrooke’s definition above.

A second difficulty derived from their mobilisation of the everyday as a corrective to existing theoirisations, which would allow scholars to ‘account for the unaccounted’ so as to build a more complete or more accurate picture of the economy. Just like feminist scholars had argued that any analysis of the global economy that omitted women was inevitably incomplete, Hobson and Seabrooke suggested that any analysis omitting the ninety per cent was bound to fall short. However, this raises the general dilemma that the number of potential biases is virtually unlimited, whilst agreement over which biases matter most, is virtually impossible to achieve. In this sense, a focus on regulatory bias can threaten to undermine a focus on gender bias, and vice versa. So that a focus on ‘the ninety percent’ or on ‘non-Western actors’ suddenly seems to be more urgent than a focus on ‘women’. This is precisely the difficulty identified in the previous chapter. If it appears necessary to extend the analytical focus of fintech scholarship beyond the power of high finance or big tech companies, which neglected aspects should be included? Everyday failures? The everyday experience of female entrepreneurs? The everyday of community-led fintech?

Hobson and Seabrooke fail to address the dilemma, which has also continued to concern feminist researchers, as Peterson (2003) made clear:

"the diversity among women has forced feminists to reflect critically (and uncomfortably) on the meaning of feminism, definitions of “woman,” the politics of representation, and the dangers of universalizing claims. “Sisterhood” aspirations have always been in tension with differences of ethnicity, race, class, age, physical ability, sexuality, and nationality, and are especially challenged in a global context marked by stark inequalities among women" (p.33).

Hence, when mobilised as a corrective to existing accounts, terms such as ‘the everyday’ or ‘woman’ are always at risk of universalising specific ambitions and interests while delimiting the relevance of others. Universalising one specific bias at the expense of other biases. Even when researchers explicitly mobilise them to escape this dilemma.
Jointly, these two conceptual difficulties amount to an important apprehension against mobilising the everyday in essentialist terms: Although analytically and politically useful in exposing the analytical biases of existing research, simply adding the everyday as a corrective – as the 'really real' or the 'actual reality' – does not help to move beyond the problem, because it merely inverts the analytical privilege of abstract categories that it is supposed to subvert. The everyday, therefore, cannot be assigned unproblematically as an empirical attribute to specific people, objects, institutions, and so forth. Nor can it be taken for granted as an authentic empirical field, an archive of the neglected, waiting out there to be unearthed. Rather, as was suggested at the beginning of this chapter, it must be placed into question as an analytical device itself (Felski, 2000, p. ch. 3; Highmore, 2008; Guillaume and Huysmans, 2018). In the next section, the chapter therefore introduces the everyday explicitly as a conceptual tool that can displace the problem of bias (rather than to resolve it) by rendering any account of fintech, and the global economy, as necessarily, temporary, situated, and incomplete. The point of studying fintech from the perspective of the everyday, then, is not to root out bias, because this seems to be an impossible task. Instead, the aim is to find a way of accepting bias as a necessary and potentially productive condition of academic engagement by keeping difference at the core of social scientific inquiry (Gibson-Graham 1996; 2006).

The everyday as a pragmatic opening

The previous section has shown how the critique of top-down frameworks with their gendered state-and-market framings and their exclusive focus on elite actors made an everyday perspective appear desirable in the disciplinary tradition of IPE. It also showed that the mere rejection of abstract categories, male agencies, or elite actors as the prime subjects of inquiry was not necessarily capable of performing satisfactory changes to the preferred aspirations or habits in this tradition. Hobson and Seabrooke’s attempt to add the everyday to the great IPE paradigms ran up against the same problems that feminist scholars had encountered in their earlier attempts to add women as an empirical concern. Instead of resolving the problem of analytical bias, it merely performed an inversion of existing categories, leaving problematic hierarchies and universalisms intact.
This section therefore follows the path of post-structuralist feminists (Felski, 2000; Peterson, 2003; Griffin, 2007) and seeks to mobilise the everyday explicitly as a conceptual tool rather than an empirical category. Instead of trying to correct bias, the section argues, the everyday may serve to complicate prevailing theorisations of fintech. Especially, it may serve to challenge theorisations that render it a discrete process, so as to displace the problem of bias, and embrace fintech’s contingency and heterogeneity. In the past, such a move has often served to ignite a meta-theoretical debate over some well-worn sticking points in the philosophy of science. Sticking points of the kind identified by Hacking (1999, p. 68) "on which clear and honorable thinkers may eternally disagree." Broadly speaking these derived from a number of very different ontological and epistemological convictions that were seen to alternate between two main positions – positivism and interpretivism (Hollis and Smith, 2009; Montgomerie, 2017). The question of the everyday and especially the question of female perspectives could thus become a question of meta-theory, of positivism vs. interpretivism, of universalism vs. relativism, as in the famous debate between Tickner (1997; 1998) and Keohane (1998), for example.

Following the suggestion of Montgomerie (2017), this section seeks to avoid these ritualised disagreements and sustain an 'ethos of pragmatism' (Sil and Katzenstein, 2005; Sil and Katzenstein, 2010; Clarke, 2012b) which intentionally moves away from meta-theory towards a more practical conversation about the specific consequences of particular methodologies. In this sense, the section introduces two specific conceptual moves afforded by the everyday that can serve to displace, or tone down, the issues of analytical bias, whilst relating an understanding of research as everyday politics, engaged in the mobilisation and multiplication of politics where one might not expect it.

**Embracing emergence, heterogeneity, and incommensurability**

The first conceptual move provided by the everyday is ontological and proposes to move away from the classical social scientific theorisation of the economy as a singular entity, or integrated system, rendering it instead an inherently contested reality, full of incommensurabilities and necessarily incomplete. This move builds on the work of
Gibson-Graham (1996; 2006; 2008) for whom an attentiveness to the everyday experiences of women translated into a broader attentiveness to the contingencies of political economic life. On this view, the sheer scale of real-life complexities is taken as a starting point to complicate classic accounts of the economy as a strictly ordered, rigidly bound and internally consistent field (McKinnon, Dombroski and Morrow, 2018). So that it becomes an open question, and at some level, a pragmatic choice, whether to describe it through a set of immutable laws and hidden causalities or as a collection of relatively autonomous developments unfolding in continuous interaction (Montgomerie, 2017). In this sense, the everyday invites thinking in terms of multiple relational ontologies, where academic orderings are inevitably considered temporary, inconclusive, and overlapping, existing side-by-side with other orderings of the very same phenomena (Haraway, 1988; Montgomerie, 2017). Not everyone is comfortable with such a perspective because it proposes a limited but not absolute form of relativism. Its benefits however are significant, as it allows scholars to displace (although not resolve) the two conceptual difficulties associated with analytical bias identified above.

On the one hand, it allows scholars to forestall the kind of dichotomous thinking that frames the everyday as always already subordinated to some authoritative other. For instance, it avoids addressing everyday borrowers as always-already subordinated to financial elites. Instead proposing to address both in the same analytical register, as everyday subjects, to interrogate whether and how their respective circumstances are threaded together into a shared social context. On this view, a student loan, say, does not appear as an instrument of unscrupulous financial elites designed to subordinate innocent (ordinary) students. Rather, the loan appears as an embedded economic reality enacted by students and financial elites simultaneously in their respective environments of practice. This is not to neglect that the student loan instantiates hierarchies and structures of power, but to insist that these hierarchies and structures of power are not predetermined but constantly brought into being in the simultaneous and overlapping daily practices of multiple economic constituencies. It is an attempt — to paraphrase Goggin (2019) — to put a more human face on the global political economy, but as a means of critique rather than promotion. So, although not equals, students and financial elites are both implicated in and affected by broader constellations of power, which can no longer be considered in the form of a hierarchical
axis with two antagonistic poles but must be considered as a multiplicity of disparate elements with uneven propensities and interlinkages. Financialisation, then, can neither be considered an unscrupulous top-down imposition of financial interests on helpless students, nor a relentless unfolding of pre-existing systemic imperatives. Instead, it emerges as a multi-faceted process, continually brought into being by the interplay of multiple actors and actor coalitions, with varying interests and outcomes, in their respective everyday contexts.

On the other hand, such a messy view or ontology avoids an essentialist notion of the everyday that implies that certain biases or neglected factors are more important than others. Financialisation or digitalisation appear on this view as articulations of two specific critiques amongst many, rather than two overarching research paradigms that require continuous testing in order to be refined. Such a view does not accept the traditional problematic of explaining a gap between theory and the world through an attention to the everyday (or women), because it does not accept theory as the ultimate purpose of empirical research (Best and Paterson, 2014). By contrast, theories are mobilised as tools to work through specific empirical problems. So, financialisation arguments can be helpful in one instance and digitalisation arguments in another. Both describe distinct developments that co-exist rather than cancel each other out. Such a view lends itself to a thinking in research puzzles (Sil and Katzenstein, 2005; Hobson and Seabrooke, 2007) rather than universal knowledge claims. It insists on the need to mobilise many theoretical traditions and manifold viewpoints, in order to build however temporary a vantage point from which to gain working access to a political economy that continuously changes. The issue of analytical bias may well persist, but it becomes less contentious, because highlighting bias does not amount to an existential threat to a theoretical tradition that is already presumed to be temporary and incomplete. Indeed, engaging the contradictions and limitations of distinctive arguments, theoretical propositions, and working hypotheses becomes itself a key site of insight from which to gain a comprehensive yet not necessarily consistent understanding of the continually evolving global political economy (Montgomerie, 2017).

In sum, the everyday invites an ontological move away from the postulate of oneness, order, and consistency, to invest in the notions of emergence, heterogeneity, and
incommensurability. Rather than claiming enduring systematic understandings of economic processes and relationships, it unlocks a perspective that emphasises open-endedness, contradiction, multiplicity, and the need to establish temporary or inconclusive knowledge claims. In this manner, the everyday allows researchers to displace (although not resolve) the problem of analytical bias by keeping difference at the core of social scientific inquiry. Insisting that the same domain of the economy can and should be simultaneously understood in different and incompatible ways. This is undeniably a meta-theoretical move, but one that allows for a certain pragmatism to thrive. Where it is possible to insist that knowledge is inevitably situated and partial, whilst recognising the relevance and accomplishments of arguments that are not presented in explicitly situated terms.

Valuing mundane subjects, sites, and means
The second conceptual move provided by the everyday is to provoke prevailing understanding(s) over what politics is and where it happens. Again this conceptual move builds on that of feminist scholars who questioned not only the subjects, but also the sites, the means, and the ends of politics (Elias and Roberts, 2016; Elias and Roberts, 2018). Not just men but also women (Enloe, 1989; Rai, 2002). Not just industrial production but also social reproduction (Bakker and Gill, 2003). Not just parliaments but also households (LeBaron, 2010; Elias and Gunawardana, 2013). Not just economic growth, but also equal pay (Kim, 2013). Expanding on this, the everyday mobilises a general sensitivity to multiple politics and mundane publics in places where they are not usually expected. It challenges the idea that meaningful politics, if it is to happen, requires public policy, e.g. public deliberation, law, regulation, etc., a vision of politics that still holds sway in much of the social scientific mainstream. Instead, it proposes that everyday circumstance, in all its habitual, visceral, routine, repetitious, and mundane unfolding, may be interrogated and engaged with, itself as political (Felski, 2000, ch. 3; Highmore, 2008; Guillaume and Huysmans, 2018; Brassett, 2021).

For instance, digital surveillance may be analysed in view of the manifold mundane practices through which it is brought into being. The digitalisation of finance, but also the digitalisation of dating, fitness, gambling, navigating, travelling, messaging, meditating, shopping, health, and so forth. More than simply a straight power grab of
digital corporations, such a view highlights how digitalisation is shot through with political concern that always-already pervades market life. Rendering everyday circumstance politically meaningful and prolific has implications for how one methodologically approaches the issue of digitalisation. As discussed, very often the natural instinct of social scientists is to approach the everyday as a mere archive of real-world examples to illustrate abstract theoretical points. The everyday would figure, for example, by way of an anecdote about algorithms that send baby-related adverts to people that do not even know yet that they are pregnant, to illustrate and politicise the ambition of Google and Amazon to infer consumption behaviour from all manner of available data (Duhigg, 2012). By contrast, insisting on a notion of the everyday as generative of arguments, viewpoints, and debates, implies a method of thinking alongside Amazon and its users rather than about them. To remain curious about how they think about, contest, and resist commercial mass surveillance. And thus to mobilise new publics or magnify existing ones from seemingly mundane practices and objects that otherwise recede from view.

Here, the role of the researcher is not so much to cut through the veil of appearances in order to reveal some hidden truths, but to interrogate, test, and question the theoretical articulations and critiques that already exist in the daily practice of market life (Maurer, 2005; Maurer, 2008). Such an approach seeks to inaugurate an ongoing dialogue between the researcher and the research field that works towards the simultaneous rethinking of conventional assumptions in both. Indeed, on this view, social scientific inquiry is considered itself a form of everyday politics, based on the recognition that academic research itself is a social practice. Social scientific inquiry, in this sense, is a critical form of engagement that "takes elements from one domain, e.g. fintech, and explains them in terms of others, e.g. IPE, making 'new' knowledges through unexplored conjunctures of existing ones" (Maurer, 2008, p. 6). That is the kind of research that this thesis is trying to achieve.

**Fintech research as everyday politics**

The previous section has argued that the everyday provides a conceptual starting point for fintech researchers that orients them to a distinct mode of studying and engaging the politics of the industry. One that is attuned to the problems of analytical bias and
that aims at registering the evolving practices of fintech, its pragmatic knowledges, political debates, and social life. The aim is to contest the meaning of fintech as given and develop a thinking alongside rather than about the industry. To give this approach some definite shape, this section now turns to describing how this approach shaped – and evolved during – the research process, how it framed the collection and interpretation of the empirical material presented in the chapters below.

The research project of this thesis spanned four years beginning in October 2016 and ending in March 2020. The general interest and intuition of the project — although initially not articulated in the same manner — suggested a need to treat fintech as an expansive and expanding empirical archive rather than a discrete entity to be studied comprehensively in a sequence of pre-described steps. The ambition was to remain open to varying interpretations of the industry and to attend to the political contents articulated by those involved in the industry themselves. A core challenge that resulted for the research process was therefore to navigate the dilemma that no empirical aspect necessarily mattered and that all aspects potentially mattered as an empirical source (Guillaume and Huysmans, 2018). The methodological question then was: How to attend to fintech and collect empirical material whilst remaining open to unexpected political contents? The pragmatic answer to this became what Montgomerie (2017) summarised as an 'iterative reflexive research strategy' (ch. 4), marked on the one hand by the continuous back and forth between empirical observation, theoretical reading, and analytical writing, and on the other hand by a good dose of serendipity (May, 2017). The research process is therefore perhaps described best as an ongoing hunt for clues and pursuit of leads, in the broader quest to engage and develop an everyday politics of fintech that could extend and complicate ongoing academic and professional debates. Different leads required different methods and although various leads resulted in nothing, they jointly contributed to a general expertise in the field of fintech, which ultimately paved the way for the critical-analytical articulation of the politics of fintech apps, fintech events, and fintech media, presented in chapter three, four, and five.
Choosing a starting point

Given the geographical differences of the global fintech sector, outlined in chapter one, it is important to highlight the geographical specificity of this research project, which was based largely on research conducted in the London-based fintech industry. The selection of London as the primary location of research was based on two considerations: first, in pragmatic terms, the city was close geographically, convenient and affordable to visit, and initial contacts in the industry existed; second, in strategic terms, London was at the brink of becoming one of the world’s leading centres for fintech, both in terms of the number of fintech start-up companies located in the city and the volume of fintech start-up investments attracted by these companies (KPMG, 2016). It largely inherited this prominent role from its importance as a global financial centre. But there was also an active attempt by major stakeholders from the financial and tech sectors, by the Mayor of London, and by the UK government to consolidate and further develop this role (UK Government, 2015; HM Treasury, 2016; HM Treasury, 2018; HM Treasury, 2020).

Two short research stays in Tallinn, Estonia (from December 2017 – February 2018) and Amsterdam, Netherlands (June 2019 – August 2019) provided important ‘outsiders’ perspectives and confirmed the leading role of London as the centre of European fintech. The Tallinn-based fintech industry was small but widely considered a success story driven by the country’s government’s broader efforts to promote ‘e-Estonia’, a programme including but not limited to online voting, digital residency, digital health, and digital finance. Research conducted in Tallinn suggested close links between the local fintech communities and London-based companies. The Amsterdam-based industry by contrast was large, well established and anticipated highly as one of Europe’s most dynamic fintech hubs. Whilst the specific Estonian and the Dutch ‘leads’ did not result in chapters, they provided context to reflect on the geographical differences and commonalities of fintech and the distinctive European context of fintech outlined in the previous chapter. It highlighted in particular the important role in the European context of proactive regulators and a politicised public for the specific entrepreneurial culture of fintech in European fintech.
Collecting empirical material

The present study primarily draws on five empirical sources: Fintech events, fintech media, fintech technologies, fintech reports, and fintech interviews:

1. Fintech events. One of the primary empirical sources of this project were fintech events (for a list of events, see Table 1). Events have received surprisingly little systematic scholarly attention in the social scientific study of fintech or, indeed, the global political economy (but: Duffy, 2014; Rethel, 2018). This is surprising, because the last decade has seen an unprecedented proliferation of professionally organised events across sectors and industries. In 2018, Britain’s events industry was estimated to be worth £70 billion pounds with over £31 billion pounds attributed to corporate events such as industry conferences, meetings, and fairs (BVEP, 2020). During the research process it became increasingly clear that the lack of attention to fintech events was a missed opportunity for fintech scholarship. Events provided important empirical insights. Not only as a source of insider views, but also as a performative site, where fintech was enacted, where new business knowledges were circulated, and where new professional networks were forged.

During the first two years of the project, from January 2017 – December 2018, the monthly 'Fintech for Breakfast' seminar of the Centre for the Study of Financial Innovation provided an invaluable source of empirical insights. The seminar took place on Wednesday mornings (8.30–10.00am) in London. It was hosted by Andrew Hilton, a former World Bank economist, and a rotating cast of discussants from the fintech industry and the Financial Times, and it was set up as an informal pre-work meetup of financial service professionals working in the City of London. Participants were invited to discuss (under Chatham House Rules) the latest developments in and around fintech and actively encouraged to ask questions and share personal perspectives and anecdotes from their respective work contexts (mostly banks). The seminars were marked by lively debates amongst financial professionals, who incidentally were mostly sceptical of the value of fintech and often regarded it as a threat. The event provided abundant insight into the individual views of financial service professionals and proved a rich source of 'hints and clues' to be followed up after the event. Moreover, it provided live insights into a professional community jointly working through the news and debating their political and economic significance.
Another vital part of the research process was the visit of industry conferences and informal meetups, ranging from large, professionally organised, multi-day events, such as the FinTECHTalents conferences, to small informal fintech gatherings organised by individual fintech entrepreneurs or start-up companies. The large industry fairs can be characterised as 'spectacles' of innovation that very much resembled the form and the function of the capital market conferences described by Retzel (2018): they were professionally designed to forge new professional networks and to attract the attention of politicians and investors by enacting fintech in spectacular fashion as a promising future industry. With attendance fees often at several thousand pounds, they brought together the obvious beneficiaries of the fintech industry: financial professionals, business consultants, venture capitalists, fintech entrepreneurs, and so forth. The high fees also proved a difficulty for research access and all the events listed in the appendix were visited by courtesy of the event organisers, who issued a visitor pass at request, that was for free. Smaller informal meetups, by contrast, were far less spectacular, usually focused on specific technical aspects (e.g. 'Using AI to provide risk-free operations to neo-banks and cryptocurrency markets' or 'How to improve customer support with machine learning when your user database is growing too fast?') and brought together all manner of entrepreneurs and tech geeks who were not (yet) part of the glamorous circles of fintech, although they often aspired to join the club. Less interesting as spectacles, these meetups were helpful to clarify specific questions in direct conversation, but also to observe the persistence of fintech narratives, ideas and ideals far beyond what the professional community considers as fintech 'proper'.

From November 2017, a third set of events came into focus, thanks to the invitation of the co-founders of the start-up company Railsbank, to participate in a 'hackathon' they organised. Hackathons are free and voluntary overnight events dedicated to the ad-hoc development of provisional software solutions or products. Initially, they seemed worth paying a visit for clarifying technical questions, for gaining contacts in the industry, and for registering alternative, entrepreneurial circles, which were not so much present at the Fintech for Breakfast events. Where the latter was primarily visited by financial service professionals, hackathons were primarily visited by students and tech-enthusiasts with coding skills, who were either already working for fintech start-ups or aspiring to become fintech founders themselves. As the research project proceeded,
the idea to tap hackathons as a source of technical insight was gradually superseded by an interest in the 'everyday politics' of hacking at the events that will be presented in chapter four.

Although there was no established social scientific 'method' for studying these various industry events, a small number of ethnographic texts provided invaluable guidance for the research process (Duffy, 2014; Nyqvist and Høyer Leivestad, 2017). Following these texts, select ethnographic research strategies were adopted and adapted to produce an empirical archive consisting of field notes and pictures created on site, of discussions and debates saved on the chat application 'Slack' (see below), and a number of reflections and observations written in the immediate aftermath of the events.

Table 1 - Fintech events

<table>
<thead>
<tr>
<th>Event</th>
<th>Date and Location</th>
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<tbody>
<tr>
<td><strong>Fintech for Breakfast by Centre for the Study of Financial Innovation</strong></td>
<td>12 January 2017, Dentons, London, UK</td>
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<td>8 February 2017, Dentons, London, UK</td>
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<td>14 March 2017, Dentons, London, UK</td>
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<td>4 April 2017, Dentons, London, UK</td>
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<td>3 May 2017, Dentons, London, UK</td>
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<td>7 June 2017, Dentons, London, UK</td>
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<td></td>
<td>12 July 2017, Dentons, London, UK</td>
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<td>6 September 2017, Dentons, London, UK</td>
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<tr>
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<td>3 October 2017, Dentons, London, UK</td>
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<td></td>
<td>14 November 2017, Dentons, London, UK</td>
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<td>7 December 2017, Dentons, London, UK</td>
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<td>9 May 2018, Dentons, London, UK</td>
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<td>12 September 2018, Dentons, London, UK</td>
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<td></td>
<td>17 October 2018, Dentons, London, UK</td>
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<tr>
<td><strong>Hackathons</strong></td>
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<tr>
<td>#Openbankhack17</td>
<td>10-12 November 2017, Rainmaking Loft, London, UK</td>
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<tr>
<td>Baltic Open Banking Hackathon</td>
<td>16-18 February 2018, SEB Innovation Centre, Tallinn, Estonia</td>
</tr>
<tr>
<td>#Openbankhack18</td>
<td>23-25 November 2018, University of Greenwich, London, UK</td>
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<tr>
<td>Industry Fairs</td>
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<tr>
<td>FDATA Summit 2017</td>
<td>5 December 2017, The Montcalm, London, UK</td>
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<tr>
<td>Imperial Fintech Conference 2018</td>
<td>7 March 2018, Imperial College London, UK</td>
</tr>
<tr>
<td>FinTECHTalents 2018</td>
<td>30-31 October 2018, Here East, London, UK</td>
</tr>
<tr>
<td>FDATA Summit 2018</td>
<td>6-7 December 2018, McEwan Hall, Edinburgh, UK</td>
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<tr>
<th>Meetups</th>
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<tbody>
<tr>
<td>The GDPR Reality by Cybertonica</td>
<td>7 March 2018, Level39, London, UK</td>
</tr>
<tr>
<td>FinTech Meetup by Ummah Finance</td>
<td>14 March 2018, WeWork, London UK</td>
</tr>
<tr>
<td>Applied AI with Monzo by City AI</td>
<td>21 March 2018, Plexal Innovation Centre, London, UK</td>
</tr>
<tr>
<td>#NeoCryptoTrust by Cybertonica</td>
<td>3 October 2018, Level39, London UK</td>
</tr>
<tr>
<td>Square and Level39 Tech Meetup</td>
<td>5 December 2017, Level39, London UK</td>
</tr>
</tbody>
</table>

2. **Fintech media.** A second important empirical source for the project were fintech media (for a list of media, see Table 2).

First, there was a proliferation of dedicated online news media outlets, such as AltFi, BankNXT, Finextra, Fintech Futures, PYMNTS and Techcrunch, which provided daily news commentary. Some of these news outlets were initially not more than a collection of commented press releases published by a small number of fintech aficionados (e.g. AltFi, BankNXT, Finextra, Fintech Futures). But they rapidly grew in sophistication as they were turned into businesses, and as their readership multiplied. Others were already established specialised media which naturally considered fintech part of their agenda (e.g. PYMNTS and Techcrunch). As fintech gradually turned into a mainstream concern, the large newspapers, too began to jump on the bandwagon, running fintech news stories with increasing frequency. The Economist, the Financial Times and the
Wall Street Journal became the three most important sources of mainstream journalism for this project.

Second, there was a proliferation of blogs run by fintech ‘influencers’ and fintech companies. Blogs are a popular genre of online writing, which are marked by an informal and personal style and abundant use of illustrative pictures and videos. They are typically written in first-person perspective to convey a sense of closeness and intimacy and tend to present thoughts and opinions, rather than journalistic accounts. Fintech ‘influencers’ write blogs supposedly out of passion, but also entrepreneurially. They can gain considerable audiences that secure them an income, whether it be through speaking engagements, through adverts, or publications (most influencers that were followed for this project have written a book over the past five years). Fintech companies also use blogs to attract an online following, whether it be prospective customers or prospective investors. Indeed, many early-stage start-up companies hire professional content managers, which underlines the enormous importance of brand recognition as a source of value in the start-up industry (see chapter five). But fintech companies also use blogs to release product updates and general company news, and they often invite their online followership to comment, provide feedback, and discuss ongoing developments. Thus, blogs provided a helpful means to keep an eye on technical developments but also on the strategic import of new media branding techniques into the industry. Moreover, as a genre of writing, blogs have also been copied back into the mainstream media. Especially, the Financial Times’ FT Alphaville blog, has become a popular and influential voice in the fintech space.

Third, the project also used debates on two chat applications, Telegram and Slack, as a source of insight. These chats are used by fintech companies to communicate in even more direct ways with their online followership. But they are also used by temporary fintech communities to organise meetups or to converse during fintech conferences or fintech hackathons. The benefit of these conversations is that they are automatically stored in the chat application and can be easily accessed later in time. For this project, a Telegram chat of the Estonian fintech company 'Change' was followed and several Slack channels used during the fintech hackathons were revisited.
Fourth, podcasts came into focus as an important source of engagement with the fintech industry. This project draws on three of them in particular, the Banking Weekly podcast of the Financial Times, the Breaking Banks podcast run by fintech ‘influencer’ Brett King, and the Fintech Insider podcast run by the fintech consultancy 11:FS. Just like hackathons, podcasts were initially approached as a source of information, of ‘hints and clues’, but then became themselves an object of academic interest, as it became clear that they were widely listened to by London-based fintech entrepreneurs. As with fintech hackathons, the idea to use fintech podcasts as a source of insight was gradually superseded by an interest in their performative role in ‘conjuring up’ fintech that will be analysed in chapter five.

To create a workable archive from these diverse online sources the online application ‘Pocket’ proved an important tool. Pocket allows users to save websites in their online browser and tag them with specific categories, such as ‘regulators’, ‘banks’, ‘investors’, ‘payments’, ‘blockchain’, ‘high-frequency trading’, ‘financialisation’, ‘datafication’, and so forth. Any online resource can be tagged with several categories. Users can then click on any of these categories and receive a list of all websites tagged in chronological order. On the one hand, the function was useful to keep an overview of a vast number of online sources that amounted to over 1500 tagged websites. On the other hand, it was useful because it could be used to flexibly attach and detach sources from particular categories. So new leads could be introduced to see whether they would build up to a compelling theme or whether they remained on the sidelines. In this manner, the application facilitated the compilation of an organically evolving archive of themes and sources over time.

Table 2 - Fintech media

<table>
<thead>
<tr>
<th>Name</th>
<th>Website</th>
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<tbody>
<tr>
<td><strong>Online news media outlets</strong></td>
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<tr>
<td>AltFi</td>
<td><a href="https://www.altfi.com/">https://www.altfi.com/</a></td>
</tr>
<tr>
<td>BankNXT</td>
<td><a href="https://banknxt.com/">https://banknxt.com/</a></td>
</tr>
<tr>
<td>Finextra</td>
<td><a href="https://www.finextra.com/">https://www.finextra.com/</a></td>
</tr>
<tr>
<td>Fintech Futures</td>
<td><a href="https://www.fintechfutures.com/">https://www.fintechfutures.com/</a></td>
</tr>
<tr>
<td>PYMNTS</td>
<td><a href="https://www.pymnts.com/">https://www.pymnts.com/</a></td>
</tr>
<tr>
<td>Techcrunch</td>
<td><a href="https://techcrunch.com/">https://techcrunch.com/</a></td>
</tr>
<tr>
<td>The Economist</td>
<td><a href="https://www.economist.com/">https://www.economist.com/</a></td>
</tr>
<tr>
<td>The Financial Times</td>
<td><a href="https://www.ft.com/">https://www.ft.com/</a></td>
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</tbody>
</table>
Blogs

FT Alphaville blog: https://www.ft.com/alphaville
Chris Skinner’s blog: https://thefinanser.com/
Revolut blog: https://blog.revolut.com/
Monzo blog: https://monzo.com/blog/
Starling blog: https://www.starlingbank.com/blog/

Group chat applications

Telegram: https://telegram.org/
Slack: https://slack.com/

Podcasts

Banking Weekly by the Financial Times: https://www.ft.com/banking-weekly-podcast
Breaking Banks by fintech 'influencer' Brett King: https://provoke.fm/show/breaking-banks/
Fintech Insider by the fintech consultancy 11:FS: https://fi.11fs.com/

3. Fintech reports. The third major empirical source of the project was the burgeoning business and management literature emanating primarily from industry bodies, accounting firms and business consultancies (for a list of consultancy reports, see Table 3). This literature was mainly in the form of business reports targeting financial professionals with the do's and don'ts of financial innovation, catering to a swelling demand for self-disruption after the financial crisis and a growing focus on technology as a means to restore public trust in the financial services industry. From 2015, the accounting firm KPMG began to publish its bi-annual 'Pulse of Fintech' reports, which provides a granular picture of worldwide fintech investment activity. From 2016, the accounting firm PwC began to publish its 'Global Fintech Report' more oriented towards business strategy. Other main sources also mostly regarding management strategy were reports by Accenture, Capgemini, McKinsey, and a series of reports published by the in-house think tank of Citigroup named GPS (Global Perspectives & Solutions).
Table 3 - Fintech reports

<table>
<thead>
<tr>
<th>Name</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Fintech Report by PwC</td>
<td><a href="https://www.pwc.com/gx/en/industries/financial-services.html">https://www.pwc.com/gx/en/industries/financial-services.html</a></td>
</tr>
<tr>
<td>Global Perspectives &amp; Solutions by Citigroup</td>
<td><a href="https://www.citivelocity.com/citigps/category/technology-innovation/">https://www.citivelocity.com/citigps/category/technology-innovation/</a></td>
</tr>
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</table>

4. Fintech technologies. In 2018, the Centre for Interdisciplinary Methodologies at the University held a series of workshops designed to explore mobile apps as a potentially important avenue of research for scholars of digital economies. The workshop consisted of four sessions between 4 May and 15 June each dedicated to specific methods for studying apps. The first session used network visualisations to study the recommendation algorithm of app-stores; the second session introduced the walkthrough method for studying visual interfaces; the third session was dedicated to examining in-built permissions and trackers of specific apps; and the fourth session was dedicated to exploring 'packet-sniffing' software for intercepting (invisible) data traffic and network connections initiated (invisibly) by the app. Whilst the specific methodologies introduced during the workshops were software oriented, and could not be squared with the theoretical and analytical focus of this thesis, the sessions animated the critical engagement with the 'mundane qualities' of fintech apps as software packages which forms part of the 'everyday politics' of fintech apps presented in chapter three.

5. Fintech interviews. A fifth empirical source of this project were expert interviews (for a list of interviews, see Table 4). Three expert interviews were held relatively early on, with two high profile fintech personalities in London, Norris Koppel, founder and CEO of start-up company Monese, and Janine Hirt, COO and Board member of the UK's main fintech trade body Innovate Finance, and with a fintech entrepreneur in Tallinn, Gustav
Liblik, Chief Product Officer of start-up company Change. The interviews provided first-hand practitioner perspectives on the emergence of fintech as an industry and served to cross-check the credibility and coherence of online sources, which they confirmed. They did not, however, necessarily provide very different or new information to that already expressed in online materials, which was largely due to the very explorative character of the questions and the still relatively open focus of the research project at the time. It became apparent that much would be gained from building a more specialised focus by working through online materials first before returning to interviews. As the project evolved and generated more specific questions, a second wave of interviews was scheduled. But they were prevented by the sudden outbreak of COVID-19 and related disruptions caused to the industry and to public life. Already scheduled interviews were cancelled and further contacts in the industry became unavailable. So, the decision was made to rely on the sources outlined above.

Table 4 - Fintech interviews

<table>
<thead>
<tr>
<th>Expert name and position</th>
<th>Date and location</th>
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</thead>
<tbody>
<tr>
<td>Norris Koppel, founder and CEO of start-up company Monese</td>
<td>26 March 2018, London, UK</td>
</tr>
<tr>
<td>Janine Hirt, COO and Board member of Innovate Finance</td>
<td>9 May 2018, London, UK</td>
</tr>
<tr>
<td>Gustav Liblik, CPO of start-up company Change</td>
<td>12 April 2018, Tallinn, Estonia</td>
</tr>
</tbody>
</table>

Conclusion

How to engage fintech critically without reducing it to a singular thing, without relying on pre-subscribed understandings of its politics, and without perpetuating a too narrow focus on only a few powerful actors? These were the questions posed by the previous chapter in view of the emerging body of critical fintech studies. This chapter has argued that one way of answering these questions can be found in the research traditions of feminist and everyday IPE. Drawing on these literatures, the chapter has introduced 'the everyday' as a critical concept that can serve to productively challenge conventional assumptions of what matters in critical fintech studies. Following poststructuralist feminists, in particular, it has argued that the everyday is more than
simply an empirical attribute to describe certain actors or practices and that it can yield a distinct research orientation or critical methodology. In what follows, this conclusion quickly summarises the discussion of previous sections and highlights how the specific methodological framework outlined in this chapter, alongside the theoretical arguments of the previous chapter, inform the specific arguments and discussions in the subsequent chapters.

The first part of the chapter introduced 'the everyday' as an analytical starting point for the critical study of fintech. It traced its previous use in a series of interventions by feminist IPE scholars and everyday IPE scholars who shared with this thesis a critical concern with the specific blind-spots, silences, and absences in traditional theorisations and critiques of the global economy. Feminist IPE highlighted how traditional IPE approaches were marked by a latent and limiting gender bias that seemed to reduce the global political economy to a sphere of just men. Everyday scholars in turn highlighted how traditional IPE approaches were marked by a latent and limiting regulatory bias that seemed to reduce the global political economy to a sphere of just elites. This chapter argued that both interventions had to grapple with the limited ability of an 'add-on' approach to address these biases. While useful in articulating and spotlighting the problem, simply shifting the analytical focus to everyday actors or practices did not help to resolve the problem of bias per se. It merely inverted the analytical privilege of traditional concerns that it was supposed to subvert. The chapter characterised this dilemma as a major apprehension in the adoption of an everyday approach to the study of fintech: an exaggerated concern with powerful actors and certain presubscribed logics cannot be corrected simply by adding everyday actors and everyday logics to ongoing discussions. First, because 'the everyday' is not a predefined empirical category to be found 'out there' readily available to be scrutinised. Second, because an everyday focus inevitably produces new silences and blind spots that cannot be ignored.

The second part of the chapter suggested that in order to deal with these difficulties, the work of poststructuralist feminists is instructive, who have long moved on from the idea of simply adding women to existing theorisations of IPE and have proposed instead to use the everyday experience of women as a vantage point to rethink the global economy in more plural and open-ended ways. The chapter suggested, by analogy, that
the point of studying fintech from the perspective of the everyday may therefore not be to provide a more complete picture of fintech so much as to rethink fintech as a contested space full of incoherences and incommensurabilities. So, rather than using the everyday as an empirical category to be added onto existing accounts the chapter proposed to use it as a critical concept that can foreground a distinct research orientation or critical methodology. It articulated two conceptual moves afforded by the concept that form the basis of the distinct everyday approach pursued by this thesis. First, a move away from notions of stability, uniformity, and internal consistency, and towards notions of emergence, heterogeneity, and incommensurability. Such a move forestalls essentialist notions of 'the everyday' as some more authentic other to the non-everyday however understood. It foregrounds that an everyday perspective on fintech is one amongst others and that any perspective on fintech is necessarily incomplete. On this view, using the everyday as a lens to interrogate fintech does not undermine or discredit other perspectives but productively engages their specific blind spots and silences as a quandary for social scientific inquiry. Second, a move away from traditional notions of politics as public policy, where powerful actors deliberate over collectively binding rules, and towards a more expansive notion of politics that includes, indeed, seeks out seemingly unremarkable aspects of fintech as politically meaningful. This implied an understanding of everyday research as everyday politics: an ongoing dialogue between the researcher and the research field that creates new knowledges through the simultaneous rethinking of conventional assumptions in both.

The third part of the chapter moved on to discuss how such an everyday approach has informed and evolved during the research process. It pointed, in particular, to the difficulty that from an everyday perspective, no empirical aspect necessarily mattered but all aspects potentially mattered as a source of valuable insight. This had an effect on the research process in practice, which the chapter characterised as an 'iterative and reflexive research strategy', marked by the continuous back and forth between empirical observation, theoretical reading, and analytical writing. In the process, five key sources of empirical insight came into focus. First, fintech events proved an invaluable source, providing the opportunity to listen and speak to practitioners, and even participate in some of their activities. Second, fintech media proved important, which can be divided into news media outlets; corporate, professional, and private blogs; group chat applications; and podcasts. These provided an ever-growing archive
of live commentary on daily occurrences but also reflections on the social and economic value of fintech as an industry. Third, specific technologies yielded important insights, revealing how specific promises, ideas, and plans registered as outcomes, how these outcomes generated new promises and new possibilities. Fourth, business, management, and consultancy reports were highlighted as a central source of empirical insight. Finally, a number of expert interviews were conducted, but brought to an abrupt halt by the broader public health crisis triggered by the outbreak of COVID-19.

It is crucial to highlight that the empirical material presented by this thesis, which informs its arguments, discussions, and theoretical claims, is grounded in a focus on the London based fintech community. London was chosen initially as a starting point for the project, because it was geographically close, because initial contacts existed, and because it was rapidly turning into one of the primary global ‘fintech hubs’ in terms of volume of investment into fintech and number of fintech companies. The London focus is, perhaps, slightly contradictory to the broader attempt of the thesis to extend the conventional focus of critical fintech studies which very much tends to lie on a select few global fintech centres. However, as the project started, the future shape of the global fintech industry could not be predicted, as indeed, the formation of fintech as a global industry was only beginning to take shape. In this sense, the specific focus of this thesis can promote further interest in future explorations of fintech in locations that have been less regarded, so far.

The discussions in this chapter, alongside those from the last, provide the theoretical and methodological framework to situate and interpret the empirical material presented in the subsequent chapters. The next three chapters each seek to engage and develop an everyday politics of fintech, using seemingly mundane aspects of the industry as vantage points for rethinking, extending, or complicating ongoing discussions, thus cultivating a heightened sensitivity to the heterogeneity and contingency of the industry. Chapter three begins by exploring the politics of app-based banking which has become a much-regarded success story of the UK fintech start-up scene. But where current debates usually focus on their role in forging a path for big tech companies to enter the financial services industry, the chapter argues that it is worth considering the strange plausibility of 'apps' as a natural solution to all manner of financial problems. Chapter four moves on to engage and develop a politics of fintech
hackathons which have become prominent events in the fintech industry. Where current critiques normally dismiss hackathons as exploitative or ideological, the chapter suggests it is worth engaging the seemingly intuitive appeal of 'hacking' as a preferred mode of social and entrepreneurial agency. Chapter five draws attention to a politics of fintech podcasts which enjoy huge popularity amongst fintech enthusiasts. Where podcasts are not commonly regarded political, the chapter shows how they can be 'performative' of the fintech industry – in a double sense of 'calling fintech into being' and of performing fintech as a lively, embodied, and socially situated practice.

While each of the chapters draw on a different set of empirical sources and theoretical literatures, they are threaded together by the everyday methodology of the thesis, which seeks to develop a critical thinking alongside rather than about fintech that complicates well-rehearsed arguments, theories, and debates, through an ongoing curiosity with regards to the ideas and practices that circulate in the industry. Jointly, they thus support the broader argument of the thesis: that a critique of fintech can take the industry seriously as a political economic domain, of which it becomes part, rather than remaining separate, as an 'objective' claim to what fintech is really about.
Chapter three: The everyday politics of app-based banking

From 2013, a small group of fintech start-up companies has formed in the UK that have often been described as 'challenger' or 'app based' banks. The self-declared mission of these companies has been to re-build retail banking for the digital age by delivering products on smartphones via mobile applications, or 'apps'. They have 'challenged' traditional banks by calling the necessity of brick-and-mortar branches into question and by charging lower and more transparent fees. Moreover, they have suggested that banks cultivate a different kind of relationship with retail customers, based on advanced analytics and enhanced mobile technologies.

Initially, traditional banks tended to ignore the challengers, simply because they seemed too small to compete. Or they adopted a mocking stance. The marketing strategy of the newcomers had been based, after all, on rubbishing established banks for their past role in the crisis and on drawing attention to various fees and charges which they denounced as excessive or not transparent enough: "Banking but better" one of the early slogan went (Starling); "A Bank that is Rooting for you" went another (Tandem); and “Better than your bank account" went a third (Revolut) (See Figure 1). Meanwhile, the challenger banks themselves burned through wave after wave of venture capital funding with no viable business model in sight (Financial Times, 2017a; Reuters, 2017). Disinterest and ridicule, however, gave way to a level of doubt and alert, as the new banks proved much more popular than expected, as retail deposits came back into focus as a cheap source of funding for banks and as the push of large internet companies into the financial services sector started to gain pace. Now, established banks began to conceive of their own slow and complex 'legacy' IT systems, of customer data stuck in 'data silos' and of notoriously high cost bases that simply could not compare to those of the branchless challenger banks (Citigroup, 2018; Citigroup, 2019).

Proponents of app-based banks suggest that the challengers could disrupt retail banking by importing platform business models into the industry. 'Just like Uber, just like Netflix', they could position themselves at the heart of a 'two-sided market' (Gawer, 2014), capitalise on 'network effects' (Parker, Van Alstyne and Choudary, 2016) and make huge profits from tiny fees by selling financial products and services on app-store-like marketplaces. They point to the successes of AliPay and WeChat in China and argue
that similar 'super-apps' may arise in Western contexts – in Europe, in South America, and in the US. So, the question becomes whether these apps will be built by traditional banks, by startup companies, or by one of the big tech companies.

Sceptics, in turn, point out that platform business models have not proven commercially viable in the UK (Financial Times, 2018c; Financial Times, 2020). They highlight that challenger banks have attracted enormous amounts of speculative investments despite continuous loss-making to suggest that 'banking as a platform' has been a marketing fad – a bait for venture investors on the hunt for the next big thing, the next Uber, the next Netflix. Other, more critical voices suggest that the import of platform business models signals a much broader restructuring of finance as platform economy (Langley and Leyshon, 2020). On this view, app-based banking appears problematic, not because it lacks profitability, but because of its monopolistic tendencies and because it may grant excessive power to big corporations.

![Challenger bank adverts, March 2018](image)

*Figure 1 - Challenger bank adverts, March 2018*
But while the import of platform business models remains an important concern, this chapter argues that it is worth to take a step back and consider another ambition of app-based challenger banks that otherwise all-too-easily recedes from view. Namely, the ambition to rethink banking from the perspective of smartphones, based on the proposition that "banking is no longer somewhere you go, but something you do" (King, 2012). This shifts the attention from the question of profitability and from the battles between companies to the strange plausibility of apps as a means to build 'better' banking, after old banking has failed. Why is it that fintech enthusiasts turn to apps to disrupt the industry? The chapter draws on a small body of critical app studies to argue that apps are attractive to fintech enthusiasts, because of their 'mundane' capabilities. They promise banks increased access to the 'lived realities' of individuals, which can be read, more politically, as an attempt to seize the social situatedness of markets as a source of competitive edge.

The argument unfolds in three steps. Section one briefly situates the emergence of app-based challenger banks within the contexts of the popular business narratives about fintech outlined in chapter one. It then moves on to outline the two most prominent critiques of app-based challenger banks: one that depicts them as an excess of financial speculation; and one that focuses on their role in restructuring finance as a platform economy. While both perspectives offer important reflections, the section suggests that they also entail certain important limitations. Writing challenger banks off as 'merely' an investor hype means to neglect the material changes they bring about, while examining them as platforms renders them a secondary concern to the power battles between high finance and big tech companies. To expand and complicate these critiques, the section proposes to unpack the challenger banks' ambition to harness apps as a means to embed banking more dynamically within the daily operations of market life. Section two introduces a growing body of 'critical app studies' that has suggested to think of apps as 'mundane software' characterised by an in-built capacity to blend into the workaday world. Though apps can often appear simple, even trivial, this literature has suggested that it is precisely their ordinary quality that has allowed them to thrive. Hence, companies mobilise apps, because of their ordinary appearance. Section Three details how the UK challenger banks have sought to capitalise on this quality. It analyses select app-based banking applications to show how they reframed the problem of public distrust.
in traditional banks as a problem solvable by apps. Beyond a naïve technological solutionism it discerns a sophisticated attempt to re-think banking as a lived social practice that requires apps as a means to navigate a fast-changing world. The chapter concludes by reflecting on how these findings extend and complicate conventional critiques of app-based banks and how they support the overarching argument of the thesis.

A short introduction to app-based challenger banks

The emergence of app-based banking in the UK can be usefully placed within the context of two of the business narratives outlined in chapter one. They can be read as the result of financial regulators' post-crisis efforts to create competition in retail banking as well as an effect of big tech companies seeking to enter the financial services sector. They were founded after the Financial Services Authority (FSA) and the Bank of England (BoE) had significantly lowered the barriers of entry for start-up companies to enter the industry. The legislative changes that took effect in 2013 were threefold: they lowered capital requirements for new banks, which had previously been higher in comparison to existing banks; they introduced a faster authorization process with significant up-front support from the FSA; and they shortened the timeline for assessing applications to less than six months. This made it significantly easier for newcomers, to build a bank. But the regulatory changes, alone, were not sufficient. Rather, the idea to move banking onto smartphones began to gain traction only after Apple launched Apple Pay in 2015, which allowed people to register their bank cards with iPhones and thereafter use their devices to pay.

Before the launch of Apple Pay, most fintech practitioners, and crucially, most fintech investors broadly agreed that in contrast to the successes of mobile money in the developing countries of the Global South and despite the rapid adoption of QR-code-payments in China, mobile phones did not have a great prospect in the financial sector in the UK (PYMNTS, 2014). Primarily, because the payments market was already saturated with debit- and credit cards, which seemed just as convenient in terms of

39 and from the Prudential Regulation Authority and the Financial Conduct Authority which replaced the Financial Services Authority in 2013.
speed, security, and simplicity. Apple’s announcement, in turn, shifted these narratives. It not only indicated that Apple had reached an unlikely agreement with the great gatekeepers of payments – banks, card networks, and merchants – that had each previously protected their territory in payments jealously (Ozcan, 2014). It also suggested that the company was determined to create a financial role for iPhones and apps, despite previously sobering experiences in the US (PYMNTS, 2014).

Once the role for smartphones as payment devices was established, an expansion of purpose unravelled, from paying with smartphones to banking with smartphones. As one industry report noted:

“For some, 2015 could be described as the year of the retail challenger bank in the UK. Four in particular have been making waves in the news throughout the year: Starling, Mondo, Tandem and Atom. [...] The challenger banks see a low friction, radically different experience as the key to winning customers; they envisage interactions between consumers and the bank being as simple and quick as possible, self-service being the default mode and all enabled by a slick, user-friendly, digital interface” (PwC, 2016).

By the time the report was published, none of the challenger banks had received their banking licences, yet. None of them were banks. Yet, they received considerable news coverage, throughout the year, where they fashioned themselves as the new 'platforms' of banking (The Guardian, 2015; The Guardian, 2016a). They would build app-based current accounts – 'financial control centres' – and grant users customised access to financial products of other fintech firms (The Guardian, 2016b). For instance, loans from Zopa, foreign transactions from Transferwise, savings from Oaknorth, investments from Nutmeg, and so on. As Anne Boden, founder and CEO of app-based challenger bank Starling explained: "Just as Netflix recommends the best choice for your next film, Starling will recommend the best choice for investments or loans, giving customers a smoother and more tailored experience." And as Emma Rumney from Reuters (2017) added: "Partner firms plug into the apps, creating a 'marketplace' of

44 Speech at Innovate Finance Global Summit 2017 in London.
services ranging from loans and investments to insurance and energy, and paying the banks a fee whenever a customer signs up to their offering."

This was the much-anticipated idea of ‘banking as a platform’ (Zachariadis and Ozcan, 2017). It proved attractive to investors because it suggested that app-based banks could disrupt the banking system by tapping new income streams: their profits would not derive from interest on loans or overdrafts, but from commissions charged on cross-selling services ‘in-app’ of other financial services providers. The money earned on commissions could then be potentially used to undercut prices of financial products. At its most extreme, app-based challengers could run loss-making banks, only to attract customers for cross-selling products. A prospect that was considered a realistic threat by established banks.45

However, as noted above, the platform model did not become commercially viable for the banks, which has prompted some commentators to present app-based banking as a temporary investor hype (Financial Times, 2020). Others, in turn, have suggested that beyond profitability, app-based banks should be seen as pioneers in a much broader restructuring of finance as a platform economy, whereby business consultancies welcome the opportunities associated with this trend (Accenture, 2019; Citigroup, 2019) and critical scholars warn of the monopolistic tendencies it entails (Langley and Leyshon, 2020). In what follows, this chapter briefly addresses both of these arguments. It recognises that both offer valid perspectives, but also suggests that they provide a limited register for engaging the politics of app-based challenger banks. For simply dismissing app-based banks as a market hype downplays their material consequences, while warnings of ‘banking as a platform’ reduces them to a secondary concern in view of the broader battles between high finance and big tech companies. So, rather than debating their role as platforms, the chapter proposes to address their role in promoting apps as a means to embed banking more dynamically within people’s daily routines.

45 This is according to Ruth Wandhofer, Global Head of Regulatory and Market Strategy of Citibank, speaking at the Open Banking 2020-2030 Summit of the Financial Data and Technology Association (F DATA) on 5 December 2017 in London. See: https://fdata.global/open-banking-2020-2030/ (Accessed 31 March 2021).
App-based banks as an investor hype

Despite continuous loss-making, app-based challenger banks have attracted enormous amounts of venture capital funding in the past five years. The UK’s largest app-based challenger banks by users and valuation are Revolut, Monzo, and Starling. Revolut moved from raising £1.5 million pounds in a seed funding round in July 2015, to £6.8 million pounds in a series A funding round in July 2016, to $66 million dollars in a series B funding round in July 2017, to $250 million dollars in a series C funding round in April 2018, to $500 million dollars in a series D funding round in February 2020.46 This amounts to £824.3 million pounds in less than five years. Monzo, collected a total sum of £384.7 million pounds over the same time period, and Starling a total sum of £363 million pounds. By the end of 2020, all three of these banks had attained ‘unicorn status’. They were valued at over a billion pounds by investors, even though they were running loss-making businesses cross-subsidised by venture capital.

From the perspective of the founders this was unproblematic. They suggested that they were focused on growth before profit and that this was normal amongst startup companies. As Maximilian Tayenthal, cofounder of the app-based challenger bank N26, put it:

"In all honesty, profitability is not one of our core metrics. We want to build a global financial services company. In the years to come we won’t see profitability we’re not aiming to reach profitability. The good news is we have a lot of investors that have very deep pockets and that share our deep vision and that are willing to support the company over many years to come" (Financial Times, 2019b).

In contrast to the startup founders, however, the rejection of profitability as a core metric led many observers to dismiss app-based banks as an excess of financial speculation. Fintech 'influencer' Chris Skinner – far from an outspoken critic of the industry – wrote, for example:

"Monzo, with 2 million customers, is now valued at the $2.5 billion as of a June funding round which is double its value of October 2018; and Revolut, with 5 million customers, was valued at $1.7 billion back in April. [...] These are impressive numbers when you think that Commerzbank is valued at just $6.8 billion. How can new firms that have yet to gain customers main bank accounts – most of these new players are being used as secondary or even tertiary accounts by many people – be worth half of a Deutsche Bank, when you combine their current valuations? It's a good question, and one that many are asking. [...] I have a feeling that some of these firms are more like Leprechauns than Unicorns. A Leprechaun is also mythical and magical but, rather than delivering riches, it just promises riches at the end of a rainbow you never reach."47

Jemima Kelly, journalist at the Financial Times made a similar argument:

"The phenomenon known as "fintech" grew up in the good times, in the aftermath of the global financial crisis. Fintech firms were great during these party years, when VC money flowed easily, when profitability didn't seem to matter (in any “tech-enabled” sector), when the idea of "being your own bank" was somehow a positive thing, and when contact with other people felt so normal — so incessant — that having an app that only spoke to you via robots felt like a nice break from the relentlessness of human interaction. But the party years, for now at least, are over" (Financial Times, 2020).

A recent McKinsey report put it as follows:

"many digital banks have a cash-consumptive business model that requires continual investor funding. Pre-COVID-19, their loss per customer was between €10 and €60. (Top-performing incumbent banks, on the other hand, generated €150 to €350 per customer). Now, fintechs' loss per customer is expected to expand to €20 to €75 (and profit per customer at top incumbent banks to drop to €50–€200). Fintechs that are skewed towards customer

acquisition (as opposed to driving positive unit economics) are particularly challenged. Given the contracted funding environment, many digital banks cannot sustain a cash consumptive business model in the medium term."

Such critiques of the 'cash-consuming' business models of challenger banks are widespread in the professional contexts of fintech and beyond. However, in critical terms they provide a very limited register for thinking about, or alongside, the politics of app-based challenger banks. They offer a handy rebuttal of claims about their supposedly 'disruptive' force. But they remain ultimately focused on the question of business success, that is to say, whether or not app-based banks create profits. Broader political implications recede from view.

**App-based banks as pioneers of the platform economy**

The critique of challenger banks as a temporary market hype contrasts with a perspective that places them within the context of a profound transformation of the financial sector. Such a perspective can be commonly found amongst business consultants or in business consultancy reports, which suggest that the challenger banks' (failed) attempt to import platform business models into finance was only a first step in the much broader battle between the world’s more powerful financial and digital platforms (Accenture, 2019; Citigroup, 2019). As Tom Merry, managing director at Accenture Strategy noted, for example:

"The rapid growth of neobanks shows they have great consumer appeal, forcing their competitors to adapt and innovate, which can only be good for customers. But there are still stark challenges that need to be addressed as they try to close the massive gap between sky-high valuations and profitability. [...] The elephant in the room for all banks is the impact Big Tech will have if it seriously enters the fold, which will likely shake up the sector in a way that will make the current fight for customers and deposit balances insignificant" (Accenture, 2020).
Citibank's "Bank X: The new new bank" report similarly suggested that:

"The emergence of BigTech such as GAFA (Google, Apple, Facebook, and Amazon) and BAT (Baidu, Alibaba, and Tencent) in financial services has led to heightened competition in the financial services sector. We think the challenge BigTech poses for incumbent and standalone challenger banks is daunting, given the absence of any cost drag from legacy information technology (IT) systems and underused branch networks (common problems for banks) and their natural advantage in customer acquisition owing to their high user engagement models. Further, the diverse nature of these large tech companies could mean that cross-subsidization allows these firms to operate even while making losses in an attempt to grab greater market share" (Citigroup, 2019, p. 15).

Such a view not only reverberates through business consultancy circles. It also resonates with the distinctly more critical academic literature. In particular, Langley and Leyshon’s (2020) influential theorisation of fintech suggests that developments such as app-based banks are inextricably linked to the broader restructuring of finance as a platform economy:

"Start-ups and early-career FinTechs, BigTech companies and ICT and banking incumbents alike are all engaged in processes of platform reintermediation. Rather than enhance competition in existing retail money and financial markets, platform reintermediation seeks to produce new market structures that will secure new oligopolistic and monopolistic positions. FinTech enterprises are thereby conducting their business strategies and operations amid intense processes of platform consolidation increasingly dominated by BigTech firms and incumbents."

Here, the primary concern regarding app-based banks is not profitability. Rather, it is their role in importing the broader operational logic of platforms into finance. Consultants suggest that they signal a threat to traditional banks who must reinvent themselves – either by partnering with technology companies or by moving into more disruptive technology and business models – so as to become truly digital competitors.
Critical scholars, in turn, point to the centralising tendencies of the platform business model and warn of the monopolistic powers they grant to individual companies. On this view, equating the rise of app-based challenger banks with increased competition is problematic, because "successful platform reintermediation turns on transforming and monopolising new market structures of retail money and finance" (Langley and Leyshon, 2020, p. 7). But while the step of big tech companies into finance and resulting monopolistic tendencies are important concerns, they also remain somewhat unsatisfactory arguments with regards to the distinct politics of app-based challenger banks. On one level, their very failure to successfully run on platform business models suggests that a platform critique does not readily apply. On another level, a critique which considers challenger banks 'early pioneers' automatically renders them a secondary concern to the much more anticipated power battles between high finance and big tech companies, as foreshadowed by the spectacular rivalry between Tencent and Alibaba in China and the equally spectacular team-ups of Amazon and JP Morgan, Google and Citibank, and Apple and Goldman Sachs in the US.

This chapter therefore offers an additional 'everyday' perspective on app-based challenger banks that mobilises 'apps' as a vantage point to engage and develop a critique of the banks' ambition to embed banking more dynamically within the operations of daily life. The next section introduces a growing body of critical app studies that has suggested to think of apps as 'mundane software' characterised by an in-built capacity to blend into the workaday world. This literature focuses attention on the ways app-based challenger banks have harnessed the distinct computational capabilities of smartphones, which provides an opening for a more in-depth examination of the everyday politics of app-based banking below.

The mundane capabilities of apps

Mobile applications or 'apps' have become a pervasive feature in contemporary market life. Usually run on smartphones, they offer support in virtually all walks of life: not just in banking, but also in travelling, messaging, dating, sleeping, cooking, meditating, gaming, shopping, running, and so forth. Indeed, so vast is the choice that it has become difficult to imagine any activity that has not yet been targeted by an app. In 2019, the two leading app stores operated by Google and Apple offered a combined number of 4.41 million apps. Meanwhile, worldwide app stores generated 204 billion downloads and $120 billion in revenue. Chapter one highlighted how the success of the app store was key to the commercial success of the iPhone with profound ramifications for the global political economy. These far-reaching consequences have prompted a number of researchers at the intersection of cultural political economy, digital media studies, and digital geography to critically question the wider political and economic ramifications of apps, app stores, and the appification of ever more industries (Ash et al., 2018a; Dieter et al., 2018; Gerlitz et al., 2019; Light, Burgess and Duguay, 2018). These scholars have pointed, in particular, to a peculiar paradox of apps. That is, whilst they appear to be simple, even trivial, because of their limited and often unremarkable functionality, it is precisely their ordinary appearance that has allowed them to thrive. In the terms of Morris and Elkins (2015), apps are 'mundane software'. But a very specific type. One that marks a decisive departure from how other mundane software has previously been packaged for sale.

Apps foreground simple features and singular functionalities, reframing all manner of unremarkable activities as problems solvable by software. On the one hand, they unbundle activities into discrete sets of computable tasks. So that a visit to the cinema, for instance, can be parcelled up into a sequence of small steps, each targeted by a respective app. One app to buy tickets, another app to send a reminder, a third app to...

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travel to the movie theatre, and so forth.\textsuperscript{54} Similarly in retail banking, one app for paying, one app for borrowing, one app for saving, one app for foreign transactions, etc.\textsuperscript{55} On the other hand, apps seek to encode all manner of semiconscious or thoughtless 'non-activities' into software — the small habits, fleeting distractions, and quick glances that are situated in-between the more purposeful activities. The most famous example, perhaps, are 'casual games', such as Angry Birds, Candy Crush, or Farmville, which "function in the ambiguous time and space between the myriad tasks we do on digital devices; between work and domestic obligations; between solitary play and social gaming; and between attention and distraction" (Anable, 2013). But casual games are not the only example. News apps, social network apps, messaging apps and, indeed, banking apps, all strive to enter the in-between spaces of daily routines, where they are used habitually, incidentally, and compulsively, but not necessarily with a distinct purpose in mind. The challenger banks, as will be shown in the next section, advertise 'banking at your fingertips' to invite users to fit banking into their lifestyles and manage their finances whenever and wherever they are. As Goggin (2011) notes, apps therefore build on and extend the already intimate status of smartphones as a personal and portable device "that users take with them whenever they go" and which they "carry or wear close to the body, and place nearby, even in sleep or repose" (p.152).

Another decisive condition for the proliferation of apps has been their affordability. For apps offer software at a very low price or for free. As such, they convey a sense of disposability to the user that has allowed numerous temporary niche markets ‘in the long tail’ (Anderson, 2006; Anderson, 2007) to thrive. Including for apps such as K Blocker (£0.99), which allows users to filter all content related to the celebrity Kardashian family from a phone’s web browser. Or its twin app, JB Blocker (free), that does the same to links related to pop star Justin Bieber; for apps such as star walk (£2.99), which uses the smartphone screen to display an overlay on the sky with all manner of visible star constellations. Or its sibling app, Is It Dark Outside? (free), that answers precisely that question at any given time and place. Whilst many of these apps

\textsuperscript{54} There is even an app for timing toilet breaks during a movie, see: \url{https://runpee.com/} (Accessed 31 March 2021).

are built to ‘go viral’ and sell rapidly in high numbers before consumer attention moves on, others (including banking apps) are consciously designed to tap alternative sources of revenue. For instance, they may gather data and sell it on, such as Erik Geidl’s infamous flashlight app that secretly sold geolocative data to advertisers.\textsuperscript{56} Or they may introduce alternative payment occasions that arise ‘in-app’ as the software is in use, e.g. in-app purchases, upgrades, or subscriptions.

An important impact of apps in this regard has been to de-centre revenue generation from the point of sale of software, by multiplying the times and the places at which payments can occur (Morris and Elkins, 2015, pp. 74-76). In casual games, for example, users often encounter a point at which they cannot proceed without paying for additional levels, equipment, extensions etc. In news apps, they often face pay walls for premium content, in messenger apps they can purchase customised stickers or gifs, in music streaming apps they may have to choose between listening to adverts or paying for a monthly subscription, and so forth. Alternative payment occasions can be problematic because they are often designed to encourage impulsive purchases. Or else, because they personalise prices according to the individual propensity of users to pay (Moor and Lury, 2018). Indeed, one of the great promises of banking apps, as will be outlined in more detail below, is that they may serve to make use of the circumstantial data about their customers produced by apps. Yet, on the flipside, de-centring revenue generation from the point of sale has forged a model for monetising mundane software — via casual, targeted, and quasi-voluntary payments, or indeed, data monetisation — that has been a third and decisive attribute for the proliferation of apps, which significantly accelerated the gradual integration of software via smartphones into the objects and operations of mundane market life.

Taken together the simplicity, affordability, and alternative revenue models of apps point to their shared status as a distinct ‘mundane’ software type that is characterised by an in-built capacity to blend into the workaday world (Morris and Elkins, 2015). On this view, the unremarkable appearance of apps cannot be considered an incidental trait. Rather, it must be understood as a central driver of their popularity. And thus, almost inevitably, a core factor of their business appeal. As Dieter and Tkacz (2020)

observe: "A successful app, in this regard, is a habituated app; an app that takes its place within an everyday that it thereby contributes to reconstituting." As a systematic feature, the habituated quality of apps can therefore be read, more politically, as an achievement of sorts; an outcome of multiple interlocking socio-technological developments; and a result of various strategic efforts that are orchestrated, at least in part, by powerful interests.

On the one hand, the unremarkable appearance of apps can therefore be contrasted with their necessary involvement with varying actors, technologies and networks that render their mundane operations possible, and indeed, valuable in the first place (Dieter et al., 2018, p. 2). For instance, apps are necessarily entwined with the varying hardware components of smartphones, including batteries, GPS sensors, accelerometers, compasses, cameras, microphones, touchscreens, vibrators, LED lights, Wi-Fi, 3G/4G/5G, USB, Bluetooth, and NFC (Mackenzie, 2010; Goggin, 2011; Wilken and Goggin, 2013). They are inextricably linked to the proliferation of vast data infrastructures, including telephone masts, optic cables, satellites, and server farms (Halpern et al., 2013; Farman, 2014; Parks and Starosielski, 2015). They are further predicated on the spread of standardised developer tools, such as application programming interfaces (APIs), software development kits (SDKs) and integrated development environments (IDEs) (Gerlitz et al., 2019) and various forms of design practice, especially Human-Computer Interaction (HCI) design, which includes user interface (UI) design and user experience (UX) design (Ash et al., 2018b; Dieter and Gauthier, 2019; Tkacz, 2019; Dieter and Tkacz, 2020). And they are embedded within the distributional logic of app stores, which determine the conditions on which users search, find, purchase, download, rate and recommend apps, and which control the terms on which developers build, deploy, promote, distribute, and sell their product (Goggin, 2011; Morris and Morris, 2019). Almost inevitably, then, these involvements flag up a multiplicity of labours involved, subjected as they are to varying degrees of precariousness, exploitation, and violence — from the extraction of cobalt and coltan for batteries (Mantz, 2008; Sovacool, 2019), to the manufacturing and assembly of smart devices (Ngai and Chan, 2012), to the design and development of software applications (Irani and Silberman, 2016; Scholz, 2013).
On the other hand, apps are not simply produced, they are productive themselves. Their mundane capabilities are not simply generated, they are generative, too. For instance, apps have become an indispensable part of the growing market for self-tracking, where people collect data via smart devices — in exercise, sleeping, diet, blood pressure, body temperature, and so forth — to extend conventional ways of ‘knowing themselves’ (Nafus, 2017). This has led to new means of self-description and identification, new narratives of belonging and membership and, indeed, a whole new ‘biopolitical’ terrain (Ajana, 2017); a terrain that is increasingly squeezed by corporate actors for commercial gain (Moore, 2017) and also, as the discussion about tracing apps in the COVID-19 crisis has shown, is increasingly seized by state actors as a means of governmental control (The Guardian, 2020; Reuters, 2020d). Apps have also become a routine element in contemporary (urban) dating, thus forcing attention to the technological re-mediation of sexuality and intimacy, to the proliferation of new dynamics, skills, pressures, opportunities and challenges in romantic relationships, but also the increasingly sophisticated corporate strategies that seek profit in the mass-commodification of affect (Albury et al., 2017; Wilken, Burgess and Albury, 2019). Moreover, and most famously perhaps, apps have also become a widespread means of communication, event-following/filtering and public opinion, thus raising political and economic questions about the technological curation, transformation, manipulation and multiplication of contemporary digital publics (Paßmann, 2019; Rogers et al., 2009; Schmidt, 2014; Weller et al., 2014).

Taken together, these multiple political and economic entanglements illustrate what amounts to the common proposition of numerous critical app studies: Rather than taking apps for granted as a simple, even trivial, software tool, they must be understood and engaged with as 'socio-technologically embedded' (Dieter et al., 2018; Gerlitz et al., 2019). So the task becomes one of examining in detail how their mundane capabilities are mobilised across political economic contexts to specific political economic ends. As such, apps provide a fruitful vantage point for extending or complicating conventional accounts of challenger banks that reduce them to either an investor hype, or an example of the platform economy.
The everyday politics of apps

The app-based challenger banks acquired their banking licenses in the UK in a time of austerity, when the repercussions of the financial crisis were still acutely felt and when a series of post-crisis scandals (from the mis-selling of payment protection insurance to the rigging of the London Interbank Rate) had further damaged the already bad reputation of banks (The Guardian, 2016c). Against this background, they promoted apps as a means of building better banking, after old banking had failed. As Tom Blomfield, co-founder and CEO of Monzo wrote:

"We believe that banking can be better. We're tired of hidden fees and charges, endless paper forms, and nothing quite working in the way we'd expect. So we're trying to build a bank that we'd want for ourselves, our friends, and our families."57

This section analyses these efforts in detail. It first illustrates how app-based challenger banks promoted apps by reframing the perceived problem of public distrust in the banking industry as a series of mundane problems solvable by mobile technology. While this was clearly an opportunistic move, the section warns against writing it off as naïve technological solutionism. Instead, it suggests that this must be understood as a strategic – and surprisingly radical – shift in operations to embrace 'social situatedness' as a business opportunity.

Building a bank as smart as your phone

One of the key ideas promoted by app-based challenger banks was that apps could help to 'unbundle' banking, whereby products and services formerly considered part of the retail banking 'package' – such as current accounts, foreign exchange, loans, savings, and so on – were spun-off as simple standalone mobile apps. This would allow them to focus on one product only and dedicate all their energy on creating 'best in class' products. As Starling’s Anne Boden suggested:

"Certainly when you look at where best in class customer standards are now being set, it isn’t by any existing bank, but [by] smaller players striving for excellence in delivering one piece of the puzzle."  

The challenger banks, thus, would focus on ‘fixing’ one product only and focus all their energy on building the world’s best app-based current accounts. They identified four initial 'pain points' with traditional current accounts that supposedly required fixing: Account opening, account balances, overdrafts, and travel money.

First, account opening. Due to anti-money laundering (AML) and know-your-customer (KYC) regulations, all banks – traditional or not – have to meet strict obligations for verifying the identity of new customers. Traditionally, this required face-to-face meetings in a bank branch. The app-based challenger banks, however, depicted these meetings as painful and hopelessly inefficient. Not only did they require customers to go on a trip to the bank and endure long waiting times, poor customer service, etc., they also presented archaic identification requirements, such as presenting a letter from government or utility providers as a proof of address. Why go through all that trouble, the challengers asked, if customer verification and account opening could be easily managed, in only a few minutes, via the app?

Most vocal about the issue was the challenger bank Monese, which identified mobile account registration — especially for expats and migrant workers — as a business opportunity early on. The mission statement of the company reads:

“When our Founder & CEO Norris Koppel first moved to the UK, he faced a frustrating experience. With no UK credit history or utility bills proving his address, he struggled to open a bank account. Without one, he found it nearly impossible to receive his salary or rent an apartment. From his painful experience, he came up with the idea for Monese: a mobile money account that’s inclusive, instant and on-demand.”

59 Monese is not strictly speaking a bank — it holds an e-money license — but the ‘real’ regulated challenger banks without exception handle the account opening process in the same way as Monese. The company is chosen as an example, here, because it has foregrounded account opening most prominently as its primary point of differentiation to traditional banks.
With Monese, Koppel quipped in a CityAm interview, "opening an account is faster than boiling an egg"\textsuperscript{61}, no proof of address and no credit history required. Instead, the process is handled 'in-app' via smartphones in what is commonly referred to as an 'onboarding process' – a series of simple swipes that swiftly guides would-be customers through the application.

Figure 2 illustrates select screens of a typical onboarding process, here taken from challenger bank Monzo during a workshop series focussed on comparing different onboarding procedures\textsuperscript{62}: New applicants download the banking app on their smartphones. They open the app, enter basic details such as name, address and email address, they read through and agree to the legal terms and conditions and then use the smartphone camera for verification. This is done by taking a picture of their ID and a picture of themselves. In some cases, they are asked to record a video and additionally use the microphone to record a voice message. Combined with the geolocative data transmitted by the device, these steps provide the app-based challenger banks with the necessary information to conduct an identity check compliant with AML and KYC regulatory requirements. Once these checks are completed, the challenger banks send out a bank card and pin.


\textsuperscript{62} The workshop series was hosted by the Centre of Interdisciplinary Methodologies at the University of Warwick, from May - June 2018.
Figure 2 - Onboarding Screenshots, Monzo, May 2018
Second, account balances. With traditional banks, so the challengers, it was close to impossible for customers to keep track of their finances. First of all, transactions often appeared in online account balances with a delay, only a couple of days after they had been initiated. Once they appeared, they usually amounted to little more than an unrecognisable entry. As Ben Chisell, Product Director of Starling, explained:

"A bank statement is usually just a list of transactions with unhelpful names and very little information to enable you to make better decisions with your money — you have to copy the information into spreadsheets or budgeting tools to learn anything interesting, but not everyone has the time, inclination or Excel skills to do that."

By contrast, the challenger banks suggested that an app-based current account could provide users with timely and useful information about their finances, providing them with meaningful spending insights and handy budgeting tools. Figure 3 provides an overview over the initial design and functionality of app-based current accounts which has evolved significantly over time.

Figure 3 - Current account screenshots, Monzo, August 2016

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Most challenger banks proposed an interactive line chart (which has since lost in popularity)\(^64\), displaying the real-time account balance over time. As soon as money left or entered the account – upon payment, or on pay day – users received a push notification which informed them of the account activity. Below the line chart users typically found a list of transactions resembling traditional bank statements, including a name and a logo of merchants next to each entry, which they were likely to recognise. A single tap on each entry would prompt the display of a map, on which the location of respective merchants was identified. As fintech enthusiasts often quipped, the functionality finally 'empowered' users to track their expenses after a drunk night out. The apps would further assign each transaction to a set of spending categories, such as groceries, eating out, transport, entertainment, shopping, expenses, and so forth, allowing users to monitor their own spending patterns, compare how these patterns changed month over month and retrieve a yearly summary of expenses, or a summary of expenses at any given merchant.

Third, overdrafts. The app-based challenger banks suggested that traditional banks were deliberately opaque when it came to overdrafts, trying to lure people into short-term borrowing in order to benefit of the corresponding fees. As Harriet Allner, Head of Communications at challenger bank Starling, suggested:

"Whether you agree with it or not, people needing to borrow money is a reality in the UK. This week's Competition and Markets Authority report\(^65\) stated that 45% of the population use an overdraft at some point in any given month. Unfortunately this has become a massive opportunity for banks to earn a significant margin from customers in the form of a quagmire of opaque charging structures. Now I am in no way saying that banks shouldn’t be able to make money. Like any other commercial enterprise, banks, of which we are one, need to cover their costs and make a decent enough profit to satisfy shareholders. But when that profit is generated by purposefully over-complicating fees and charges, resulting in, at best a lack of transparency, at


worst genuine confusion amongst the most vulnerable customers, then it feels exploitative."

Similarly, Venkat Srinivasan, Head of Lending at challenger bank Monzo, wrote:

"With traditional banks, customers often 'slip' into their overdraft and only realise this is the case when they receive charges in later monthly statements. This is especially true of unauthorised overdrafts, where you haven’t agreed on an overdraft limit with the bank in advance. Research from the Financial Conduct Authority suggests that customers don’t necessarily see overdrafts as debts and can quickly become accustomed to using it. Furthermore, the language used when talking about overdrafts is often needlessly complex and confusing, making it even more difficult to understand."

Explanations for the perceived failure of established banks to address the issue varied amongst proponents of app-based banking. Some held profit motives responsible ("Selling complex products with opaque charging models makes commercial sense for them!"). Others emphasised internal cost pressures ("The thousands of branches and creaky old IT systems aren’t cheap to maintain!"). Another fraction saw technological ignorance as the problem ("They simply do not know how to do better!"). The verdict was all the same: As long as big banks benefitted from 'rip-off fees' on unarranged overdrafts they had no incentive to change the status quo, and so, it was up to the challenger banks to build a solution that "makes your financial life easier, rather than trying to catch you out with penalty fees and charges."

Figure 4 illustrates the app-based solution provided by challenger banks. First, unauthorised overdrafts were categorically excluded from the apps. Instead, users were deliberately forced to actively 'switch on' overdrafts to minimise the risk of unintentional borrowing and make sure that customers were aware. Once overdrafts were switched on, the apps sent users automatic push notifications shortly before an

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upcoming payment took their account into overdraft and also at the very point at which their balance actually turned negative. Again, to limit exposure to, and raise awareness of, unintended borrowing and associated overdraft fees. Further, the apps included simple managing tools that would allow users to check the cost of an overdraft before using it and to check the accumulated cost and duration of a running overdraft 'at a glance'.

Fourth, travel money. With traditional banks, the app-based challenger banks complained, travelling abroad was costly. Here is Starling's content strategist, Jess Ruiz, expressing her frustration with the difficulties of preparing for an upcoming trip abroad:

"While I nailed my packing technique, when it came to travel money, I just couldn’t get it right. No matter how much I planned, it inevitably worked out as expensive or inconvenient (or a combination of both). Talking to friends and family, it seems most of us have been in a similar boat […] Many banks charge a fixed fee for every spend, as well as a percentage for currency conversion. So that £2.50 coffee might suddenly be inflated to £3.50. Plus, that spontaneous trip to Madrid seems like a fab idea right up until your card is declined post-patatas bravas because you forgot to tell your bank you were heading overseas and now you need to make umpteen overseas calls to fix the issue."
In almost identical terms, Monzo’s Tom Blomfield wrote a blogpost titled, "Why are foreign card payments such a mess?":

"For me, the first struggle is the moment I inevitably get my card blocked for fraud. I’m not sure if I’m on some kind of list at my bank, but they seem to block my card every time I land in a new country. At best, it’s a 15-minute international call to get the card unblocked. At worst, it remains blocked for days. The second problem is the fees and charges. Even worse than getting screwed on foreign exchange is not knowing for several days how hard I’m being screwed. I come back from holiday and look at my statement, wincing. I just can’t understand how it costs so much. Here’s the secret: foreign card payments don’t cost much. The banks have been using them as a hidden profit-centre for decades."

The proposed app-based solution once more included the purported benefits of a push notification. Upon arrival in a foreign country, the apps sent travellers an automatic welcome message that informed them about the live exchange rate. For example: "Welcome to Italy. The exchange rate is approximately €10 = £8.70. Enjoy your trip!" (See Figure 5).
They used the geolocative awareness of smartphones not only to send this message, but also to avoid the problem of preemptively blocking cards. For if the location of a smartphone matched that of a payment initiated by its owner, the probability of fraud was very low and the payment could be approved instantly — no card blocking and no international calls necessary. Most importantly, however, from the perspective of challenger banks, they did away with the 'hidden profit centers' in foreign payments by displaying the cost of each foreign payment or foreign transaction upfront and by waiving the fees and mark-ups usually charged by traditional banks. Passing on the live exchange rate quoted by card networks (Visa and Mastercard) and indicating the mark-up the card networks charged over central bank rates, in order to deliver 'full transparency'.

It would be easy to dismiss these mobilisations of apps as naïve technological solutionism: "The future of banking is... You're broke" wrote Holly Wood in a biting polemic in Wired magazine against the pseudo-utopian narratives of challenger banks at the industry's flagship Money 20/20 event.71 She undoubtedly stroke a chord with many observers when she described how

"It can be deeply depressing to attend a large gathering of executives, founders, and industry veterans [...] and hear the same, somber message repeated over and over again: The future of money will be predicated on the fact that the personal finances of the next generation are as fragile as a Fabergé egg. This, according to attendees and speakers, is both a problem and an opportunity. No one bothered mentioning that the sick state of the nation’s finances isn't technology's problem to solve."72

However, and building from the insights of critical app studies, simply writing off apps as 'trivial' is to misunderstand the strategic use of their mundane quality. Instead, this chapter argues that app-based challenger banks mobilise apps, precisely because they seem trivial. Thus, in the following, the chapter outlines how the distinct mobilisation of apps presented here were predicated on a strategic re-thinking of banking as a lived

social practice, which can be read more politically as an attempt to tap the social situatedness of markets as a business opportunity.

Banking as a social and affective practice

A central theme amongst proponents of app-based banking was their frustration with the 'obsession' of traditional bankers to think in pre-defined product categories: Here is a current account, how can I sell this? Rather than beginning from an existing product and then thinking about how this could be delivered on smartphones, they suggested, banks should start from specific financial situations with smartphones and then think about the kinds of solutions they could provide (See Figure 6). So, they started by mapping out all manner of fictitious but context specific financial 'problem spaces' to identify 'pain points' and then work backwards to an app-based solution from there.

![Figure 6 - 11:FS - Better banking business models](image)

Fintechs start with the customer problem and then solve a number of other adjacent problems with digital tools. In turn, they build new business models around this joined-up problem solving.

It was thus that the above-mentioned solutions came into focus: account opening, account balances, overdrafts, travel money, and so forth. But the focus soon expanded to include further monetary scenarios, especially, all manner of monetary situations that had only recently become susceptible to corporate intervention thanks to the widespread use of smartphones. For instance, splitting a bill after dinner, keeping track of online subscriptions, budgeting shared expenses with housemates, putting money aside for a treat, sending money as a gift, and so forth. These scenarios were often
discussed by the banks with their online community of supporters, who were invited to post feedback on existing product features, but also propose, discuss, and vote on new product features, online. In this manner, the app-based challenger banks strived to cultivate an almost anthropological awareness of their customers’ monetary pragmatics to create new features and functionalities. As Tkacz (2019) astutely observed:

"Similar to anthropological and sociological theories of money as embedded or marked, the appification of money equally involves a distinguishing between different money practices. Not only is there a recognition of specificity (distinct embeddings, markings, meanings, etc.), but such a recognition is now the basis for product differentiation and innovation. The spectrum of money practices, situations, and wider money ecologies richly detailed by anthropologists and sociologists is being carved up into new product niches or features within existing apps" (p. 270).

Indeed, in striking resemblance to what anthropologists and sociologists had long theorised as 'earmarking' (Zelizer, 1994), the challenger banks addressed what they conceptualised as 'mental accounting' by rolling out app functionalities variously referred to as pots, piggybanks or vaults. Intended to reflect the real-life accounting practices of 'actual' people, these functionalities allowed users to put money aside for specific purposes within the app — money for holidays, savings, household expenses, and so forth. In short order, further optional features arrived: one that allowed users to automatically round up payments to the nearest whole number and add the difference to a dedicated account; one that automatically earmarked incoming payments and channelled them directly into a dedicated account — so, for example, one third of the salary into household bills, another third into holiday savings, and the remaining third into the basic current account; and one that allowed users to set up shared pots, piggybanks, or vaults, between several people to manage common expenses during a project or trip.

Next to shifting the focus from products to practices, the banks further suggested that banks should develop a heightened awareness to the affective dimensions of banking, as Starling's Anne Boden suggested:

“When you think about it, money isn’t about finances. Not really. Money is about emotions. Finding a fiver in an old pair of jeans comes with an unexpected thrill. Going to the shops and having your card declined leads to embarrassment or panic. The end of the month can feel like the World’s Toughest Mudder, whilst that first weekend post-payday fills us with a rush of relief, joviality and generosity. Money is emotional. But sadly, according to research, the most common emotions surrounding money are those of shame, fear, anxiety and anger. Even our positive emotions — surprise, relief — arise as a response to that stress and worry. With today’s technology, however, money does not need to be the emotional rollercoaster we know it to be. Money can be simple, clear, fast, stress-free. You can have a relationship with your money that is positive and healthy.”

On one level, this emphasis on behaviour, emotion, and affect was linked to the promotion of convenience as a marketable category. Proponents of app-based banking suggested that there was a demand for increased ‘visibility and control’. In this context the ability to track one’s expenses in real-time and to check one’s account balance at all times became more than a simple gadget. It was considered an affective device, an effective means to make banking ‘feel’ easy and offer customers some peace of mind in a fast-changing world. Further features abounded, such as a ‘freeze button’, which allowed users to instantaneously freeze their card when they thought it was lost and unfreeze it once they had recovered it. On another level, apps also provided a means to introduce all manner of voluntary behavioural nudges, such as an app functionality called ‘gambling block’, which allowed customers to restrict their own spending at high

street bookies and online betting sites. The block could be activated in-app 'by the push of a button' and could be de-activated only after a 'cooling off phase' of two days.

In practical terms, this emphasis on affect and behaviour was informed by the import of a set of existing techniques and practices in the professional field of app design (Tkacz and Velasco, 2018; Tkacz, 2019). For instance, the banks used real time testing based on actual users as they engage with the app, in order to make them 'feel' seamless:

"Such tests take one of two forms: a/b testing and multi-variance testing. In a/b testing a certain percentage of users who access the site in question receive one version of the site and the other percentage receive the other version. Including a key design difference between each site, the designer can then use the site analytics to determine the effectiveness of a single element such as the colour of a button, by seeing if the difference introduced increases or decreases engagement. In multi-variance testing, a similar principle is used, except multiple differences are introduced and all the combinations of these differences are tested to understand which combination of units is most effective (such as two different headlines and two different images that sit alongside this headline)." (Ash et al., 2018b, p. 1143).

Moreover, as Dieter and Tkacz (2020) have shown, the account opening processes of challenger banks make use of a series of familiar design patterns, such as chunking or progressive engagement, to reconcile the promise of speed and convenience with complex legal requirements:

"Onboarding becomes a matter of chunking and pacing, of punctuating the key moments of interaction or touchpoints and fostering a sense of progression to keep the user engaged. The sequential unfolding of registration screens is anticipated through the use of familiar design patterns aspects that are further overlaid with emotional and affective cues, such as

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79 See: ibid.
playful modes of address and personalisation. Taken as a whole, the onboarding sequences for challenger banking apps portray an approach to banking that revolves around the strategic production of positive affect and habituated behaviour. Patterns and interface elements are interwoven with a new aesthetics of everyday banking, characterised by modes of interaction and instruction that are ‘beaming with positivity,’ ones which cosy up to the user through casual rhetoric or intimate forms of address (‘you look good today’) with the aim of binding the user to an identity, and hence, to the service” (Dieter and Tkacz, 2020).

This kind of behavioural nudging can be problematic because it encourages particular behaviours and discourages others in a manner that is not usually transparent to the user. For instance, Clarke (2019) and Ash et al. (2018b) report that fintech companies specialising in lending strategically adjust digital interfaces to encourage people to borrow more. It can also be problematic in terms of privacy because the users are not normally aware that their behaviour is being recorded for the purpose of optimisation, or at least not of the granularity of the behavioural data collected by the banks. But it is important not to confound nudging with manipulation. As Ash et al. (2018b) emphasise, assumptions about the "smooth manipulation" of "passive users" all too easily creep into the discussion when they belie the reality of interface design. App-based interactions between challenger banks and their customers must rather be understood as a responsive, iterative, and interactive process, that the challenger banks are able to just-so manage, rather than fully control.

Banks as companions in daily market life
So far, this section has shown how app-based challenger have promoted apps as a solution to all manner of 'mundane' pain points in banking. It has further argued that while this was clearly an opportunistic move, it was predicated on a sophisticated attempt to 'rethink' banking as a lived social practice, and to embed banking more dynamically within the routine operations of daily life through the use of specific app design practices. These observations add crucial insight to the conventional focus on platform business models and point to a peculiar shift in the foundational assumptions of fintech companies that too often goes unnoticed: the plausibility of app-based
banking, rests on the presumption that individuals are emotional social beings immersed within markets which they can never fully understand. So, apps become a necessity, to navigate a fast-paced and constantly changing environment, a means to 'unlock' rational or – better – smart behaviours that otherwise remain out of reach.

There is then a curious compatibility of the outlook promoted by challenger banks with long-standing academic critiques of neoclassical 'pure markets' assumptions. Situatedness, social context, and individual circumstance, so often the clarion call of critical scholars against the violence inflicted on people in the name of pure markets ideology are increasingly harnessed by fintech startups as a source of competitive edge. The challenger banks criticise their competitors for 'punishing' individuals who do not behave rational with penalties and fees, and alternatively promote an 'enabling' role for banks in unlocking more rational behaviour with app-based functionalities that are attuned to people's individual circumstance. In this sense, the promotional statements on blogs, which point to a gap in the intuitive convenience of banking apps and the burdensome bureaucracy of old banks exceed a naive technological solutionism. They perform a strategic shift in the corporate outlook on banking to embrace a focus on the messiness of social life – and to seize it as a business opportunity.

The marked emphasis on 'visibility and control' is symptomatic of this shift. It instantiates a view which holds that individuals are not capable of navigating markets effectively, because they are not able to 'see' them. Proponents of app-based banking therefore suggest that people – themselves, their friends, their family – need apps in order to make sense of markets that otherwise remain overwhelming and opaque. They offer visuals as stable reference points to temporarily arrest the fast-paced world. So, the ability to see one's finances 'at a glance' becomes attractive to individuals, empowering even, because they offer them oversight from a position of immersion within markets, which they otherwise are incapable to comprehend.

Conclusion

Why do fintech enthusiasts resort to apps to build 'better' banking? This chapter has added evidence to previous suggestions that an important reason for apps' widespread popularity are their 'mundane' capabilities. Challenger banks harness apps to embed
banking more dynamically within the daily currents of market life. Placing apps centre-
stage thus can add crucial insight to fintech analyses that otherwise tend to focus
primarily on business-models and corporate battles between startups, big banks, and
big tech companies. In what follows, this chapter conclusion briefly summarises the
research findings presented in this chapter, before it situates them within the broader
argument of the thesis.

The first section introduced app-based challenger banks as a research concern for
fintech scholars. It highlighted two key developments that propelled these companies
to the forefront of the UK fintech scene. First, a set of regulatory changes by the BoE
and the FCA designed to reduce regulatory barriers of entry to the retail banking
industry that took effect in 2013. The changes were threefold: they lowered capital
requirements for new banks, they shortened the application process, and they speeded
up the authorisation of new banks. Second, the launch of Apple Pay and a sudden shift
in expectations regarding the financial role of smartphones in the UK. Apple's
announcement marked an unlikely agreement between the great gatekeepers of
payments – banks, card networks, and merchants. Soon after, an expansion of purpose
began to unravel from paying with smartphones to banking with smartphones.

A key promise of app-based banks to investors has been to 'disrupt' retail banking with
platform business models. However, these business models did not become
commercially viable in the UK, which has prompted two key arguments to emerge. One
of them contrasts the enormous speculative investments attracted by app-based
challenger banks and their even larger private market valuations with their continued
lack of profitability to suggest that app-based banking has been a temporary marketing
fad or investor hype – another example of speculative finance spiralling out of control.
The chapter argued that such a perspective can be useful to counter exaggerated claims
about the supposedly disruptive effect of app-based challenger banks. But it also
suggested that it downplays their broader political economic ramifications. It may well
be that app-based banks remain unprofitable, or – more likely – that they end up
adopting those traditional revenue models they decry. But in the process, they
experiment with digital capabilities that are likely to remain important. So, engaging in
detail their ambition to rethink banking from the perspective of smartphones becomes
an important task.
The other argument focuses on the role of app-based challenger banks in restructuring finance as a platform economy. On this view, the import of platform business models into retail banking, whether successful or not, forges a path for big tech companies to enter the industry. Where consultants welcome the potential opportunities for innovation and profits that may result from such a move, critical scholars have warned of the monopolistic tendencies built into the operative model of ‘banking as a platform’. The chapter has argued that such a perspective is vital to puncture the seemingly unbound optimism of business consultants for platforms, but that it tends to reduce the politics of startup companies to a secondary concern, in view of the much-anticipated battle between high finance and big tech companies. So rather than debating whether big banks or big tech will define the future of finance, the chapter has argued, it is worth to unpack an ambition of challenger banks that exceeds the restructuring of finance as a platform economy. Namely, their ambition to harness the computational capabilities of smartphones and apps in order to embed banking more dynamically within the daily routines and rhythms of market life.

In the second section, the chapter introduced a small but growing body of ‘critical app studies’ which has drawn attention to the peculiar ‘mundane’ capabilities of apps as a software package. That is, whilst they appear to be simple, even trivial, because of their limited and often unremarkable functionality, it is precisely their ordinary appearance that has allowed them to thrive. So, companies use apps because of their seemingly ordinary quality. They use them to unbundle activities into discrete sets of computable tasks and to encode all manner of semiconscious or thoughtless ‘non-activities’ into software that are situated in-between the more purposeful activities. Building on these insights, the chapter argued that apps provide a fruitful vantage point for engaging an everyday politics of app-based banking. It asked: why do fintech enthusiasts turn to apps to build ‘better’ banking? What is it about apps that they find compelling? How exactly do they mobilise their mundane capabilities?

In the third section, the chapter offered a detailed analysis of how app-based banks have sought to capitalise on the mundane capabilities of apps by reframing the perceived failure of traditional banks opportunistically as a set of mundane problems solvable by mobile technology. It discussed four perceived problems in particular:
account opening, account balances, overdrafts, and foreign payments. Although the focus on these minor issues could be easily dismissed as a naïve form of technological solutionism, the chapter argued that it also entailed a systematic, and indeed, a sophisticated attempt to re-think banking as a lived social practice. On the one hand, this includes an attempt to move away from selling products and services, to selling something much closer to daily financial companionship, based on a heightened attentiveness to the monetary pragmatics of individuals. On the other hand, it includes a marked emphasis on the affective dimension of banking and personal finance. Thus, challenger banks postulate a demand for financial 'peace of mind', a demand for making banking 'feel' easy, based on increased visibility and control. This can be read partly as a function of the increased influence of design practices, such as human experience-, app-, and interface design. But it also entails a surprising shift in the foundational assumptions about markets, market subjects, and market rationality. Challenger banks no longer consider markets to be rational but opaque and overwhelming. They no longer consider market subjects to be rational but social and affective beings that are immersed – indeed lost – in a fast-paced market environment which they can never fully comprehend. So, apps emerge as a necessity to successfully navigate markets, to unlock rational or 'smart' behaviours.

These findings, then, complicate conventional critiques of app-based banking as either a marketing hype or the harbingers of a broader restructuring of finance. On the one hand, they complement conventional assumptions that hold that app-based banks are primarily driven by the profitable prospect of importing platform business models into retail banking. Beyond profit motives, they show, there is also a clear dedication amongst proponents of app-based banking to pursue a different kind of banking made possible by mobile technologies, that operates much closer to the daily currents of market life. On the other hand, the findings spotlight a political dimension to app-based banking that goes beyond conventional concerns with regards to the excessive powers of big banks or big tech companies, and which revolves around the growing plausibility of apps as a natural solution to all manner of problems. As such, the findings draw attention to two further concerns.

First, challenger banks actively seek to make apps seem normal. They use specific design techniques to 'optimise' interactions with their customers, which can mean
different things. The chapter has mentioned previous research that has highlighted how the design of apps can influence user behaviour, increase subscriptions, or even the willingness to borrow. In the case of challenger banks, this can be problematic, for example, in the account opening process. Here identification and verification processes, as Dieter and Tkacz (2020) have argued, are transfigured into playful exercises whereby the legal force and violence involved in what is essentially a digitalised border practice become invisible. But the chapter has also emphasised that the influence of app-design on user behaviour must not be exaggerated. Moreover, it has suggested that it may actually be done in the interest of those who use the apps, too. Through the transparent use of voluntary nudges, such as the gambling block for example, or the visuals designed to reduce people’s reliance on overdrafts. So in this sense, apps are the site of an ongoing negotiation over what ‘optimised’ interactions mean.

Second, the specific appeal of apps rests on a deeper shift in assumptions about the ontological contours of the market, or better, markets, which are no longer assumed to be rational entities based on the dynamic interplay of supply and demand. Rather, they arefigured by challenger banks as opaque and overwhelming, so that apps emerge as a necessity to navigate them successfully. What is striking about this shift in assumptions is how it seems to mirror or incorporate the long-standing critique of social scientists against the pure markets assumptions of economists and neoliberal politicians. So where critical academics have long pointed to the violence inflicted on people in the name of market rationality, challenger banks point to the damage caused by traditional banks’ common practice to punish people with fees and penalties for not behaving market rational. In this sense, it seems important to acknowledge that a critique based on their lack of attentiveness to the social situatedness of markets no longer holds. Instead, a more important task for critical scholars becomes to question the ease with which challenger banks, and fintech more broadly, are able to claim that markets are fast-paced, overwhelming and opaque.

In terms of the broader argument of the thesis, the chapter has outlined an everyday approach to the study of fintech by illustrating how a focus on seemingly unremarkable aspects, such as apps, can yield fresh perspectives on the politics of an industry that is all-too-often reduced to merely an investor hype, or else, a battlefield between big
corporations. It has shown how fintech, while driven by profit and profiteering, also entails genuine attempts to rethink finance and banking in view of novel technical capabilities. It has sought to take seriously the sustained enthusiasm for apps amongst fintech entrepreneurs to understand some of the political stakes involved that otherwise might recede from view. It is worth pointing out that the focus here lied specifically on the plausibility of apps to fintech entrepreneurs, which leaves considerable scope for further engagement: e.g. how does app-based banking change the way users interact with their finances? What questions does it raise? Is app-based banking equally attentive to the lived experience of all users, or targeted primarily at young, male, urban professionals? This spotlights another core argument of the thesis: that any critique of fintech remains unfinished and that the everyday politics of fintech, apps, and app-based banking therefore cannot be taken for granted as the industry continues to unfold.

In what follows, the thesis shifts the focus from the politics of app-based banking to interrogate the curious popularity of hacking in the industry. It draws attention to the rise of ‘hackathons’ as a widespread event format and argues that such a focus raises a further set of questions regarding the everyday politics of the industry. While these questions are different from those raised in this chapter, they serve the same purpose in developing a critical analysis that does not simply reject or dismiss fintech or reduce it to a presubscribed understanding but seeks to take it seriously as a political domain and highlight the heterogeneity and contingency of the industry.
Chapter four: The everyday politics of hacking finance

A number of recent works have drawn attention to the significant role that industry events play in making and remaking the global political economy (Garud, 2008; Duffy, 2014; Nyqvist and Høyer Leivestad, 2017; Rethel, 2018). In the context of fintech, the proliferation of ‘hackathons’ has been one of the most noteworthy and yet underexplored events. Their popularity has grown rapidly as the ‘fintech revolution’ moved from the outskirts of the payments industry into the core business of banking and finance and led to the import of digital cultures and practices into the professional circuits of global finance (Hendrikse, Bassens and van Meeteren, 2018).

Fintech hackathons are corporate events that invite programmers, designers, marketers, and everyone else with an interest and/or relevant skill set, to work intensively and collaboratively on the development of provisional software solutions, which are called ‘demos’ or ‘prototypes’. As a combination of two words – ‘hacking’ and ‘marathon’ – the name alludes to the exploratory and investigative software programming taking place at the event, as well as the endurance required to finish a prototype under strict time-constraints. The name also implies a counter-cultural legacy – a shared history with hackers, open-source activists, and early computer pioneers – and it indicates the competitive nature of the event, where the winning prototype can earn programmers a prize.

Hackathons are often presented by fintech enthusiasts as creative events, dedicated to the ad-hoc creation of innovative digital solutions to the financial sector’s biggest problems. However, ironically, the prototypes created during the events very rarely are innovative and, indeed, very rarely outlast the event. So, even though hackathons sometimes create innovative technologies, their much more consistent and much more consequential outcomes are cultural. Organisers and sponsors use them to generate publicity, to explore potential partnerships, and to promote an entrepreneurial spirit amongst employees. Participants often use them to network, to learn more about programming, or simply to meet up with likeminded people that share an enthusiasm for building digital applications from scratch.
A number of social scientific scholars have further pointed out that hackathons can serve an 'ideological' function of promoting entrepreneurial values and normalising unpaid work (Gregg, 2015; Zukin and Papadantonakis, 2017). Indeed, at hackathons, participants are often expected to adhere to the view that personal aspiration, the will to experiment, and the courage to fail, will eventually yield huge rewards for those who dare trying, if not financially, then at least in terms of personal development. Meanwhile they often carry out unpaid technological legwork and produce publicity on social media platforms for free. Thus, hackathons speak to a broader set of political concerns regarding the blurring of lines between work and play (Scholz, 2013) and the perpetuation of uncertain working conditions in the digital economy (Nardi, Whittaker and Schwarz, 2002; Neff, 2012).

However, while such a perspective remains vital, this chapter argues that it leaves intact several striking questions regarding the specific attraction of fintech hackathons. Why, of all things, do fintech companies turn to hackathons to normalise precarious work? What kind of practical knowledges — economic, cultural, digital — do hackathons provide? How do these link up with 'neoliberal ideology'? And what kinds of deviations do they entail? These questions point to an everyday politics of fintech hackathons that is usually ignored: hackathons do not simply 'manufacture' consent to entrepreneurial values and precarious work, they also promote a distinct vision of entrepreneurial agency based on hacking, tinkering, and experimenting that forcefully resonates with a widespread desire amongst tech enthusiasts to 'make a difference'. As Irani so pointedly put it, hackathons promote a firm belief that "bursts of doing and making can change the world" (Irani, 2015, p. 2).

This chapter therefore adds to the ongoing concern with precarious work an additional concern with the chase of precarious workers' creativity, conviviality, and affect. It analyses how fintech hackathons transpose the skills, the pleasures, and the informal conventions of 'hacking' into corporate registers to produce a stance to the world that is both entrepreneurial and experimental. It suggests that this stance is attractive to fintech enthusiasts, because it embraces a set of assumptions about global finance encapsulated in complex systems thinking: uncertainty, non-linearity, and perpetual change. On this view, fintech hackathons instantiate a broader trend in neoliberal polity to reject 'general equilibrium' as the ultimate horizon of policymaking and accept the
postulate that the ‘actually existing’ economy is inherently complex, unpredictable, and constantly in flux. Thus, the chapter develops an everyday politics of fintech hackathons that emphasises how ‘hacking’ emerges as a preferred model of social and entrepreneurial agency, because it already presumes that the world – just like software – is governed by temporary, often accidental configurations, rather than universal regularities.

The argument unfolds in two steps. Section one situates fintech hackathons within a broader rise of corporate hackathons across public and private domains. It presents two prominent perspectives on hackathons: one that celebrates them as a key means of digital innovation; and one that rejects them as neoliberal ideology. While both capture important dynamics, the section argues that they provide a limited notion of the politics of hackathons. Rather than debating whether or not hackathons are innovative, or whether or not they are neoliberal, it proposes to unpack the strange appeal of hacking at the events. Why do fintech enthusiasts mobilise hacking as an entrepreneurial practice? Section two analyses empirical research findings from two fintech hackathons held in London in 2017 and 2018. It details how they encouraged participants to think of themselves as creative hacker-entrepreneurs on a quest to disrupt the financial sector with clever uses of digital technology. Beyond a naïve entrepreneurialism, the section discerns a sophisticated attempt to address a set of limits encapsulated in the business metaphor of a complex and adaptive ‘ecosystem’: radical uncertainty and perpetual change. The chapter concludes by reflecting on how these findings can serve to extend or complicate well-rehearsed arguments about hackathons and about fintech more broadly, and by situating these findings within the broader argument of this thesis.

What are hackathons?

Hackathons are intense design and development events dedicated to the exploration and production of clever solutions to all manner of problems, challenges, and constraints. The first usage of the term ‘hackathon’ can be traced back to an event held by open-source developers in Calgary, in June 1999, which provided a rare occasion for the community, which was usually only connected online, to work face-to-face on the production of digital code (Briscoe and Mulligan, 2014; Irani, 2015). From the late
2000s, hackathons increasingly appeared in the corporate sector as 'collective brainstorming marathons' that promised to bring the logical rigour and creativity needed to outsmart the technical constraints of computers to bear on various other issues across many other domains. The first corporate hackathon is normally attributed to the commercial web services provider Yahoo, which held a first public 'Hack Day Festival' on its Silicon Valley campus, in June 2006.

The event did much to popularise a meaning of the term 'hacking' that decisively differed from its popular use. Where in popular culture hacking had typically been associated with an amazing ability to break into computer systems, at the Yahoo event it was not so much linked to computers or code. Rather, it described a creative-imaginative practice of finding the 'excess potentials' in conventional artifacts, technologies, systems, and rules. As Chad Dickerson, one of the organisers of the Yahoo hackathon, remarked: "Some people hack music, and some people hack software. Some people even hack puppets. Mixing all of that up was one of the great joys of the event." This notion of hacking, as a general-purpose practice, arguably harks back to its original meaning from the 1950s, when a small group of MIT students coined the term to describe all manner of geeky pranks with technology, such as using toy whistles to place calls on the landline for free (Lapsley, 2013). It also reflects the predominant meaning of hacking in hacker communities, which have always considered hacking as a multifaceted practice, not reducible to 'cracking' security protocols and revealing the flaws of a given IT system (Jordan, 2016; Coleman, 2016).

Following Yahoo's Hack Day Festival, other internet firms, such as Facebook, were quick to adopt hacking as part of their routine working practice, praising hackathons as a means to facilitate commercially oriented blue sky thinking within their swelling organisations and to instil an entrepreneurial spirit in their rapidly growing workforces (Fattal, 2012). Moreover, in recent years, the mainstream appeal of hackathons further expanded, capturing the imagination of professionals well beyond the corporate circuits of the Silicon Valley high-tech industry, and encouraging policymakers, in particular, to host hackathons to foster digital innovation across various public and private domains (Briscoe and Mulligan, 2014; Gregg, 2015; Lodato and DiSalvo, 2016; 80 See: https://blog.chaddickerson.com/2006/10/03/yahoo-open-hack-day-how-it-all-came-together/ (Accessed 31 March 2021).
So, in 2016, the United Nations hosted a "fishackathon", to promote "creative solutions for sustainable fishery and aquaculture policies", for example.\(^81\) In 2018, the Kingdom of Saudi Arabia hosted a "Hajj Hackathon" to promote "digital and tech-based innovations" for the pilgrimage to Mecca.\(^82\) And in 2020, the European Commission hosted its pan-European "EU vs. Virus Hackathon", in response to the COVID-19 public health crisis.\(^83\) Hackathons, in other words, have become a mainstream practice, adopted in various contexts, by different actors, to any number of purposes.

The proliferation of hackathons in the financial sector is therefore hardly an exceptional phenomenon. But it occurred under specific circumstances that broadly determined their specific political economic role. In finance, hackathons were marketed as the signature event of a new generation of digitally savvy entrepreneurs who were determined to leverage the 'power of technology' to change, disrupt, or indeed, 'hack' finance in view of the disastrous consequences of the financial crisis of 2008/9. As such, hackathons were pushed into the financial sector by the explosive growth of the fintech industry. In this context, they rapidly evolved from predominantly small, independent, and informal gatherings, to large, corporately sponsored, and professionally organised events. Soon, they were routinely held in those well-funded 'co-working spaces', 'innovation labs' and 'fintech incubators' that had begun to mushroom in financial centres across the globe. In London, the most prominent of these spaces included Level39, a coworking space located on the 39th level of a skyscraper in London's banking district of Canary Wharf; TechHub, a coworking space in London's 'Silicon Roundabout' near Old Street, which was touted by the UK government as the country's response to Silicon Valley;\(^84\) and Plexal, a coworking space in the former press centre for the 2012 London Olympic Games, which was transformed by the Mayor of London with much fanfare into a start-up business campus, in 2018.\(^85\) In this sense, fintech hackathons also became part of the sustained efforts of political and economic

stakeholders to embrace 'digital disruption' as an opportunity rather than a threat to the financial services industry (Hendrikse, Bassens and van Meeteren, 2018; Hendrikse, Meeteren and Bassens, 2020).

In the process, fintech hackathons also became a lucrative business for specialised event organisers, such as OpenBankProject, FinTECHTalents, or Garage48, which inaugurated well-recognised fintech hackathon series in global financial centres worldwide; and thus, they became standardised to a degree that allows a description of their 'typical' course of action. Fintech hackathons normally start on a Friday evening and end on a Sunday morning. On the first day, participants are welcomed and introduced to the localities. Topics and challenges are presented. Small groups team up (usually between 2-8 individuals), they take out their laptops, connect to power and Wi-Fi, and start discussing the challenges, before they dive into building a prototype solution. The organisers usually provide, pizza, beer, and advice. People may leave late at night, sleep at the locality, or not sleep at all. On the second day, participants refine their ideas and their prototypes. Organisers often provide feedback and some form of alternative activity – workout sessions, keynotes, pitch trainings, or simply a walk – and they provide food and drinks. On the third day, teams present their prototype to a panel of experts, executives, and VCs, who judge the team effort. Winning teams may earn a cash-prize, or some form of future mentorship. And, in very rare occasions, they may even receive seed funding to develop their idea into a business.

Fintech hackathons usually fail to produce actually working – let alone innovative – prototypes. But they are valued by organisers and participants as 'disruptive' tech events, because they generate other outcomes, too. Fintech enthusiasts highlight at least four additional outcomes, which will be discussed in more detail below. First, hackathons can generate public and investor interest in 'disruptive' fintech companies; second, they can promote problem-solving and entrepreneurial attitudes in the financial sector; third, they can facilitate networking and partnerships to sustain the fintech community; and fourth, they can generate practical feedback on the usability of technological propositions, such as new datasets, technical platforms, or APIs. In political terms, fintech hackathons are curiously considered to be 'disruptive' because they promote traditional business values – innovation, competition, efficiency – in a supposedly rigid financial sector held back by the vested interests of a few large
financial monopolies. From a more critical perspective, however, promoting such business values is hardly 'disruptive' and rather must be deemed to perpetuate the normative commitments of the financial services industry. Thus, a number of scholars have argued that hackathons primarily serve an 'ideological' function (Zukin and Papadantonakis, 2017). On this view, they 'co-opt' hacking culture in order to exploit volunteer labour and promote entrepreneurial values. In what follows, this chapter briefly addresses both of these arguments, in turn. It recognises that they both capture important dynamics of fintech hackathons but also suggests that they provide a too limited notion of their politics. Instead of debating whether hackathons are innovative or discussing whether they have an ideological function, it proposes to critically question the specific appeal of hacking at these events.

Hackathons and/as creative disruption

Proponents of fintech hackathons like to present them as disruptive tech events. They invite participants to 'hack' finance – not in the sense of pranking financial institutions or breaking into their IT systems, but in the sense of re-thinking finance in creative-imaginative ways. Although the tangible results in terms of creative ideas may be limited, advocates point to at least four expected outcomes that contribute to this end. Brand awareness, entrepreneurial culture, professional networking, and technical fixes.

First, brand awareness. Most simply, hackathons make headlines. They are announced on financial- and social media channels, and thus, raise the profile of corporate sponsors and organisers as digital disruptors, boosting potential clients and investors. For instance, in 2015, Transferwise held its "Break the Banks Hackathon" which invited participants to address the question: "How can we utilize modern technology to disrupt the current banking systems to benefit the customer?" (Business Insider, 2015). Though the theme of the hackathon was broadly in line with the business interest of the company, it was not motivated by an interest in technical innovation, but in media attention. As one of the company's representatives put it:

"The hackathon is a great way for your customers to bond with the brand — people really love the idea of being a part of something that is changing banking. [...] It's like a David and Goliath set up, and the big banks are Goliath
— they been there for centuries, and then there's the David — smarter, nimble with better tech” (Business Insider, 2015).

Second, entrepreneurialism. Fintech hackathons can energise individuals, even entire workforces. They bring people from different backgrounds, different companies, or different work units together to collaborate, exchange ideas, solve problems, think about business propositions, and more. From an individual perspective, hackathons are therefore often experienced as casual, fun activities (Perng, Kitchin and Mac Donncha, 2018). As this participant reports, for example:

"Attending a hackathon for the first time can be a liberating experience for someone who has never seen the kind of innovation that emerges from the witches' brew of legacy-free, unencumbered developers and open APIs. Think about it. You don't have to be in a job for very long before you've been told a million times why something can't be done instead of how it could be done. Your senses are dulled, your imagination is wilted, and you don't feel as though you can be the change agent that you originally envisioned. [...] It's one thing to get all the stakeholders together in a way that exposes them to the potential of something uniquely transformative. It's another to deliver an experience so religious that pretty much everyone in attendance was destined to lose sleep that night, energized by the possibilities and motivated to do whatever is necessary to disrupt the company's status quo before the next Apple Pay comes along and does it for them" (ProgrammableWeb, 2014).

Third, networking. Fintech hackathons are often organised by companies, regulators, or organisations to explore future relationships with participants. On the one hand, companies may seek to attract or assess 'talent', as one event organiser suggests: "within 48 hours, recruiters can quickly evaluate participants’ technical and social skills."66 On the other hand, companies may seek to explore potential partnerships with other firms and seek out investment opportunities, without however committing to anything. In this sense, the creation of prototypes can be a secondary concern to

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convenors who consider the event in the first instance as an assessment process (Irani, 2019, p. 227).

Fourth, technical fixes. Fintech hackathons are typically organised around a specific digital platform, a new dataset, or an existing body of code, which provide the pre-determined technical basis for the explorative programming at the events. In March 2018, Bank of Santander held a hackathon, for example, that invited developers to think about creative use cases for its new Open Banking APIs.87 During the event, two Santander representatives held workshops to introduce participants to the technicalities but also the intended use cases of these APIs and openly told participants that for Santander Bank the main purpose of the event – next to creating amazing ideas – was to test the usability and soundness of their technical infrastructure before releasing them to a much larger community of third-party developers online.

In sum, fintech hackathons serve a number of business purposes, which proponents like to describe as 'disruptive', although their disruptive function remains largely indirect. They may boost the brand value of a particular 'disruptive' company; they may energise employees in a startup or a financial institution and encourage them to embrace 'disruptive' ideas; they may facilitate networking, recruitment, and corporate partnerships to foster a 'disruptive' business community; and they may help companies to test their 'disruptive' digital platforms. In political terms, then, the radical rhetoric of 'digital disruption' rests – somewhat counterintuitively perhaps – on the promises of fairly traditional business values, such as innovation, competition, efficiency. So, from the perspective of proponents, what is being disrupted, are the perceived failure of large financial institutions to fully embrace these values in comparison with smaller fintech startup firms.

Hackathons and/as ideology

The largely positive image of fintech hackathons conveyed by proponents contrasts with an alternative, more sceptical view, which ascribes an 'ideological' function to hackathon events (Gregg, 2015; Irani, 2015; Zukin and Papadantonakis, 2017). While

such a view starts from the same observation, that what is being produced at hackathons in the way of projects and prototypes typically remains very basic, it rejects the claim that their 'actual' outcomes are universally beneficial and further points to a number of political impacts that proponents of fintech hackathons do not typically recognise.

On one level, scholars have emphasised that conveners of hackathons certainly benefit more from the events than their participants, who 'sacrifice' or 'donate' their labour without ever expecting material compensation (Gregg, 2015; Zukin and Papadantonakis, 2017). Thus, participants produce tweets, comments, and other form of social media content that boost the brand awareness of the organising entity; they pose on event-pictures that will later be used for marketing purposes; they provide technical assistance to test datasets, platforms, applications, and APIs; and all of this 'unpaid work' is routinely performed out of a hope, a belief, or an implicit promise that the hackathon may result in a future job-opportunity, in some form of seed-funding, or in an upcoming partnership. This is in spite of the fact that organisers openly admit that they only very rarely hire employees on the basis of their performance at hackathons (Zukin and Papadantonakis, 2017). And indeed, during the research conducted for this thesis, the majority of participants considered this to be normal, justified, or simply the way the start-up industry worked. In this context, hackathons can seem to 'co-opt' hacker culture to normalise and legitimise precarious working conditions, in an industry, where any expectations of a stable career path have been erased by the demand for flexible skill-portfolios and quick attachments to temporary professional networks (Neff, 2012; Lorusso, 2019). As Zukin and Papadantonakis suggested:

"In its determined subversion of everyday organizational routines, the event embodies a set of quasi-Orwellian precepts that have practically become axioms of the new economy: Work is Play, Exhaustion is Effervescent, and Precarity is Opportunity. Hackathons' social practices convert these discursive tropes into a performative culture for a tech-dominated, post-financial crisis economy, where "it's the romance, not the finance, that makes the business worth pursuing" (Komisar and Lineback, 2000; Thrift, 2001). In this case, the "romance" begins with hackers' subculture, and innovation is their "business" (2017, p. 3).
An often-neglected aspect of this critique extends to the timing of the events. As Irani (2015; 2019) has pointed out, the fact that hackathons take place during weekends, outside normal working hours, undermines their very ambition to bring people of diverse backgrounds together. For the privilege of deferring other responsibilities, such as care work or parental duties, during these times, underwrites the willingness of participants to regard a weekend of unpaid work as 'casual fun' (Irani 2015, p.13-14).

On another level, scholars have highlighted that hackathons inflect hacking with an entrepreneurial ethos that steers tech enthusiasts away from a radical politics of collective technical transformation towards the production of quick, individual, and opportunistic solutions (Irani, 2015). Here, it is not so much the unpaid work of participants that is being critically highlighted, but the entrepreneurial values promoted at the events. For Gregg, for example, hackathons

"embody core principles of start-up and venture-capital wooing enterprise. It is not just access to information that is heralded as 'good' but the conviction that especially talented individuals can do more with data than those officially charged with its curation. As we see in the case of accommodation providers like AirBnB, or the taxi service spin-off, Uber, app development typically proceeds on the premise that autonomous access to resources is superior to any state-regulated method. The liberal ideology shared by app developers and various hacking traditions is the belief that technology builds a non-partisan bridge between competent, self-motivated, rational actors" (2015, p. 188).

In this sense, fintech hackathons appear 'ideological' because they promote meritocratic beliefs which hold that the smartest and the hardest working deserve to become billionaires; because they present personal risk-taking, aspiration and profit-making as the fullest expression of freedom and liberty; and because they suggest that private enterprise alone can provide viable solutions to societal problems – at the expense of public or collective forms of organisation, cooperation, and wealth (Cockayne, 2015; Marwick, 2018). This is why the radical rhetoric of 'creative disruption' seems deceptive to critical scholars. It suggests profound change yet remains firmly
committed to a set of free market values that frame ruthless competition and unapologetic profiteering as indispensable drivers of social and economic progress. What is being disrupted, in other words, are specific businesses and technologies, whilst the radical subjugation of finance to capitalist imperatives remains intact. Grasped in these terms, fintech hackathons merely appear as a corporate strategy to tap, or co-opt, the radical politics of tech enthusiasts and reorient them towards the reproduction of the status quo.

Taken together, these points provide an important corrective to the uniquely positive image of fintech hackathons conveyed by proponents. They show that the outcomes of the events are politically more ambiguous than is commonly acknowledged. On the one hand, because they solicit donated labour to outsource technical feedback and public relations. On the other hand, because they promote entrepreneurial values that perpetuate rather than disrupt the normative orientation of the financial services industry. Yet, while both, the exploitation of labour and the promotion of entrepreneurial values, remain important critical concerns, this chapter argues that they provide a somewhat limited, or better, imprecise notion of the politics of fintech hackathons.

On one level, the observation that fintech hackathons promote entrepreneurial worldviews is hardly surprising, given that they are organised by fintech entrepreneurs for fintech entrepreneurs in a venture backed startup environment. So, while referencing unpaid work and entrepreneurial hubris can be a useful reflex to counter the celebratory narrative of creative disruption, it somewhat misses the target by merely confirming what is already expected and by overlooking the novelty and specificity of these events. Put differently, the question of whether or not fintech hackathons promote entrepreneurial worldviews is much less interesting than the question of what kind of entrepreneurial worldviews they embody and enact in practice.

On another level, and building on this apprehension, it remains crucial to attend to the differences and contradictions that persist at fintech hackathons. That is to say, though they certainly promote entrepreneurial worldviews, they do not necessarily succeed in convincing participants or in subsuming their various ideas and ambitions into one big
entrepreneurial mission. In this sense, the political contents and outcomes – the ideological functions – of fintech hackathons should not be taken for granted. Thus, to engage and develop an everyday politics of fintech hackathons which addresses them in more tentative and more open-ended ways, the following section shifts the focus away from unpaid labour and entrepreneurialism towards the specific discourses and understandings that inform, and give coherence, to the practice of hacking at these events. What is it about hacking, that attracts fintech professionals, i.e. sponsors, organisers, and participants?

The everyday politics of 'hacking' finance.

The empirical material that forms the bulk of the analysis in this chapter is taken from participant observation at two fintech hackathons in London. The first hackathon, named #OpenBankHack17, took place from the 10-12 November 2017 in the co-working space 'Rainmaking Loft' near London Bridge. Its successor, named #OpenBankHack18, took place from 23-25 November 2018 in the University of Greenwich. The material includes field notes and pictures taken during the events, conversations with and between participants on the dedicated Slack channels, and online materials such as blogposts and tweets produced by participants during and after the events. The everyday approach of the thesis guides the interpretation of these materials. It foregrounds the generative quality of these events. As chapter two indicated, the two hackathons came into focus serendipitously. Although they share many recurring characteristics with other fintech hackathons, they should not be read as representative case studies. Rather, they are analysed here as a particular circuit of everyday practice – situated, messy, and incomplete – that resonates with and productively challenges conventional assumptions about where or what the politics of fintech are. In this sense, the section develops an everyday politics of 'hacking finance' from the specific contexts of these events. In order to complicate the analytical conceit that simply equates fintech hackathons with 'creative disruption' or else reduces them to mere 'neoliberal ideology'.
Hacking global banking – with five lines of code

The two #OpenBankHacks were organised in two consecutive years by Railsbank, a fintech startup based in London. Railsbank was founded by two long-time friends and financial services veterans, Nigel Verdun and Clive Mitchell, in 2016. Its business proposition echoed that of another successful fintech startup, Stripe, which had reached ‘unicorn status’ by offering clients a developer friendly way to integrate payment functionality into websites "with 7 lines of code''. Railsbank proposed to do the same for banking by providing third parties developer friendly access to global banking 'with 5 lines of code'. It started by building an international network of small banks and a unique set of APIs which allowed companies to 'plug into' this network and access banking services. Profits would derive from resulting synergies. For instance, a small UK bank might have a customer wanting to expand business operations to France. Usually at that point, it would lose the customer to an international bank, such as Barclays or HSBC. With Railsbank’s APIs, it could gain simple access to the services of a French partner bank. In that way, the British bank could keep its customer and the French partner bank could expand its business. So Railsbank would charge the British bank a fee for the privilege of keeping its customer and/or take a cut of the profits generated by its French partner bank. Win-win-win!

The idea proved popular with investors and Railsbank quickly evolved from entering a London-based fintech accelerator as a 'startup in residence' in November 2016, to raising $1.2 million dollars in August 2017 (Finextra, 2017) to raising $10 million dollars in September 2019 (Finextra, 2019), to raising $37 million dollars in November 2020 (Finextra, 2020). Thus, Railsbank’s first funding round had just been completed when it hosted its first #OpenBankHack17 (See Figure 7). According to Clair Challenor-Chadwick, the event manager of the hackathon, the event was equally motivated by the prospect of creating media headlines and of testing the usability of its APIs. The hashtag in the event name indicated a strategic effort at marketing the event on Twitter (in fact, the hashtags of both events can still be revisited on Twitter, today89) and the invitation circulating online read as follows:

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"Calling all developers and future FinTech entrepreneurs! 48-hour hackathon to create innovative Banking Services on the Railsbank Open Banking API. If you’re keen to be creative and push the boundaries of what can be built using Open Banking APIs, want to build the next generation of innovative banking and compliance services and win cash prizes, then #OpenBankHack17 is for you!"\(^9\)

![#OpenBankHack17](https://www.eventbrite.com/e/openbankhack17-railsbank-open-banking-api-hackathon-tickets-33847397477?aff=estw#)

Figure 7 - #OpenBankHack17

The event was co-sponsored by a number of business partners of Railsbank which were all relatively newly founded London-based fintech startup companies: Skills Matter, Comply Advantage, Vacuum Labs, Startupbootcamp, Fintech Connect Live, Starling Bank and IO Recruitment. Yet, despite these sponsors and despite the recent funding success, the event remained a relatively low-budget affair. Railsbank charged a £13 pounds registration fee and in exchange offered participants a space for hacking, showering, and sleeping; free meals, snacks, and drinks; and prize money of a combined £1750 pounds.

The event followed the conventional agenda outlined above. Participants arrived on Friday evening at 6pm. They registered, grabbed some swag, and began to acquaint themselves with each other (See Figure 8). There were ca. 50 participants, mostly men in their twenties. Some had come in teams. For instance, a group of students from the Birmingham based 'School of Code' and three university dropouts from Brazil who said they were travelling Europe to learn English and code. There was also a group of seasoned employees of the IT company Oracle. Other participants had come on their

own, to meet like-minded people, learn some tricks, and see what kind of banking solutions could be built over the weekend.

Figure 8 - Registration & Swag

At 7pm the two co-founders of Railsbank kickstarted the event. They welcomed participants to a community of 'bright and creative minds' who were ready 'to change the world'. They introduced the company, the sponsors, and the localities of the event. Then, they pointed to a 'Challenge Wall' that was pinned to a window and included challenges as varied as "Alexa as your Banker: Imagine being able to control your banking via Alexa and manage the spending of your kids/household"; "Chat bank: Create a WhatsApp/Facebook Messenger chatbot that on-boards a consumer to Railsbank"; and "Forensics Bot on Transactions: Hook into machine learning APIs to analyse transactions" (See Figure 9). People teamed up and had food, before Railsbank's Chief Technology Officer gave a quick introduction to the Railsbank's developer platform and APIs. After the introduction around 10pm the 'hacking' officially started (See Figure 10). Various participants had brought sleeping bags. Others left late at night to sleep somewhere else. Breakfast the next morning was scheduled for 9am.
Saturday started with breakfast and an optional morning workout. Before lunchtime, teams were expected to attend a brief pitch training to learn about the expectations regarding the live presentation of prototypes to in front of judges on the last day of the event. The pitch was expected to follow a specific form. It should start with a ‘hook’, a specific problem or inconvenience that the judges would know or easily relate to, followed by an introduction of the team and a description of the team’s tireless efforts at solving the problem. Then, the live presentation of the prototype would follow. Yet, by the end of Saturday, most teams did not know for sure whether their prototypes would be up and running the next day.

On Sunday, teams were given time until 2pm to finish. The judges arrived and the pitching began. Twelve teams of two to ten people presented their respective prototypes, which ranged from integrations of Railsbank functionality with Alexa, WhatsApp, and Excel, to standalone apps that used Railsbank’s APIs to provide ‘easy access’ to retail investing, wealth management, and personal loans. After an hour of deliberation, five prizes were given (See Figure 11). A £750 pounds cash price for Best Overall Solution, a £500 pounds cash price for Best Technical Solution, a £500 pounds

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The judges were Adam McGreggor, CTO at Railsbank; Erica Young, Director at Anthemis Group; Richard Hall, Founder and CEO of CloudOrigin; Megan Caywood, Chief Platform Officer at Starling Bank; Gregoire Michael, Program Manager of Tech City UK; Alexa Fernandez, FinTech Partnerships at BBVA; Gen Ashley, from Women Who Code and a former NASA engineer; and, Gabrielle Inzirillo from Ventures BNP.
cash price for best pitch, a symbolic price for best commercial idea, and another symbolic price to the best female hacker, of which there were five.

"Hacker conferences", wrote Gabriella Coleman (2010, p. 53) about non-corporate hacker events, "are a little bit like summer camp but without the rules, curfews, and annoying counsellors. [...] A vacation that often involves furiously exhausting work, lack of sleep, and the need to take a real break afterwards." Many participants described the #OpenBankHack17 in similar terms. They emphasised the social pleasures, the mutual learning, and the thrill of meeting the entrepreneurs behind a hot fintech startup company. They expressed their excitement about spending a weekend with friends in London, in a hip co-working space only a stone's throw away from the iconic Tower Bridge, about the joy of staying up all night, hacking, eating pizza, socialising, and networking. They also expressed a sense of relief by the end of it and a need to recover from sleep deprivation, constant exposure to other people, and the permanent worry about the state of the prototype. Several participants wrote blogs about their experience. "I think we can all say that we're proud of what we've achieved", wrote one of them, "we've made some friends, we've had some laughs, and we've learned a lot."92

Yet, the comparison to Coleman’s account of the hacker conferences also marks out certain differences that are important to recognise. The #OpenBankHack created a temporary community amongst participants and conjured up the kind of group solidarity that one would expect to emerge from working intensely and collaboratively in a small workspace, late into the night, and from collectively worrying about a fast-approaching deadline. Yet it did not generate the kind of crazy vitality and intense comradeship identified by Coleman at the hacker cons. Mostly, because participants recognised the #OpenBankHack17 as a business event. Talk of the digital revolution and the fintech community were ubiquitous. But most participants were not too invested in the politics of fintech. They were there to experience a weekend of ‘casual fun’, to pass their time coding and chatting, and often, to gain a welcome add-on to their personal skills profile. Some people were eyeing the prize money, despite the relatively small sums on both occasions. Others were keen to meet the judges – fintech ‘legends’ as one of the hosts put it. And one of the participants was even asked, apparently to her own surprise, whether she wanted to join Railsbank for an internship after the event.

The #OpenBankHack18 followed largely the same script, with different protagonists. The sponsors were again London-based fintech companies. This time they were called Kompany, Aprexo, and AimBrain. The participants were again mainly men in their twenties, although more students. The event took place in the University of Greenwich,
which did not quite match the entrepreneurial 'vibe' of the Rainmaking Loft. But the agenda remained broadly the same. Participants were invited – per keynote by fintech 'legend' JP Rangaswami – to join the fintech community and help 'change the world'. They were introduced to the challenges; formed teams; and started hacking. Participants kept up all night and worked intensely on prototypes. They received technical feedback and pitch trainings. The judges arrived on Sunday. Teams presented their prototypes. Prizes were given and photos were taken. Then everyone left, exhausted and mostly content. "It was a great experience", one of the participants wrote in a blogpost, "meeting my expectations and giving me what I wanted from a hackathon: sleepless nights, hacking atmosphere, cool challenges, interesting APIs, food, snacks, and hackers falling asleep on their chair."³⁹³

To underline, it would be easy to approach the #OpenBankHacks as either 'creative disruption' or 'neoliberal ideology.' Both events fulfilled their business purpose of creating publicity for Railsbank and helping the company test the usability of its APIs. They also fulfilled their 'ideological' function of convincing participants that donating their voluntary labour in exchange for pizzas was cool. But they also promoted 'hacking' as a preferred mode of entrepreneurial agency, and it is this latter aspect of the #OpenBankHacks the chapter now turns to.

**Hacking as an entrepreneurial practice**

As indicated above, corporate hacking is not necessarily linked to computers or code. Rather, it refers to a creative-imaginative practice of 're-thinking' conventional artifacts, systems, rules, or technologies. Central to this notion of hacking is the suggestion that the latter, just like computers and code, possess 'excess potentials' that may be fruitfully exploited, whether it be for fun, for business, or for politics. As Brett Scott suggested:

"A 'hack' is an action that combines an act of rebellion with an act of creative re-wiring. [...] In this sense, one can hack a door by kicking it down (rebellion) and then using it to build a table (creation). The idealised hacker combines

rebellion and creation into a seamless disruptive act, using each to power the other" (2013, p. 8).

This articulation gestures to a logic of creative repurposing; of making new things through unexplored conjunctures of what already exists; and of re-thinking what is normally taking for granted. As Coleman explained:

"Since many technical objects are simultaneously bound by certain limits yet exhibit potential excesses, during the course of their existence, they can be exploited and redirected toward new paths of functionality by acts of hacking. Hackers are thus attuned not simply to the workings of technology but also seek such an intimate understanding of technology's capabilities and constraints that they are positioned to redirect it to some new, largely unforeseen plane" (2013, p. 98)

At the #OpenBankHacks, this notion of hacking was put into practice with the 'excess potentials' of banking and finance in mind. Here, a fintech 'hack' referred to a clever use of technology that exposed unforeseen opportunities for rethinking, recomposing, or rewiring global banking in creative – and ideally – profitable ways, and 'hacking' referred to the process of looking for such a hack.

The business proposition of Railsbank itself was considered a textbook example of a fintech hack: a clever use of open banking APIs that revealed the unheeded opportunity of linking up small banks to profitably extend third-party access to global banking. The most cited example at the event, however, was not Railsbank but Transferwise – the fintech startup that had reached unicorn status by 'rewiring' the global financial system to its own ends. It is worth briefly recounting the example here because it uniquely captures several key tenets not only of a 'hack' but also of the process of 'hacking' that figured prominently at both #OpenBankHack events. It is important to note, however, that the example is based on a marketing narrative which is not an accurate description of the startup's rise to success. It is used here exclusively to provide context to the manner in which hacking was articulated and pursued as an entrepreneurial practice at the two fintech hackathons.
The example of Transferwise circulated in the form of an inspirational story about its two Estonian cofounders, Taavet Hinrikus and Kristo Käärmann, who lived in London and ‘discovered’ an easy way around paying the ‘rip-off fees’ charged by banks to send money across borders. The problem the two initially faced was that Hinrikus received his salary in euros into a bank account in Estonia but needed pounds to pay his bills in London, whereas Käärmann received his salary in pounds into his UK bank account but needed euros to pay a mortgage in Estonia. Transferring money back and forth was costly, so they decided to help each other out peer-to-peer: Hinrikus would send a set sum in euros from his Estonian bank account to Käärmann’s Estonian bank account. Käärmann, in turn, would send the corresponding sum in pounds from his UK bank account into Hinrikus’ UK account. The two would check Reuter’s public live exchange rate to make sure that the two sums matched in value. No fees, no mark-ups, no extra costs. What started as a small ‘life hack’ turned into a business idea: Why not use digital technology to match complementary payment streams across borders at scale?

The example illustrates several key characteristics of how ‘hacking finance’ was understood and practiced at the #OpenBankHack events. First, and in line with the above theorisations, hacking finance was about repurposing, recomposing, or rewiring ‘already-existing’ finance. The trick was not to build something entirely new, but to free up, activate, and seize the latent potentials of what was already there. In the Transferwise story, the two friends did not build a new system for foreign transfers. They activated the latent potential for matching complementary payment streams within the old system. Similarly, the two co-founders of Railsbank did not build a new bank. They explored the synergies of linking up already existing ones in novel ways. Second, hacking finance was predicated, even reliant, on the clever use of digital technology. It was not so much the technology itself that was subject to hacking. Rather the technology was seen to generate new contingencies within finance either by exposing unexplored potentials or by enabling new unforeseen possibilities. In the case of Transferwise, the clever use of a matching algorithm enabled cheaper cross-border payments at scale. In the case of Railsbank, open banking APIs made linking up local banks seem desirable. Thus, digital technologies provided the means to free up, activate, and seize those ‘excess potentials’ in finance that had previously gone unnoticed or remained inaccessible. Third, hacking finance was considered an iterative, gradual, and open-ended practice, where each hack built on previous hacks and
enabled further hacks – as opposed to the straight execution of a business plan. Hence, in
the Transferwise example entrepreneurial success emerged as a side-effect of hacking, almost incidentally. A small life-hack between friends inspired the unconventional use of a matching algorithm which became the basis of a successful startup company. In this sense, hacking was valued primarily as an explorative practice, which only sometimes happened to also generate promising business ideas.

These understandings formed a common frame of reference at the #OpenBankHacks and gave coherence to participants’ activities. Teams spent hours deliberating, often passionately, what a 'clever' solution would look like and which ideas for a 'hack' would be worthy to explore. As one of the participants reported:

"After hearing the orientation talk and plundering the snack bar for Jaffa Cakes(tm), we stole away into the very cutely named 'Walkman' meeting room to plan our project [...]. Taking our lessons in Agile to heart, the entire first night was spent strategising. Our plans took up five of the room’s six whiteboards, and only because the other team had staked their claim on the sixth. Once our views were laid out and Chris and Jonathan had come to a consensus on what a ledger is, we were finally ready to begin coding... which is when I decided to go to bed."[^94]

Most teams settled on ideas that, in one way or another, delivered financial services on smartphones, via apps. As such, they broadly echoed the propositions of app-based challenger banks discussed in chapter three. The idea was to 'expose' monetizable efficiency gains that derived from embedding already-existing finance more dynamically – via smartphones – within the routine operations of daily life. For instance, Team SmartLend built an app functionality for lending money to friends – at friendly interest rates; Team Liber built an in-app functionality that allowed users to round-up payments and invest resulting pennies in cryptocurrency; and Team Neon built a prize-winning prototype for young investors, to pool their resources via Facebook, and collectively vote via Facebook Messenger where to invest it. None of these hacks were particularly new, original, or even functional. But despite the competitive nature of the

events, and despite the teams' constant worry about finishing their prototypes in time, the failure to produce something truly innovative was not necessarily a major concern. Rather, what really mattered, as one of the participants put it, was to "get shit done and create and create. Even if what you end up with is 100% crap. Because the key is the process and what you learn by doing it on the way." In this sense, the value of hacking surpassed mere instrumentality at the events and was revered as much for its explorative emphasis on testing and tinkering, rethinking, and reimagining, as for its DIY ethos and its emphasis on "learning by doing", on "building stuff", and on "less talk, more action!"

In her study of a civic hackathon in India, Irani (2015) has pointed out how an entrepreneurial "bias to action" can have depoliticising and even antidemocratic ramifications. In her case, the phrase was used by participants to contrast the virtues of individual entrepreneurs with what they considered to be the debilitating bureaucratic mind-set of politicians, and to express a preference for "quick and forceful action with socially similar collaborators" over "the contestations of mass democracy or the slow construction of coalition across difference" (p.3). It would be wrong to suggest that such views were absent from the #OpenBankHacks. There was a similar belief in the superiority of business and technology and scepticism towards, or simply disinterest in, political compromise and debate. There was also a similar sense of entitlement amongst many participants which found expression in the popular personal aspiration to become rich by changing the world. Yet, it would be an exaggeration to speak, in this context, of a contempt for political institutions or mass democracy. Even though teams adopted all manner of rhetorical flourishes in their pitches, about the 'digital revolution' or the 'democratisation of finance', the political significance of most hacks remained superficial and people's personal politics usually remained undisclosed.

In the following, the chapter therefore offers an alternative argument about the "bias to action" and the perceived virtues of hacking at the #OpenBankHack events. Rather than placing them within the context of (Indian) middle-class apathy, it foregrounds their intimate link to a (neoliberal) business discourse that reframed the financial sector as a 'complex and adaptive ecosystem'. In this context, hacking appeared attractive to

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95 Participant at the #OpenBankHack17
96 JP Rangaswami in his keynote at the #OpenBankHack18.
participants, not because it allowed them to bypass slow and bureaucratic party politics, but because it provided them with a practical orientation for operating under the presumed condition of radical uncertainty, non-linearity, and continuous change.

**Hacking the financial ecosystem**

One thing that organisers and participants of the #OpenBankHacks were clear about was that the financial sector was shifting. The financial crisis and the rise of digital technologies, they suggested, had combined to create a perfect storm, in which the previous shape of the sector was no longer sustainable. Customer behaviour was changing. Regulation was changing. And so were attitudes and expectations regarding the industry's role in society. The net effect of these "irresistible forces", as one of the organisers put it, was "rapid and irreversible change." The image that circulated at the events to describe the supposedly pivotal moment depicted the financial sector as a business 'ecosystem' in transition. The image was extensively used in business and consultancy discourse at the time (KPMG, 2017; PwC, 2017) but not necessarily given much consideration by participants. Yet it articulated certain shared expectations about the potential impact of fintech that were important in sustaining participants' enthusiasm for hacking at the events.

For instance, discussions often revolved around the 'tipping point' qualities of the financial ecosystem, which meant that digital disruption would follow an escalating or cascading logic, unfolding: "first gradually, and then suddenly". Participants often drew comparisons to other industries: Apple disrupting mobile telephony; Netflix disrupting video rentals; Uber disrupting taxi hailing; Spotify disrupting music retailers; and so forth. The common denominator being that all of these companies did not seem much of a threat to market leaders, until they suddenly gained momentum and disrupted respective industries. These sudden changes were explained in loose reference to popular tropes of 'chaos theory' (Gleick, 1988) whose cardinal insight had been that dynamic processes of interaction could render the assumption of 'linear causality' problematic. Linear causality assumed that changes in one variable translated into proportional changes in another. In turn, chaos theory emphasised disproportional, or non-linear cause-effect-relations, where a complex 'chain of causation' undermined the

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97 Nigel Verdon, OpenBankHack17
predictability of outcomes. Small differences in the change of an independent variable could – over repeated iterations – make a huge difference in the ultimate outcome. Hence, the famous articulation of a 'butterfly effect' (Lorenz, 1972). These explanations – in effect – suggested that the financial ecosystem too was complex and characterised by non-linear cause-effect-relations. But while this was a challenge to 'incumbents' it provided an opportunity for clever fintech entrepreneurs: to seek out the tipping points of the financial ecosystem and push it from seeming stability into another, more 'digitally disrupted' state. The metaphor of the business ecosystem shared with the practice of hacking an implicit promise that small changes may unlock huge effects.

But while financial innovation was expected to happen gradually and then suddenly in the financial ecosystem, it was above all considered to happen unexpectedly. Against this background, hacking offered participants a practical orientation to not only accept this unpredictability, but to embrace it decisively. Hacking meant to give up on the hubris of intentionality and focus instead on the joy of discovering possible but unlikely ways of approaching a problem. Participants agreed that the most likely outcome was "100% crap". But there was always an (imagined) chance that an individual hack might hit a nerve, go viral, or trigger a tipping point, thus pushing the banking ecosystem over the edge to a digitally disrupted state. This unpredictability of entrepreneurial action rendered the iterative, open-ended quality of hacking attractive. While individual hacks were pursued with a plan to unlock specific potentials, their 'actual' impact could not be foreseen. So the point was to build and test and adapt, and to remain attentive to the problems and possibilities that emerged in the process, to see whether some further hacks might be rendered from it. The "bias to action" was not so much about overcoming bureaucracy, then, but a function of the profoundly uncertain effects of hacking. Participants could not possibly predict what would emerge in the process of building a prototype. So, there was no point in overthinking things, or planning too far ahead. All they could do was to enjoy the process and remain attuned to whatever the consequences.

Conclusion

The formation of fintech as an industry has been accompanied by the rise of hackathons as a popular event format. But how should we think about these events? Previous
Critiques have tended to highlight their role in soliciting volunteer labour and promoting entrepreneurial values amongst participants. This chapter has argued that next to these functions, it is worth considering the strange appeal of 'hacking' as a social and entrepreneurial form of agency. In what follows, this conclusion quickly summarises the argument, before it situates it within the broader context of this thesis. Just like apps in the previous chapter, it suggests, a focus on hackathons can serve to pose surprising questions and inflect fintech studies with a heightened attentiveness to the heterogeneity and contingency of the industry.

The first section introduced fintech hackathons as a research concern. It traced their emergence from the informal work practices of open-source developers to the first corporate hack day 'festival' organised by Yahoo! on their Silicon Valley campus to their broader rise to prominence in policy circles and a wider range of industries. It showed how hackathons were promoted in finance as the emblematic event of a new digitally savvy generation of fintech entrepreneurs and gradually transformed from small informal gatherings into the emblematic events of well-funded co-working spaces, innovation labs, and fintech incubators that have been mushrooming in financial centres across the globe. The section pointed out that despite the widespread promotion of hackathons as innovative technology events, they do not usually produce innovative technologies. Rather, they serve a number of different functions that may or may not contribute to the creative disruption of the financial services industry.

Organisers and sponsors emphasise four functions: they may raise brand awareness, they may motivate workforces, they may facilitate networking; and they may serve to test technological propositions. More critical perspectives, in turn, emphasise their role in soliciting unpaid labour and in promoting entrepreneurial values. They suggest that hackathons may be read as an attempt to co-opt the radical politics of tech enthusiasts and reorient them towards the reproduction of the status quo. Whilst broadly sympathetic to these critical perspectives, the chapter argued that they remain somewhat unprecise in neglecting the distinct role of hacking at hackathons. Thus, the chapter proposed, it is worth asking: why – of all things – do sponsors and organisers turn to hacking to exploit volunteer labour and spread entrepreneurial worldviews?
The second section argued that the popularity of hacking was not incidental but rather had to do with its compatibility with a set of foundational assumptions about finance encapsulated in the metaphor of a complex and adaptive ecosystem. The section presented empirical material from two hackathons held in London in 2017 and 2018 to describe how they transposed the skills, the pleasures, and the informal conventions of hacking into corporate registers. The events were organised by Railsbank, a fintech startup company with the self-declared mission to provide companies access to global banking 'with five lines of code'. Participants were invited to use (and therefore test) Railsbank's APIs and build all manner of digital banking solutions that promised to create monetizable efficiency gains. The section described how 'hacking' therefore attained a distinct meaning at the hackathons that differed significantly from conventional understandings. Where in popular culture, hacking is normally associated with an amazing ability to break into computer systems, at the hackathons it was considered a creative-imaginative practice dedicated to the exploration of clever or surprising uses of APIs.

The chapter identified three key characteristics of hacking that became important. First, a marked emphasis on re-thinking what already-existed rather than trying to come up with something entirely new. The unquestioned assumption was that the clever use of Railsbank's APIs could potentially exposing unforeseen opportunities for rethinking, recomposing, or rewiring global banking in profitable ways. Second, a marked emphasis on the contingencies of finance rather than those of technology. Thus, it was not the technology itself that was subject to hacking. Rather the technology was seen to generate new contingencies within finance and hacking was about detecting, activating, and harnessing these 'excess potentials' in clever ways. Third, a marked emphasis on hacking as an iterative, gradual, and open-ended practice, that was valued as an activity in and of itself.

Following these observations, the chapter suggested that hacking appealed to organisers, sponsors, and participants as a practical orientation that gave up on the 'hubris' of intentionality but not on the possibility of rapid and surprising success. It highlighted how digital innovation was considered to unfold in an escalating or cascading logic, first gradually and then suddenly. This expectation was consistent with a broader business discourse at the time that framed the financial system as a 'complex
and adaptive' ecosystem, characterised by 'non-linearity' and a certain 'tipping point' quality. Thus, sponsors, organisers, and participants suggested that hacking was about sending disruptive impulses into a complex business ecosystem to see whether these impulses would trigger some broader changes. Thus, crucially, the outcome of hacking was not considered to be predictable. Participants were fully aware that most of the prototypes created at hackathons were neither innovative, nor functional. But that did not deter them from trying, for what mattered to them was the process, and there was always the possibility, however unlikely, that they might hit a nerve.

These findings, then, add to those in the previous chapter to illustrate how an everyday approach to the study of fintech can yield surprising insights. They show, more specifically, how a focus on fintech hackathons can foreground the curious rise of hacking as a preferred mode of social and entrepreneurial agency. Fintech hackathons invite participants to think of themselves as creative, self-motivated, self-educated, and potentially disruptive 'doers and makers', and to experiment with digital technology to see whether some 'excess potentials' may be activated, and what the consequences of this might be. This can be read as an ideological exercise in that it helps sponsors and organisers to solicit donated labour. But it can also be read as a form of political engagement an ongoing dialogue about how to change finance, and about the role of technology therein. Finally, it can be read as an attempt to address a set of limits to entrepreneurial agency encapsulated in the business metaphor of a complex and adaptive ecosystem: non-linearity, unpredictability, and perpetual change. In more general terms, then, hackathons, just like apps in the previous chapter, belie the depiction of fintech as an industry ruled by big corporate interests, pure instrumentalism, opportunism, profiteering, and greed, emphasising the heterogeneity and the contingency of the industry.

In the next chapter, the thesis will consider podcasts as another fruitful vantage point for complicating conventional assumptions about fintech. More specifically, it will use one particular podcast – Fintech Insider – to raise broader questions about the role of the specialised fintech media in making and re-making the industry. While the chapter, again, asks a different set of questions and mobilises a different body of literature, its broader purpose remains the same: to develop a critical thinking alongside rather than
about fintech that neither simply rejects or dismisses the industry nor simply takes it for granted, but rather takes it seriously as a political and politically contested domain.
Chapter five: The everyday politics of fintech podcasts

A fascinating facet of fintech has been the rise to prominence of dedicated media outlets, news, and commentary services. These include news providers such as AltFi, BankNXT, Finextra, The Fintech Times, or Techcrunch; fintech blogs and portals such as The Finanser and Crunchbase; and indeed, fintech podcasts, such as the Breaking Banks podcast, the Banking Transformed podcast, and the Fintech Insider podcast. The symbiotic relationship between finance and the media is, of course, well-documented. Finance has always been a source and even genre of popular entertainment (Goggin, 2012). Financial and media speculation have always been entwined in the build-up and bust of speculative bubbles (Preda, 2001). And financial and media discourses have always interacted in the constitution of both 'normal' finance (Aitken, 2007) and financial crises management (Wodak and Angouri, 2014).

Meanwhile the relationship is also subject to continuous change. It is well acknowledged, for example, that the 1990s witnessed significant shifts. As finance was turned into a mass-market for consumers in the wealthier Global North, it was also incorporated as a standard feature into the mass media, aided by the emergence of the 24-hours news cycle and the spread of multi-channel TV (Clark, Thrift and Tickell, 2004). This opened up lucrative markets for the professional advertising and PR industries (Bourne, 2017) and led to a multiplication of new linkages between the global financial sector and the wider population of these societies (Langley, 2008). A development first cast as the democratization of finance, and then, as the financialisation of democracy (Frank, 2000; Martin, 2002).

The decade after the financial crisis of 2008/9 brought about further shifts. Multi-channel TV and the mass-media were joined by smartphones and social media, which led to an explosion of new media formats, such as blogs, tweets, chats, podcasts, etc.

— just witness the launch of the Alphaville blog,108 the Banking Weekly podcast,109 or the Markets Live chat110 of the Financial Times. These new media radicalised a previous trend towards more personal, intimate, and affective market commentary, and they further blurred a once cherished distinction between objective financial markets and subjective financial lives. But they also heightened competition between traditional and new media outlets, as a growing number of people began to consume the news on free websites, and indeed, increasingly produced and shared their own media content online.

These developments played a decisive role in the politicisation of finance in the aftermath of the crisis in the UK. So, almost inevitably, they also proved important for the formation of the fintech industry. On the one hand, because social media allowed people from different backgrounds to share their frustration about the financial sector and galvanise energies for technology-led change. On the other hand, because it enabled fintech entrepreneurs to eclipse the mainstream marketing industry and advertise their products at relatively low cost via targeted online campaigns. So, the shift to new media channels mobilised new publics and new consumers that jointly induced finance with a 'new spirit' (Boltanski and Chiapello, 1999). The fintech revolution gathered momentum and audiences, turning what was initially little more than a set of outworn business clichés into an investment hype with significant material consequences.

This chapter begins to analyse this process by interrogating one emblematic media channel of the fintech industry – the Fintech Insider podcast. Following previous discussions about performative finance (Clarke, 2012a; Morris, 2016), it argues that the podcast provides a fruitful example for studying the 'layered' performativity of the fintech media. On the one hand, it is performative of fintech in the sense of 'intrinsic to its emergence', as drawn out by the social studies of finance (Callon, 1998; MacKenzie and Millo, 2003; MacKenzie, 2006). It can therefore draw attention to the role of new media channels in calling fintech into being. On the other hand, it is performative of fintech in a more literal sense of 'embodied performance', as emphasised by scholars of cultural political economy (de Goede, 2005; Aitken, 2007; Langley, 2008). As such, it

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draws attention to the reiterative, ritualistic, and lively performance of fintech as a social practice.

The chapter unfolds in two parts. The first part introduces Fintech Insider as a research topic and argues that the podcast can be read through a performativity lens as drawn out by the Social Studies of Finance: it induces entrepreneurial promises with a certain self-fulfilling tendency by generating investor hypes which attract funding that in turn increase the probability of these promises to become true. Here, the chapter draws a comparison between the performative role of the mass-media during the 1990s dotcom boom and the performative role of the new media in the current fintech boom. The second part unpacks how the podcast is performative of fintech in the more literal sense of 'embodied' performance. It shows how the hosts and the guests of the podcast perform fintech as a profession with a distinct purpose, mission, and ethic. But it emphasises that they do so in contested ways. The chapter concludes by reflecting on how the performativity of the fintech media extends conventional assumptions about fintech, and by situating the discussions of this chapter within the broader framework of the thesis.

**Part One: Fintech Insider and the performativity of fintech media**

Fintech Insider is a bi-weekly podcast produced by 11:FS, a small fintech consultancy firm based in London. Hosted in rotation by 11:FS members, the podcast features news analyses, and in-depth interviews with invited guest fintech influencers and entrepreneurs. Fintech Insider grew out of and indeed concurrently with the fintech start-up industry. Its origins story begins with four men,\(^{111}\) who had previously worked in consulting and finance, meeting up in a London Starbucks café. The men had come to the realisation that "we were seeing challenger banks, challenger fintechs, but not really seeing challenger consultancies."\(^{112}\) So, they decided to found such a consultancy, 11:FS, that would outdo bigger competitors in flexibility and specialisation, and of course, in motivation and talent. Soon after, the podcast was launched, explicitly as a means to 'bootstrap'\(^{113}\) the consulting business. The idea, according to the producers,

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\(^{113}\) The term is commonplace in fintech start-up culture and refers to building a business with little or no starting capital. It draws on the more common expression of ‘pulling yourself up by your own bootstraps’, i.e. achieving a seemingly impossible task. But it also indicates a practical awareness of
was to produce a podcast by fintech geeks for fintech geeks that would intentionally leave room for tongue in cheek discussions, snarky comments, and the occasional odd joke. As one of the producers stated, it was meant to resemble the kinds of discussion the 11:FS team would usually have in a pub.¹¹⁴

The first episode of the podcast was aired on 12 July 2016, and indeed, its listenership rapidly grew. On 8 November 2016, the podcast made headlines as it became number one in the UK podcast charts.¹¹⁵ In July 2017, the producers launched two further specialised podcasts, Blockchain Insider and Insurtech Insider, due to growing demand. Fintech Insider remained the consultancy's flagship programme, however. It became so influential that when 11:FS won the British Banking award for Consultancy of the Year in 2019, its CEO David Brear jokingly introduced the team as 'the people who do that podcast.'¹¹⁶ In July 2020, the podcast boasted 6-figure monthly downloads in 180 countries around the world, taking the top spot of business podcasts in the UK and top ten in the US.¹¹⁷ So, for once, bootstrapping actually worked. 11:FS went from doing speaking gigs and running the podcast, to advising major banks,¹¹⁸ building their own 'digital-only' bank proposition,¹¹⁹ and winning two consecutive consultancy awards within less than four years.¹²⁰

It makes sense, then, to think of Fintech Insider as symptomatic of the 'performativity' of the fintech media. That is, the extent to which they have been able to call the fintech industry into being simply by boosting expectations about its future profitability. This meaning of the term 'performativity' builds on the work of Callon (1998) and MacKenzie and Millo (2003), who used it initially to articulate how applied economics was implicated in shaping those markets it purported to merely objectively represent. MacKenzie's (2006) celebrated account of the Black Scholes Merton options pricing model famously demonstrated that the adoption of the pricing model preceded its empirical adequacy — it became gradually truer as practitioners began to use it, rather than the other way around. It became the paradigmatic example for demonstrating

¹¹⁸ Including Citigroup, RBS, and Standard Chartered.
how economic theory, and especially financial economics, not only describe or respond to markets but are actively implicated in their making, spotlighting how markets have an in-built reflexivity.

Though initially an argument about the self-actualising tendencies of financial economics, the performativity thesis was subsequently extended to all manner of other pragmatic knowledges, technical devices, and corporeal routines. Scholars addressed calculative technologies, such as the yield curve (Zaloom, 2009; Christophers, 2017); regulatory practices, such as the announcements and press conferences of central bankers (Holmes, 2014; Morris, 2016); and the rhetoric and the images of financial education and popular marketing campaigns (Aitken, 2007; Langley, 2008). The media, too, came into focus as a constitutive element of finance, rather than a mere description of it (Clark, Thrift and Tickell, 2004). In what follows, the chapter turns to analyse the financial performativity of the media in contemporary contexts. It begins by discussing a number of previous arguments regarding the performativity of the mass media during the 1990s dotcom boom, before it moves on to suggest that the rise of new media channels, such as podcasts, has radicalised and refracted their performative quality. It suggests that the Fintech Insider podcasts instantiates a broader shift in the fintech media that has been described as a 'demotic turn' in celebrity, wherein successful entrepreneurs are presented either as ordinary people who have become rich, or rich people who claim to be ordinary. This then points to the importance of embodied performances, which will be analysed in more detail in the second part of the chapter.

The mass media and the dotcom boom
In an important precursor to this chapter Clark et al. (2004) have highlighted how the 1990s growth of retail finance into a mass market brought the performativity of the mass media sharp into focus. "The value of financial products", the authors observed, "is increasingly bound up with the media image of those products as new connections are gradually made" (p. 290). Where the mass media could previously be regarded as separate from financial markets, because market participants by and large followed the principles of portfolio theory, media discussions began to exert a greater influence on investment decisions and price movements, as untrained or 'unsophisticated' investors
entered the financial markets in growing numbers. Consequently, even highly trained traders were forced to incorporate the impact of news headlines into their strategies (Clark, Thrift and Tickell, 2004). As a result, the mass media became implicated in the make-up of financial markets in unprecedented ways.

In the 1990s, the media landscape was marked by the spread of cable TV, the proliferation of specialised TV channels and programmes, and the mushrooming of personal finance pages in daily newspapers and specialised financial magazines. On one level, these changes coincided with a political climate in which the welfare state and other forms of public investment, insurance, and wealth were thoroughly being dismantled and when retail finance was being promoted as an adequate substitute to replace them (Martin, 2002; Watson, 2009). The inclusion of financial bulletins into the national broadcasting news; the publication of personal money pages in the national newspapers; and the launch of specialised financial news channels all contributed to the promotion of retail finance as a seemingly routine element of middle-class life. On another level, financial broadcasting inaugurated a departure from the cautious and often critical financial news reporting of the specialised print media, such as the Financial Times or the Wall Street Journal, towards the kind of spectacle, scandal, and opportunism characteristic of reality television and the tabloid press (Clark, Thrift and Tickell, 2004): star traders and investment analysts rose to fame presenting their "buy" and "sell" recommendations; PR firms and consultants were hired to curate the public media image of companies and their CEOs, and to talk up the value of select company shares; experts and talking heads presented a never-ending stream of breaking news; backgrounded by raucous outcry trading pitches and framed by the nervous flickering of ticker tapes.

Financial broadcasting, in other words, created a 24-hour news spectacle that gained a growing presence in the public as television screens swept business localities across the UK, from hotel lobbies to travel lodges, from beauty salons to corner shops. To the consternation of many, this spectacle started to move markets, as it shaped the expectations of ever more market participants (Clark, Thrift and Tickell, 2004). This was especially seen problematic because it catered to a public appetite for private investing without raising public awareness of private risks. The commercial interest of media executives, not the interest of private investors dictated television programmes, which
came to resemble a kind of reality television or even commercial advertising on its own (Clark, Thrift and Tickell, 2004). The favourite channel of amateur day-traders, CNBC, was famously biased towards "buy" recommendations (Financial Times, 2018b), contributing to a cultural climate of confidence in the financial markets in which it seemed increasingly plausible that they provided virtually unlimited possibilities for profit and wealth. Public trust hit peak when talk of an emerging 'New Economy' encouraged claims that the US had entered a period of sustainable non-inflationary growth and an increasing number of start-up tech companies raised billions on capital markets, based on little more than the promise of spectacular future returns (Feng et al., 2001). Until, of course, the music abruptly stopped by the turn of the century.

Social media and fintech hype

In previous chapters, the thesis has repeatedly highlighted that fintech has experienced a similar wave of speculative investment, based on widespread optimism and (over)confidence in the wealth generating possibilities of mobile and digital technologies. To underline, where between 2011 and 2013, only 14 fintech companies had been able to secure more than $50 million dollars of venture capital funding worldwide, this was achieved by more than 60 companies in 2015 alone (KPMG, 2016). Meanwhile, total investment grew from $6bn in 2011, to $51.2bn in 2014, to $135.7bn in 2019 (KPMG, 2020). This massive influx of speculative capital revived some familiar phenomena from the dotcom boom.

Chapter three highlighted how various UK challenger banks attained unicorn status despite continuous loss-making. It cited N26's Maximilian Tayenthal who suggested that the company had investors with deep pockets that monitored user acquisition rather than profitability as the company's core metric of success (Financial Times, 2019b). Here it is worth pointing out that these investors thereby followed a specific script of venture investment strategies that were pioneered during the 1990s (Langley and Leyshon, 2017b). These strategies prescribe seeking out companies with high fixed costs and low marginal costs, and with the prospect of scaling up to market dominance to generate exceptional over-average returns (Langley and Leyshon, 2017b; Financial Times, 2018b). Crucially, they already foresee a performative role for the media: both fintech investors and entrepreneurs know that the valuation of venture-backed start-
ups is according to 'expected' future returns. They already presume that the valuation of a company is 'bound up' with the media image or brand of that company, because investor expectations and trust in the prospects of a profitable future depend on that image, and because user perceptions and acquisition rates are influenced by it (which in turn are valued by investors as key indicators on the path towards profitability). Hence, from the very start, venture backed start-up firms are built on the assumption that media hype is directly rewarded by investors with high valuations in successive funding rounds (Langley and Leyshon, 2017b; Langley and Leyshon, 2020). Unsurprisingly, fintech entrepreneurs therefore actively, continuously, and opportunistically try to seize the performativity of fintech media to their own ends.

While the performative power of the fintech media is not new, it has evolved because the broader media landscape also has changed. Compared to the 1990s, digital and mobile devices have replaced television and newspapers as the primary channels of (financial) media consumption, and the rise of cheap media technologies has diversified the producers, audiences, and beneficiaries of media content. More and more individuals, professional and non-professionals, produce and share content, ranging from conventional media formats such as videos, podcasts, and blogs, to more distinctly social media formats such as tweets, memes, comments, and so forth (Manovich, 2009). So, the size and the composition of media audiences has multiplied. Private individuals are increasingly able to reach mass audiences on a scale previously thought to be possible only for broadcasters, and even those who do not reach the masses may find audiences or a followership in one of the countless niche communities thriving in the 'long tail' online (Anderson, 2006).

These changes have made it possible for fintech entrepreneurs to routinely eclipse traditional media outlets in promoting their business and instead take advantage of the popularity of alternative media sites, social media networks, and inexpensive (and frequently free) digital marketing tools to publicise and distribute their wares. Fintech founders routinely speak, for example, of the need to figure out the ‘viral mechanics’ of social media – that is, the conditions under which a single media headline gathers attention exponentially – in order to build brand recognition and gather a followership online.121 They place huge emphasis on the value of online communities, which not only

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follow the company and use its product or service, but also contribute interactively to its further development through feedback, or even funding, and they use advanced data analytics to monitor in great detail the impact of specific marketing interventions on social media within select consumer groups.¹²²

In fact, these alternative media practices have further trickled down to 'regular people' who have traditionally been excluded from access to capital markets and/or venture capital funding, and who increasingly, and sometimes surprisingly, use mobile and social media attention to attract funding for their own business ideas. For instance, in 2017 fintech experienced considerable investor hype around Initial Coin Offerings (ICOs), a digital crowdfunding strategy that involves the sale of digital tokens or digital 'coins' that can be issued relatively easily by people with basic software developing skills. These tokens were usually promoted as prospective functional units in a technology, product, or service, whereby the latter was then promised to raise the value of the token once it became operational. In November 2017, a group of students organised the sale of a digital token named Change Coins (CAG).¹²³ Much to their own surprise, they raised $17.5 million dollars from the sale, which they used to develop a digital wallet that would allow users to hold and exchange fiat- and crypto-currencies (including Change Coin) online.¹²⁴ Before the sale, they had promised to process currency conversions via Change Coin, so that each conversion would involve first a conversion into Change Coins and then a conversion into another currency. The aim was that this would increase the demand and therefore the value of the token, so that early investors could sell them on for a profit.¹²⁵

Celebrated amongst some as a new form of community-led venture funding,¹²⁶ and ridiculed by others as "akin to giving money to a man in a pub for tickets to a film that he says he will make" (Burton, 2017), fintech enthusiasts raised at least $1.3bn dollars with ICOs in 2017 (Financial Times, 2017b). Although clearly fraught with bad ideas and

¹²⁴ This is according to Gustav Lüблik, one of the co-founders of the company, who was interviewed for the project. See: Appendix.
¹²⁵ The company later diverged from this plan and organised a 'token swap' in 2019 turning Change Coin from a 'utility token' (a functional unit) into an 'equity-like' token (effectively a kind of equity).
scams, the hype surround ICOs nevertheless captures a widespread awareness amongst fintech enthusiasts of the link between media image and financial value; an awareness that arguably distinguishes them from MacKenzie’s derivative traders and from Clark et al.’s day-traders, who were unaware of the performative power of the Black-Scholes-Merton formula or the buy recommendations of CNBC, respectively. Crucially, this awareness is an additional source of popularity of fintech that is not commonly recognised – a genuine belief that aspirational individuals may be propelled by the excitement of their own online followers into the limelight of investors, so that a whitepaper full of buzzwords, a quirky social media account and a team of developers might just be enough to 'make it' in the industry.

Fintech Insider and the demotic turn

Fintech Insider is both a product and a catalyst of these trends. It is a product, because it is itself a calculated (and highly successful) attempt at 'conjuring up' the 11:FS consultancy business by attracting the attention of a growing followership online. In this sense, it is a prime example of how fintech entrepreneurs have used mobile and social media — in this case, inexpensive tools for recording and disseminating a podcast — to strategically perform their own business into being. But the podcast is also a catalyst because it contributes to amplifying the media resonance of other fintech companies, boosting their opportunities to attract funding and realise their business ideas. As such, the podcast forms part of a wider fintech media ecology that encourages entrepreneurs to amass online audiences, generate promise, and attract funding on new media channels.

There are a number of clear parallels between the performativity of the Fintech Insider podcast and the performativity of traditional mass media channels such as CNBC. Similar to CNBC during the dotcom boom, the producers of Fintech Insider have a stake in the success of fintech. The podcast therefore resembles the enthusiastic market commentary of the television channel. It is beaming with positivity and optimism about the social and economic value of the industry, celebrating huge funding rounds of individual fintech firms, reporting on various successes of individual fintech entrepreneurs, and providing all manner of ex-post rationalisations to explain recent trends. Why a company like Square may indeed be worth its $55 billion dollars
valuation;¹²⁷ why a scandal like Wirecard may not be representative of, but rather an exception of the otherwise genuine fintech community;¹²⁸ How fintech companies help rescue small- and medium-sized businesses during Covid-19;¹²⁹ and so forth.

But there are also profound differences between Fintech Insider and CNBC. Especially, in the huge emphasis placed by the former on values such as authenticity, relatability, and intimacy. In this regard, the podcast is consistent with an extended repertoire of social media tactics that give the impression of candid, unfettered access to the day-to-day life of individual entrepreneurs: seemingly casual snapshots from the office posted on social media platforms such as Facebook or Instagram; live Q&A chats held on messenger services such as Telegram or Whatsapp; personal blogs and opinion pieces published on open access websites such as Medium or LinkedIn; and more. Departing from the rote interview banter seen and heard on TV, a Fintech Insider episode usually begins with an extended conversation about the weather. Followed by a lively back and forth between the hosts and the guests, that is as casual in tone as it is explicitly subjective. Hosts and guests are clear about the fact that what they express are personal opinions, individual anecdotes, and spontaneous moments of thinking-out-loud. There is no sense of objective or superior market knowledge here.

Tooker and Clarke (2018) have recently argued that post-crisis finance has seen an outburst of experimentation with 'relational finance', which renders the social quality of finance explicit. The cultivation of direct relationships between entrepreneurs and their followership, or at least the illusion of such via podcasts can be read as one aspect of this. Through the lens of Fintech Insider, finance no longer appears as an abstract reality, or as the detached preserve of some narrow elite. Rather it shows up as a social arena, replete not only with personal excitement and thrill but also with boredom, routine, and frustration, and with the same kind of drama, gossip, and rivalry that also pervades all other areas of social life. Due to the intimate format – the casual back and forth, the occasional jokes – listeners can easily forget that they are not directly involved and may even begin thinking about the hosts as personal acquaintances, or friends. In marked contrast to the perceived stodginess and arrogance of suit wearing financiers, who are implicitly and sometimes explicitly written off in the podcast as out-

¹²⁷ e.g. episode 443, see: https://fi.11fs.com/620 (Accessed 31 March 2021).
¹²⁸ e.g. episode 439, see: https://fi.11fs.com/616 (Accessed 31 March 2021).
¹²⁹ e.g. episode 438, see: https://fi.11fs.com/615 (Accessed 31 March 2021).
of-touch with the rest of the world, the hosts appear as 'real' people giving their unadulterated and honest opinions, who are transparent about their own motivations as consultant-entrepreneurs and who are always up for a laugh.

The hosts of the podcast suggest that this should be read as a gradual opening of the financial services industry to the voices and scrutiny of 'ordinary' people who seek to make finance work for regular people rather than against them. In more critical terms, however, this can be read as an example of what has been described elsewhere as a 'demotic turn' in celebrity (Turner, 2004), wherein the stars and the role models of fintech are either ordinary people who have become famous, or famous people who claim to be ordinary. The ability of individuals to attract enough attention and funding to 'perform' their business dreams into being is therefore linked, on some level at least, to a talent to appear ordinary. But this does not imply egalitarian outcomes. The demotic turn in fintech may create space for unexpected voices yet the supposedly ordinary entrepreneurs that receive the bulk of the attention — and virtually all of the funding — continue to cater to a predictably narrow iconography of start-up success: young, white, male, urban, educated; sneaker, hoodie, jeans, etc.

These observations point to a politics of the 'embodied' performance of fintech or what cultural political economists have theorised as the reiterative, ritualistic, and lively performance of finance in practice (Morris, 2016). As scholars including Aitken (2007), Clarke (2012), and Morris (2016) have pointed out, the politics of embodied performances tend to escape those studies in the sociological tradition of Callon (1998) and MacKenzie (2006) that place primary attention on the performative 'magic' of self-fulfilling claims. The language of performativity, here, is preserved to highlight the reflexivity of market practice rather than its political contingencies per se. Performativity in this tradition does not capture the affective power and ontological disruption generated by the public intimacy and ordinary celebrity produced by Fintech Insider. In order to unpick this additional dimension of the podcast's performativity, it must therefore be addressed in a different analytical register. Following Morris (2016), the embodied performance of fintech may thus be addressed as an additional 'layer' of the podcasts performativity. Next to contributing to the self-fulfilling dynamic of fintech's future profitability, it also contributes to constituting –
and challenging – how fintech is socially practiced and known. It is this second layer of the podcast’s performativity this section now turns to.

**Part Two: Fintech Insider and the 'embodied' performance of fintech**

This section seeks to unpack the reiterative, ritualistic, and lively performance of fintech in practice. It argues that beyond its role in generating self-reinforcing investor hypes, the Fintech Insider podcast also acts as a platform, where fintech is literally performed as an industry by actual fintech insiders. It argues that these performances entail normative dimensions that are not usually recognised. For instance, host and guests both provide normative commentary on contentious issues, corporate scandals, political developments, etc. Moreover, they represent fintech in a manner that marks fintech out as culturally distinct from finance. To illustrate these dimensions, the section presents a number of snippets of the podcast, transcribed from three episodes, Ep. 146 (30 Oct 2017), Ep. 156 (27 Nov 2017), and Ep. 303 (11 Mar 2019). In these snippets, the hosts and the guests deal with a series of controversial comments made by Nikolay Storonsky, a high-profile figure of the UK fintech scene. Storonsky, founder and CEO of the challenger bank Revolut, repeatedly defended a toxic work culture at his company, which led to discussions on the podcast about the role of precarious work in the industry, but also about what distinguishes fintech culturally from the broader financial services industry. The snippets were chosen here from a large archive of over five-hundred episodes to emphasises both, the normative dimension of Fintech Insider but also the embodied performance of a certain work ethos or identity. The question of which virtues a fintech enthusiast or entrepreneur should embody, they show, is far from settled and continuously negotiated.

*What’s the price of getting SH1T done?*

The news story that prompted Fintech Insider to first comment on Storonsky’s views on working culture came from Business Insider, a fintech news site, on 13 October 2017. It was titled: "Our culture is about getting s**t done: The Revolut founder on why his people work 12-13 hours a day." The news site cited Storonsky defending exploitative working conditions by explaining that no one was telling employees that they *had* to do it, but people worked long days and also weekends, supposedly because they shared
the vision of the company. "We are trying to attract people who want to grow themselves. Growing is always through pain. It’s the same as going to the gym", Storonsky stated controversially. Fintech Insider picked up on the topic two weeks after the article had been published. The following conversation took place on Fintech Insider Ep. 146, between the three hosts, Jason Bates, David Brear, and Simon Taylor, and one of the guests of the show, Sharon O’Dea, a fintech consultant, advisor, and blogger.

Jason Bates: "Ok, first up. How culture is about getting shit done. Revolut founder on why his people are working twelve to thirteen hours a day. We had quite a discussion on fintechinsidernews.com. Sharon, I think you had some things to say on this.

Sharon O’Dea: "The story was, the founder of Revolut, Nikolay Storonsky, he was talking about the delivery culture at Revolut. And how they work twelve-, thirteen-hour days and over the weekends, in order to ‘get shit done’ in his words. That people are working through the weekend. But nonetheless that they are grown-ups and it is up to them how they manage their time. I had a few issues with this. So, I sort of, had a little rant on the Fintech Insider news forum which turned into a blogpost that I then posted on LinkedIn. And got loads of feedback from people who work in banking and tech. So, for me this exemplified a lot of the cultural problems you see in tech, in banking, and fintech, around organisational culture. And that is kind of where I do a lot of work in – so I have strong opinions. Anyways. The way I see it is that it just does not make business sense to work that way. You know. It does not make for a sustainable business. The most important point is: It is detrimental to the quality of the product. If you got people who never leave the office, how can they make products for people who have real lives and real problems? And I think the companies who fetishise that kind of working culture, they are missing out on the talent of people who can’t or just don’t want to work 60-hour weeks. And I know you had Liz and Gael and others talking about these kind of gender imbalance issues, but ultimately, I think it is also commercially short sighted.[...] So ultimately to me it felt like it was a failure of leadership."

Jason Bates: “I mean, I guess this isn’t a new thing. We have seen investment banks or strategy houses, and magic circle law firms just working people to death through the years. What’s your view, David?”
These opening lines of the podcast introduce two opposing views on the political issue of working conditions in fintech. O’Dea rejects Storonsky’s comments by suggesting that overworked workforces are detrimental to business success. She argues that people who spend all their time in the office will lose touch with the ‘real world’ echoing the kind of emphasis on lived social practice that chapter three characterised as typical of UK challenger banks. O’Dea continues by referencing a previous episode where the same issue had been discussed in relation to the notorious lack of women in the fintech industry. But she insists that the primary problem with the kind of working culture Storonsky suggests is that it is commercially short-sighted. Jason Bates, the host of the show, in turn responds by downplaying the issue suggesting that exploitative work is nothing new in the industry. This is also the stance taken by Brear, who concedes that 12-13 hours a day could not be the norm, but that it is justified under certain circumstances, and that this must have been what Storonsky meant:

David Brear: “Yeah... I think this is really... I think he led himself into saying stuff that I think he didn’t... if he had the opportunity again, he wouldn’t say it, right? Because the whole sort of ‘get shit done’ mentality, I’m a big advocate of this. But when I say get shit done, I mean, like, don’t fuck about, basically. You know, like, figure out the most effective way of doing it and do that thing. [...] That’s one thing. But like, you can’t sprint forever. I think this is the kind of point that you sort of kept making, Sharon. Where it’s about, actually, you can’t just work 13-hour days every day, and the weekend, and, and, and... For that to be an expectation of actually what the norm is [...], that’s when it becomes a super, super problem, isn’t it? [...] So, I kind of feel for him, because I think he probably said some stuff he didn’t necessarily one hundred percent mean. But I completely take on the context of what you are saying, Sharon. It feels like actually if this is the norm for the company, then it feels like a much bigger problem, than if it's like a ‘hey guys, we’ve got a big thing, let’s all work the weekend, please.”

For Brear, overwork, then, is justified and necessary on some days in startup life. Bates however insists that in certain types of institutions, overwork is an established model, which O’Dea counters with a provocative statement that culminates in a moment of sexual banter, before Taylor strikes a more conciliatory tone, in order to move the discussion onto the next headline:
Jason Bates: "We also have to look at where he worked before. He was at Credit Suisse, he was at Lehman Brothers, there’s this thing about people bringing the culture and the model of the organisation that they expect with them from their previous lives. You work in a place and you kind of work out how work works. And then, if you are not careful, you just rebuild that in some other form where you are. So, high performance, super harsh, you know, well rewarded, live-hard-play-hard... there’s something about that investment banking thing that he has brought across. And that is an established cultural model of a certain type of organisation."

Sharon O’Dea: "Well, you know, I spend four years working for a global bank. And it does become, you know, a senior leadership dick waving contest. You know, who can stay the latest? And that means, ultimately, whoever has to get in at half eight or leave at five o clock, gets overlooked for promotion. Maybe misses out on a bonus, doesn’t get the interesting projects. People sort of make assumptions. It happened all the time. To the detrimental effect of the product and the outcomes really.

Jason Bates: “David uses a term all the time: Quant and qual - there’s an amount of work, and then, there’s a quality of work.”

David Brear: “I thought that was going to be a dick waving reference there...”

Everyone: [laughter]

Sharon O’Dea: “I think, it’s what you do with it that counts...”

Everyone [laughter continues]

Simon Taylor: “Yeah, absolutely. Ehm. But there was a story in theladders.com about tech workers worrying about age discrimination: There are stages of life in which you probably could do twelve to thirteen hours a day and you probably live in a city centre and you are probably trying to grow your career. In which case, if it suits that person, and they can dedicate that time to their work, and that’s a choice they want to make, then I don’t think anybody should stand in their way of doing that. But also, we should value, the complexity and the diversity of input that you can get from people who have (a) more thinking time (b) different skills. Stepping back from it for a moment Revolut have grown
remarkably quickly. They have taken on a lot of users. They have grown a lot. And they are building a lot of products. And I guess they are saying: We have a culture of just executing. And compared to all the big banks, who have a culture of talking about maybe doing something. I think that’s a useful contrast. But the way in which they position it in the media. The value of this message has completely been lost.”

Drawing these points together, this first snippet illustrates three different arguments about overwork in fintech. Bates normalises overwork, O’Dea rejects it, and Brear and Taylor suggest that overwork can be justified in particular circumstances but can never be the norm. These arguments are linked to the performance of different visions of fintech: what does the industry stand for? Bates feels comfortable to think of fintech as a subsector of banking that replicates the working culture of Wall Street investment banks. O’Dea, in turn, distinguishes fintech from 'global banks'. She argues that fintech must avoid overwork and remain more down-to-earth and more attuned to 'normal' people to be commercially successful. Brear and Taylor also distinguish fintech from the big banks. Like O’Dea they emphasise the importance of time for thinking and of diversity of input and skills. But they suggest that the big banks do not suffer from overwork so much as from a culture of 'maybe doing something' rather than a culture of 'just-executing'. Beyond the substantive arguments, the snippet illustrates the casual tone of the podcast, the quick back and forth, the disagreements, the word-of-mouth, and odd jokes, that marks out the lively performance of fintech on the episodes.

Growing through pain

On 22 November 2017, Storonsky came into the headlines again, this time via an article on efinancialcareers titled: "This former Credit Suisse trader is hiring 25 people a month for his fintech start-up, but says bankers can’t hack it". The headline appeared on Fintech Insider, five days after the article was published, in an episode hosted by the same staff but with different guests. On this episode Ali Paterson, Editor of Fintech Finance, Valentina Kristensen, Head of Marketing & PR at OakNorth, and Tanya Andreasyan, Editor of Banking Technology, made an appearance:
Simon Taylor: "Next story on efinancialcareers, ‘This former Credit Suisse trader is hiring 25 people a month for his fintech start-up but says bankers can’t hack it. Jason, another Revolut story.’

Jason Bates: "Yeah, amazing. And I kind of think now, when people go and talk to the CEO of Revolut, and to people at Revolut, they almost, like, they almost home in on the people element, because the founder has said so many amazing things over the last few news cycles, over the last few weeks, that I just don’t think journalists can leave that alone. They ask a little bit about Revolut, and then they’re like: Tell me about your people policies, or how is it like to work there? And he came up with just some cracking quotes. Ehm. ‘As long as something needs to be done, I can work twelve hours a day’, ‘I can work weekends and clock at least eighty-five hours. It’s not a problem’, ‘it was intense on the trading floor, but this is intense squared’. But my all-time favourite quote - and I’ve been repeating this in the office today as a meme - he says that the average age of Revolut employees is 28, and he said previously that he liked to hire people who want to grow themselves, and that growing is always through pain.

Simon Taylor: Oh dear, that is sinister, isn’t it? I can see Valentina wanted to dive in here… Go!

V. Kristensen: Such an annoying... It’s just so annoying to hear this! Basically, it’s just a classic quote that you hear. It’s so old-fashioned, you know: 'I will only ever hire people who are like me' […] It’s just so ridiculous! You have no children. You are not someone, who has any kind of social... I just... It’s like, to brag about it! [...] I am very proud of the fact that I work for two founders who are both parents. I am very proud of the fact that we hire twenty-year olds and we also have people who have twenty years' experience. The fact that you’ve got the majority age of someone who is twenty-eight and so therefore was in high school during the financial crisis, well, then they can’t possibly learn from many of the mistakes from the past. Very reassuring, considering that you work in a financial services company and we might get into a recession after Brexit.

Simon Taylor: I love your passion!

[applause from the round]
V Kristensen: It’s just completely the wrong message and you are going to miss out on loads of great talent, as a result.

This snippet, then, again offers two different views on Storonsky’s remarks. Once more, there is Bates, who defends the comments or at least takes an ironic stance. This time his statement is met by vehement opposition from Kristensen, who fiercely argues against a culture of overwork and who earns a spontaneous round of applause. Bates replies by seeking to normalise the idea that in certain firms one must put in the hours, but the round ultimately mocks Storonsky as outdated and old-fashioned by comparing him to the villain investment banker of the 1987 movie Wall-Street:

Jason Bates: And to a certain extent it goes against the ethos and the PR about start-up life. But you might say, this has been around for a long time. If you join a magic circle law firm, your life is over, you know, for a while. You join an investment bank, you join a big strats [strategists] house, you are probably going to put in these kinds of hours. And I do wonder sometimes, if we have become a bit wed – and I am playing devil’s advocate a little here – to that Silicon Valley TV series. You know, start-up life is great because we get flexibility and we can work in great coffee shops and it’s all great. But ultimately, it’s also pretty brutal and pretty aggressive.

T. Andreasyan: There are plenty of people who are prepared to putting these hours in and dedicate themselves to their work and it’s absolutely fine. It shouldn’t be condoned or say no don’t do that. But at the same time, it shouldn’t be, you know, put on a pedestal, as this is the only thing that can be done to be successful.

V Kristensen: And also, I think the thing is with, you know, with the Magic Circle law firms or with the investment banks, it was very much that one-liner which was: we work until the work is done. It was not, people work twelve hours a day because they are so passionate about what they are doing [...] To kind of take the same sort of view, as I said, is just sort of really old-fashioned like the kind of stuff you heard in the eighties.

Simon Taylor: It does feel very eighties doesn’t it? It's up there with like 'greed is good'.
Drawing these points together, this second snippet again presents three views on work culture. Bates' view that overwork should be considered a normal occurrence in fintech, Kristensen's view that it has no place, and Andreasyan suggesting that it may be ok for some people sometimes but should not be glamorised. These arguments, again, are linked to different visions of fintech, whereby the question of working culture serves to mark out the relationship between fintech and the traditional financial services industry. Bates emphasises continuity, Kristensen and Andreasyan signal change. These points are again presented in a casual manner, with various references to pop culture and in conversational style. Moreover, where in the previous snippet the group seemed to converge on Bates' view that Storonsky's views were ill-phrased but acceptable, in this snippet the group seems to converge on the opposite view that Storonsky's views were outdated and too close to the toxic working culture of 'old finance' and therefore undesirable.

The Revolut revelations rumble on
The final snippet of Fintech Insider, then, comes from an episode that was released several months later, on 8 March 2019, after a period of relative quiet in Revolut related news on the podcast. The week before the episode was released, however, Storonsky had published two blogposts. One titled 'Let me set the record straight' that reacted to an FCA inquiry into compliance issues with Anti-Money-Laundering laws, and another one titled 'Revolut's culture: the past, present and the future' in response to a series of new allegations about the toxic working culture at the company. This episode was hosted by Sarah Koncianski and Simon Taylor and the guests were Mel Palmer, CMO of Exo Investing, Matt Valentine from Barclays UK Ventures, and again, Ali Paterson, now Editor in Chief of Fintech Finance. What is noteworthy of this episode, when compared to the previous ones is how the hosts and the guests unanimously reject Storonsky's blogposts and even perceive them as a reputational risk for the fintech industry as a whole.
Simon Taylor: “Holy snowball. Right? It's like a runaway freight train and it feels like they can't get their arms around it. And it feels like they can't help but do more stupid things because the culture is broken. [...] Like, the title of the blogpost, “let me set the record straight”. One, it’s like: You’re all wrong. I’m right. Let me prove it to you. And then, two, this blogpost about Revolut’s culture “the past the present and the future”, if you actually go read that, it reads like it’s ghostwritten. It... there is no authenticity in it, and I think, that’s the thing that customers want. [...]”

Sarah Kocianski: It is... the term that comes to mind every time Revolut do anything is tone-deaf.

Mel Palmer: I think that’s it. And you look at some of the stuff and it almost feels corporate. Like they’ve been told ‘you need to say these things’ and I’m thinking now - we’ve spoken about this a couple of weeks ago on this show - it is really important to fintechs to be transparent, to be trustworthy, you know? We are going up against a traditional industry and that’s really what sets us apart. And, you know, the communication, the tone, it just isn’t doing that.

Ali Paterson: Do you think that... cause it used to be, Nikolay used to be the gift that keeps on giving. He would say things at events that very clearly had not gone through PR and now it seems that, as you said, it is not authentic, it has been PR’ed. Do you think, they should almost embrace who they are, and be like, yes, we are very targets driven? Because that kind of is their culture?

Sarah Kocianski: But they have done that, repeatedly. So, like, 18 months ago that was very much them. And when I was at Business Insider, my colleague Oscar did a couple of pieces on them. And he said things – I can’t remember them word for word but they were very much in the vein of like, if you want to go home at 5 o’clock, we don’t want you working for us. And like, I don’t believe you can build a company if you have a work-life-balance. [...] So, they did do that. And that turned me off personally, I was turned off by that like right away. A lot of people weren’t. But I think the problem is that they have proven that the bad culture has resulted in systematic flaws. So, these problems in their compliance, I would suspect have come from the cultural root. Does that make sense? So, I think, if your company culture is results driven, then maybe you do end up cutting corners. Where you really shouldn’t be cutting corners.
Simon Taylor: We saw this with the financial crisis as well. And we have seen it with every mis-selling scandal that has ever happened. Is, when people have a target, but the culture isn’t right, then... this isn’t something about fintechs. But what really bothers me is, this becomes something that you can throw back at fintechs. And the whole industry takes a hit from it. When actually, there is a whole bunch of people trying to do the right thing for customers. And there is a whole bunch, I am pretty certain of it, of great people inside of Revolut for whom, they don’t stand for this, who are trying to do the right thing for customers. And this must be deeply frustrating for them. Who are trying to build a great product that makes a difference. And let’s remember: at the middle of this was a great product. Like people love Revolut. It was the best travel card. And all of that’s been forgotten and that’s not what people are talking about. And that’s what people should be talking about.

In marked contrast to previous episodes, the hosts and the guests on the show agree that something is wrong with the working culture at Revolut. Where in previous episodes the conversation turned to consider how a culture of overwork could indicate good things, like passion for the job, or a culture of 'just-executing', this episode depicts it as a road to 'cutting corners' and not doing the job right. Both, Palmer and Taylor suggest that the style of communication was important, because it influences the reputation of Revolut and of fintech as a more transparent and more trustworthy industry. Kocianski echoes the points by O’dea in the first snippet, that the work culture must be right, and that a cut-throat targets-driven work culture necessarily leads to systematic flaws. Taylor agrees with Kocianski and argues that toxic work cultures were precisely what led to a lack of trust in traditional banking. Again, this is a conversation at once about Revolut but also about fintech, more broadly. There is an explicit attempt to mark out fintech as not-finance, as a more transparent, more trustworthy, industry. The hosts and guests turn into a kind of 'brand' ambassador for the industry, defending what is and what is not fintech to avoid Revolut headlines having a bad impact on the industry.

Fintech as lively, iterative, and social practice

This second part of the chapter has presented select snippets of Fintech Insider to showcase the 'embodied' performances of fintech by actual fintech insiders, i.e.
professionals who work in the industry. The snippets were selected to demonstrate how the hosts and the guests of the podcast contend with political issues, such as the work practices at a high-profile fintech firm. Taken from three different episodes that were released on 30 October 2017, 27 November 2017, and 11 March 2019, respectively, they further provide a sense of the iterative negotiation of such issues over time.

The snippets spotlighted a clear normative dimension in the discussions between hosts and guests. Participants disagreed on the issue of working culture and engaged in a lively debate about its significance for Revolut as an individual company, but also for fintech as a broader industry. Conversations focused on two questions. First, whether or not overwork was detrimental to business, and second, whether or not overwork was part of fintech culture or an unfortunate import or residue of traditional finance. Beyond the specific arguments and standpoints presented in each episode, the discussions point to the role of the podcast as a kind of public platform where fintech enthusiasts and entrepreneurs from different professional backgrounds debate the social and economic value of the industry. What kind of fintech do we want? What should fintech stand for? Does fintech as an industry differ from traditional finance in terms of culture? Does it merely reproduce it?

Next to the role of podcasts as a public platform, where fintech insiders deliberate and contend with each other, the snippets also presented the distinct style of debate, i.e. the banter, the rants, the jokes, the applause, etc., as well as its tone of voice, i.e. the casual atmosphere, the cultural references, the speculative questions and answers, etc. In this sense, the snippets illustrate what might be termed the demotic turn in relational finance: a rendering explicit of the social dimension of finance combined with a sustained effort to cultivate its ordinary appeal.

Conclusion

In previous chapters, this thesis has examined fintech as an emerging industry, an expanding professional network, and a subsector of finance. This chapter in turn has indicated that fintech is also a media event, an ongoing series of news stories, issuing from numerous webpages of dedicated news outlets and from a growing range of new
fringe media, such as blogs, chats, apps, and podcasts. While this aspect of fintech could be treated as insignificant, the chapter has argued that it is worth considering it in some detail, not least because most fintech practitioners consider it an important part of the industry. The chapter has focussed specifically on one emblematic media channel of the UK fintech industry – the Fintech Insider podcast. It argued that such a focus can promote a thinking about and alongside the performative impact of the fintech media in making and remaking the industry. In what follows, this conclusion briefly summarises the main arguments of the chapter, before it situates them within the broader context of this thesis.

The chapter introduced Fintech Insider as a relatively new medium launched by four fintech professionals to boost their consultancy business in 2016. Their idea was to offer a platform by fintech geeks for fintech geeks that would emulate the kinds of discussions they would otherwise have in the pub. The podcast became popular very rapidly, catapulting the producers company to the forefront of the most prominent and the most sought-after fintech consultancies of the UK. While the success of their business was exceptional, the chapter has argued, the role of the podcast in promoting it was not. Instead, the chapter proposed, its role can be read as symptomatic of the broader ‘performativity’ of the fintech media.

Drawing on previous theorisations of the performativity of finance, the chapter has distinguished between two different ‘layers’ of performativity. One referring to the manner in which the fintech media is implicated in conjuring up fintech as an industry; and one referring to the manner in which it literally performs fintech as a lively, social, and embodied practice. Before it moved to discuss both of these meanings in turn.

In the first section, the chapter has begun to unpack how Fintech Insider can be thought of as performative of fintech in the first meaning of the term: as a medium that is implicated in calling fintech into being. To draw out that meaning, the section has drawn on previous arguments about the performativity of the mass media during the 1990s dotcom boom. At the time, the transformation of finance into mass markets was accompanied by the incorporation of financial news into the mass media. Especially, financial TV channels became a popular source of information for middle-class investors. As more and more 'unsophisticated' investors began to make investment
decisions based on TV news, media discussions began to exert a greater influence on price movements, forcing even trained investors to take media news stories, and their potential effects on market prices into account. So, where the mass media could previously be regarded as separate from financial markets, because most market participants followed the principles of investment theories, it was now inextricably linked to these markets. It attained a performative role. Especially, in the dotcom boom, when the financial media sustained the widespread optimism about the seemingly unlimited possibilities of the internet and so contributed to the inflation of an enormous asset price bubble – the 'New Economy'.

Following these observations, the chapter has argued that Fintech Insider, and other new media channels, play a similar role in sustaining investor hype in the profitable opportunities created by digital technologies. They perform fintech into being by boosting expectations about its future profitability. However, the chapter suggested, they have also refracted this role in significant ways. First, they have led to a diversification of the producers, the audiences, and the beneficiaries of media content. Private individuals are increasingly able to reach mass audiences on a scale previously only possible for broadcasters. Even those who do not reach the masses often find a significant niche followership online. These changes have made it possible for fintech entrepreneurs to routinely eclipse traditional media outlets in promoting their business. Second, they have profoundly increased the popular awareness of media performativity. There is a widespread recognition amongst fintech enthusiasts that the business idea of an individual may be propelled by the excitement of an online followership into the limelight of investors and thus attract the kind of funding required to turn it into an actual startup company. Third, the new media channels have also inaugurated a trend described elsewhere as the demotic turn in corporate celebrity, placing huge emphasis on the values of authenticity, relatability, and intimacy. Against this background, the chapter has argued, Fintech Insider can be characterised as an emblematic example of the new media landscape: four fintech enthusiasts using inexpensive tools for recording and disseminating a podcast that intentionally gives the impression of candid, unfettered access to the 'people behind the scenes', in order to opportunistically boost their own business.
The second section of the chapter argued that Fintech Insider can be thought of as performative of fintech in the second meaning of the term: as an embodied performance of fintech by actual fintech insiders. It presented three transcribed snippets taken from three different episodes of the podcast to illustrate the manner in which the hosts and the guests debate contentious political issues on the show. The snippets focussed on how the show dealt with a series of controversial comments made by Nikolay Storonsky, a high-profile personality and founder of the challenger bank Revolut, who defended the toxic work culture at his company. They showed how hosts and guests were divided over the legitimacy of a targets driven work culture and long working hours in the industry. Some of them have suggested that overworked employees are bad for business, and that target driven work culture must be avoided because it encourages individuals to cut corners where they really should not be doing so. By contrast, one of the hosts was particularly insistent that long working hours and exploitative working conditions were simply part of the deal – a legitimate part of fintech startup life. Others took yet another, more ambiguous position, suggesting that overwork was justified in some instances, but damaging in others.

Beyond the specific arguments and debates made by the hosts and the guests of the show, the chapter has foregrounded how they debated and contended with each other over explicitly normative questions. Conversations went from debating the impact of working culture on business outcomes, to debating its role in determining the social and economic value of fintech as an industry. To some, the culture of fintech was precisely what marked it out as different from the traditional financial services industry. Next to the normative dimensions, the chapter further highlighted how the snippets showcased the distinct style of debate of the show, and its tone of voice. The snippets entailed banter, rants, applause, and so forth, which can be seen as symptomatic of the demotic turn in fintech celebrity: the intent to give audiences the impression of direct access to the 'real' people behind the scenes.

These findings, then, add to those in the previous chapters, to illustrate how an everyday approach to the study of fintech can interrogate the industry without reducing it to a singular entity defined by a narrow set of actors or pre-defined logic of power. They show more specifically how a focus on fintech podcasts can yield surprising insights on the performative role of the fintech media in the making and remaking of
the industry. Fintech Insider contributes to perform fintech into being by boosting expectations about its future profitability. It also contributes to performing fintech as a lived social practice carried out by 'real' people, in a manner that distinguishes it from the traditional financial services industry. Indeed, it provides a kind of niche public, where fintech entrepreneurs from different backgrounds deliberate over the social and economic value of fintech as an industry. Such issues are not normally recognised in critical fintech studies and can productively challenge conventional notions of fintech as an industry ruled by big corporate interests, pure instrumentalism, opportunism, profiteering, and greed. They can point to the mediatised nature of fintech and all of the complications this mediatisation entails. As such, they directly speak, for example, to the recent headlines about an online community of amateur traders who organised on a free website and used a fintech app to attack large hedge funds in a concerted effort to save a gaming company (Feher, 2021). In this sense, this chapter has raised a set of questions and arguments that are potentially gaining mainstream importance, even beyond fintech scholarship.

This, then concludes the empirical explorations of this thesis, which have sought to engage and develop the everyday politics of apps, hackathons, and podcasts, to promote a heightened sensitivity to the heterogeneity and the contingency of the fintech industry. In what follows, the thesis recapitulates the main findings in each of these chapters and how they support the broader argument of the thesis. It then highlights the main contributions of the thesis to the social scientific study of fintech, before it proposes a number of ways in which the research presented here could be taken forward in the future.
Conclusion

In a recent blogpost, titled *You’re Doing It Wrong: Notes on Criticism and Technology Hype* (2021), tech scholar Lee Vinsel has offered an incisive critique of tech researchers and writers that he described as 'hype-y'. Whether it be artificial intelligence, self-driving cars, genetic engineering, the sharing economy, blockchain, or crypto currencies, he argued, there was a genre of critical writing which rather than undermining the sensational claims of tech enthusiasts "simply flips them, and starts talking about 'risks'" (Vinsel, 2021). The blogpost cites Orlowski's Netflix documentary *The Social Dilemma* as an example as well as Zuboff’s *The Age of Surveillance Capitalism* (2019), which has been cited on several occasions in this thesis. Both have become instant commercial successes by presenting a dramatic image of big tech companies as dark corporate forces with an almost unlimited ability to manipulate individuals via digital technologies. However, the problem with these 'wake-up' calls, according to Vinsel, is twofold. On the one hand, they do not submit convincing empirical evidence to support the claim that big tech companies have quite such sweeping manipulative powers. As a result, rather than undermining the power of the big tech companies Orlowski and Zuboff become strangely complicit in inflating their hype. On the other hand, so Vinsel, they detract attention from 'real world problems'. For instance,

"many people, especially those without college degrees, have little-to-no access to good jobs. Moreover — despite the hype about, like, apps — nothing about current technological change is likely to change any of these economic conditions soon" (Vinsel, 2021)

This thesis has grappled with similar dilemmas. It has similarly asked how to critically engage with the hype around fintech, without simply flipping it and calling it dangerous. But while it shares this central concern with Vinsel, to avoid a critique that becomes strangely complicit in exaggerating the powers of big banks or big tech companies, it strenuously objects to his suggestion that there is an easy way to simply return to a focus on 'real world problems'. For the question of what counts as a real-world problem cannot be taken for granted. Is it the extension of financialised capitalism? Is it financial speculation spiralling out of control? Is it the power of Google, Apple, Facebook, Amazon, etc.? Or is it the ease with which people accept apps as a solution to all manner
of problems; the intuitive appeal of hacking as a form of social agency; and the role of podcasts in facilitating (niche) public debates? Rather than offering a solution, the thesis has argued, the problem of how to critique (fin)tech remains difficult to resolve and is therefore better treated as an ongoing theoretical and practical dilemma of (fin)tech research.

In this sense, the thesis has offered one response to the question of how to engage fintech critically, by highlighting the advantages of an everyday approach. In what follows, this conclusion recapitulates this argument as well as the main findings of the thesis. It then outlines the wider implications of these findings and how they contribute to the critical study of fintech. Before it proposes a number of future research avenues.

Main argument and findings
This thesis makes two broad arguments. First, it argues that a critique of fintech can take the industry seriously as a political arena itself – one that produces valuable arguments and debates. Critical approaches that reduce fintech to an investor hype, an instance of financialisation, or an extension of surveillance capitalism find it difficult to do so. Moreover, they conjure up three broader risks: a risk of stagnating in permanent opposition to the industry; a risk of reinforcing fintech as the preserve of only a few dominant players in a manner that exaggerates the power of these players to near absolute; and a risk of reducing the politics of fintech to a singular, predefined logic, whereby empirical attention to the ways in which fintech exceeds these logics is effectively suspended. Thus, there is a need to inflect these critiques with a heightened attentiveness to the heterogeneity and the contingency of the industry.

Second, the thesis argues that 'the everyday' provides a useful concept to that end – one that can promote a thinking alongside rather than about fintech and one that promotes a critical sensitivity to how seemingly unremarkable aspects can extend or complicate conventional assumptions about where or what the politics of fintech are. This argument builds on previous interventions by feminist and everyday IPE scholars to depart from previous theorisations of the everyday as an empirical category. Rather than simply 'adding' the everyday as a research concern to existing accounts it proposes to use it as a critical concept that yields a broader research methodology. The point of
studying fintech from the perspective of the everyday, then, is not to provide a more
cOMPlete picture of the industry, but to mobilise seemingly mundane aspects of the
industry as a vantage point for reading a politics back into issues that seem settled or
solved, or – more often – seem not to contain a political question at all.

The following sections will re-capitulate how these two general arguments were born
out and developed in the three empirical chapters on apps, hackathons, and podcasts,
each mobilising a seemingly unremarkable aspect of fintech to develop an everyday
politics that otherwise would likely recede from view.

Challenger banks and the mundane capabilities of apps
This section presents the main findings from the first empirical chapter on the everyday
politics of fintech apps. The chapter introduced a group of fintech startup companies
known in the UK as challenger banks, or app-based banks, which deliver retail banking
products on smartphones, via apps. It described the historical context of their
emergence which was marked by two decisive developments. First, the postcrisis
efforts of the Financial Services Authority (FSA) and the Bank of England (BoE) to
promote competition in the retail banking sector by lowering the barriers of entry for
start-up companies. Second, the launch of Apple Pay in the UK, which triggered a
growing sense amongst investors that smartphones would have a significant financial
role to play in the UK. The chapter then moved on to discuss the central promise of
app-based challenger banks to investors: to undermine the traditional business models
of established retail banks. Rather than earning interest on loans and overdrafts, they
would earn commission on cross-selling financial services on app-store-like
marketplaces. The chapter also suggested that the sustained lack of profitability of app-
based challenger banks, has begun to cast doubt over this promise.

Against this background, the chapter identified two main lines of critique of app-based
challenger banks. One that contrasts the skyrocketing valuations of these companies –
several of them are valued at over a billion pounds – with their sustained lack of
profitability; and one that places them within the context of a much broader
restructuring of finance as a platform economy. While both of these critiques offer
important insight in some regards, the chapter argued that they remain limited in
others. Simply dismissing the startups because of their lack of profitability risks neglecting what they do with the enormous sums they have attracted, whereas placing them within the context of the platform economy renders them only a secondary concern to the much more anticipated battle between high finance and big tech companies. The chapter thus offered an additional 'everyday' perspective that rendered the strange plausibility of 'apps' a critical concern. Why, apart from new business models, do proponents of challenger banks find app-based banking compelling in any way? The chapter followed an emerging literature on 'critical app studies' to argue that apps, as a software package, are characterised by an in-built capability to blend into the workaday world. Hence, app-based challenger banks mobilise apps to embed banking more dynamically within the daily operations of market life. This provided an opening for analysing how app-based banks reframed the perceived failures of 'old banking' as a series of mundane problems solvable by apps.

Focussing on the distinct functionalities of app-based challenger banks, the chapter revealed a sophisticated attempt by the fintech startups to embrace social situatedness as a business opportunity. First, there was a strategic effort at building functionalities based on 'real-life' monetary practices. From account opening to mental accounting, the challenger banks promoted a shift in focus from selling financial services to selling app-based efficiency gains in financial situations, whereby 'convenience' rose to prominence as a marketable category. This was inflected with a heightened attentiveness to the affective dimensions of money and banking. Thus, convenience was not only about efficiency gains. It was also about a 'feeling' of being in charge, generated by increased visibility and control. The chapter pointed out, that this shift or re-thinking of banking reflected two broader developments. First, in practical terms, it reflected the import of app-design techniques into banking, such as a/b testing and multi-variance testing as well as the use of familiar design patterns, such as chunking and pacing. Second, in theoretical terms, it reflected a rejection of pure market assumptions. Instead of punishing individuals for not acting 'rational' challenger banks presented apps as a means to 'unlock' more rational behaviour depending on respective circumstance.

These observations, then, point to an everyday politics of fintech that is not commonly recognised or discussed. The remediation of banking via smartphones entails a re-
thinking of markets and market life more broadly. Challenger banks reject the idea that markets are 'natural' or 'rational’. Instead they suggest that markets overwhelm individuals who therefore need apps to navigate their financial lives. In this context apps attain an almost intuitive plausibility as affective devices that allow users to see their finances and feel in control.

The findings of the chapter contribute three main points to the current debate. First, the import of platform business models may not be the most important or the most compelling proposition of challenger banks. In addition to experimenting with alternative revenue streams these fintech startups also have begun to harness the computational capabilities of apps to operate in closer proximity to people’s daily routines. Second, privacy and surveillance concerns may be fruitfully complemented with an interest in the distinct vision of market life promoted by challenger banks. So, on the one hand, app functionalities such as the account opening process clearly represent a leap forward in the datafication of identity verification, with potentially serious implications for the governance of populations through digitised border practices. On the other hand, challenger banks advocate the use of voluntary behavioural nudges based on the transparent use individual data. This opens up questions about how the intuitive plausibility of apps for developers, entrepreneurs, and users, are linked to the rethinking of markets as complex and incomprehensible to the individual, whereby apps become almost indispensable companions for individuals who must 'see' their position within markets in order to navigate and interact with them effectively. Third, and related to this, the marked emphasis on social context suggests that fintech is partly an attempt to incorporate the long-standing critique of 'pure markets' assumptions into business operations, and indeed, to seize them as an opportunity for competitive edge.

Hackathons and the re-thinking of entrepreneurial practice
This section presents the main findings from the second empirical chapter on the everyday politics of fintech hackathons. The chapter introduced hackathons as a popular event format of the fintech industry. It traced their historical emergence back to the informal work practices of open-source developers who organised them as a rare opportunity to work face-to-face on the maintenance and development of code. It then
illustrated how they were later adopted by internet companies as a form of 'collective brainstorming' and how they have recently become a wider phenomenon across private and public domains. But while hackathons are spanning many sectors today, the chapter argued, they were pushed into the financial sector by the fintech industry as the emblematic event of those well-funded fintech innovation hubs that have been mushrooming in financial centres around the world as a result of numerous attempts by political and economic stakeholders to embrace digital disruption as an opportunity rather than a threat to the sector. The chapter pointed out that while fintech hackathons are dedicated to the ad-hoc development of innovative software solutions, they usually fail to produce working let alone innovative prototypes.

Against this background, the chapter identified two main lines of critique of these events. One that argues that hackathons are exploitative, because sponsors and organisers benefit from the voluntary work of participants without offering compensation; and one that depicts hackathons as ideological, because participants are expected to celebrate personal risk-taking, aspiration and profit-making as the fullest expression of entrepreneurial freedom and liberty. While both of these critiques remain important, the chapter argued that they are also somewhat unsatisfactory, because they tend to ignore the distinct role of hacking at the events. The chapter thus offered an alternative everyday perspective on hackathons that rendered the strange appeal of hacking as an entrepreneurial practice a critical political concern: why is it that sponsors and organisers turn to hacking to solicit volunteer labour and spread entrepreneurial ideas?

Reporting back from two fintech hackathons held in London in 2017 and 2018, it discussed how hacking was understood and practiced at these events. It emphasised three aspects in particular that became important. First, the idea to change finance not by building something entirely new, but by activating inherent potentials and unforeseen possibilities of what already existed. Second, the idea to harness digital technologies as a means of hacking, rather than an object to be hacked themselves. Third, the idea of hacking as an intrinsic, iterative, and open-ended practice. The chapter argued that these perceived virtues of hacking linked up at the events with a broader management and consultancy discourse that rendered finance as a 'complex and adaptive ecosystem' characterised by unpredictability, non-linearity, and
continuous change. This became most apparent in the articulation of financial innovation as a process of triggering tipping points, so that small fintech hacks could – just like the butterfly effect – lead to huge changes in the industry.

These observations, then, point to an everyday politics of fintech that is usually overlooked. The promotion of 'hacking' as an entrepreneurial practice entails a re-thinking of finance as a complex and adaptive ecosystem that suggests that innovation cannot be planned but rather must proceed in a gradual, iterative, and open-ended manner. Because the effects of any technology are considered to be unpredictable. In this context, hacking becomes attractive as a practical orientation, because it already pre-supposes a world that is complex and adaptive, whereby the specific consequences of any individual hack are rendered unpredictable. So, the task becomes one of attending to the unforeseen possibilities that emerge in the process of hacking. As such, two points stand out as main contributions of these findings to current debates. First, the perpetuation of precarious working conditions and the spread of entrepreneurial ideology may not be the most significant impact of fintech hackathons. Rather, there is a sense in which fintech hackathons normalise a distinct vision of social and entrepreneurial agency that suggests that social change cannot be planned but must be pursued in a gradual and iterative manner, through disruptive impulses from within. Second, and related to this, fintech hackathons therefore spotlight a paradox convergence of fintech entrepreneurs and critical academics on the common attempt to resist old finance, not so much by opposing it, but by re-inventing it in creative-imaginative ways.

Podcasts, marketing, and public debate
This section presents the main findings from the third empirical chapter on the everyday politics of fintech media. The chapter introduced the Fintech Insider podcast as one of the most prominent media voices in the UK fintech startup scene. It described how the podcast was launched by four fintech consultants as a means to bootstrap their consultancy business. With remarkable success: within four years, the podcast reached 6-figure monthly downloads in 180 countries, and the consultancy was elected consultancy of the year at the British Bank Awards in two consecutive years. The chapter suggested that the link between the podcast’s success and that of the
consultancy was not incidental but symptomatic of the 'performativity' of the fintech media. In a double sense: it was symptomatic of how the fintech media has aided entrepreneurs in 'calling their businesses into being' simply by boosting expectations about their future profitability and it was symptomatic of how the fintech media depicted entrepreneurial success as a story of 'ordinary people' challenging a discredited financial elite.

This led to an analysis of the 'layered performativity' of the podcast in two parts. First, the chapter situated the podcast within a longer history of financial mass media beginning with the proliferation of specialised TV channels, the inclusion of financial bulletins in the national news, and the publication of personal money pages in the national newspapers, during the 1990s dotcom boom. These media formats began to have a performative impact on stock prices at the time as they shaped the investment decisions of a growing number of middle-class investors entering the markets. Thus, they started to have an impact on markets which they purported to merely represent. By analogy, the chapter suggested, the Fintech Insider podcast can be read as a contemporary media format that shapes the investment decisions of its listeners. On the one hand, the hosts used it to gather attention and thus to gain clients for their consultancy business. On the other hands, they used it to promote fintech as an industry and thus to sustain the influx of investment into fintech more generally. As such, the podcast contributed to a broader investor climate in which the expectation of future profits in fintech allowed individual entrepreneurs to attract funding through the mere promise of a future business, which then allowed them to start building that business. This self-fulfilling dynamic found its most extreme expression in the hype surround Initial Coin Offerings wherein a team of developers, a whitepaper, and a growing online followership was often enough to attract millions in speculative investments online.

While there are clear parallels between the role of the financial media in the dotcom boom and the role of podcasts and other cheap online media in the fintech boom, the chapter also identified key differences. First, it argued that the podcast was distinct in how its producers were aware of the potentially self-fulfilling dynamics of the medium. In marked distinction to derivative traders who unlocked the self-fulfilling tendency of the Black-Scholes-Merton formula and even of the celebrated market analysts of the
dotcom era, fintech entrepreneurs no longer pretend to merely represent fintech, but actively acknowledge and seek to profit from their own role in influencing it. Second, it argued that the podcast performed what media theorists have described as a 'demotic turn' in celebrity: the hosts and guests placed huge emphasis on authenticity, relatability, and ordinary appeal. This then pointed to an additional layer of the podcast's performativity. That is, the manner in which it literally performed fintech as a lived social practice and thus rendered the social dimensions of finance explicit. Here the chapter foregrounded how the podcast was not merely a marketing platform for fintech entrepreneurs, but also – to an extent – a public platform to debate the norms and values of the fintech 'community'. The chapter presented as a case study a series of snippets that demonstrated how different fintech practitioners dealt with controversial comments of a high-profile figure of the UK fintech scene regarding the legitimacy of exploitative working conditions in fintech startup life. The chapter indicated how the question of working conditions was discussed controversially, ironically, and enthusiastically on the podcast and regarded by some as a reputational issue for the fintech industry as a whole.

These observations, then, point to an everyday politics of fintech that is not normally recognised. The industry has prompted a host of new media outlets to emerge that contribute to the investor hype around fintech but also provide a range of niche publics where contentious political issues are controversially discussed. In this sense, the chapter makes two broader contributions to current debates. First, it emphasises the role of the fintech media as a key driver of technological change that opens up further questions. The chapter suggests that the rise of cheap online and social media in particular deserve attention as they have an impact not only on the investment decision but also on the manner in which political issues, such as working conditions, are being negotiated within and beyond the industry. Here, the podcast is only one example. Many fintech companies communicate with investors on group chat applications, blogs, and social media channels. How does this move onto private media channels influence investment decisions? How does it influence the corporate culture of fintech firms, but also of bigger financial services companies? Second, the chapter underlines that fintech is not purely a profit-driven enterprise but shot through with normative concern. So, while the Fintech Insider podcast is partly a marketing exercise it is inextricably also a public platform where the political and social mission of fintech and its broader value...
for society is controversially discussed. In this sense, the chapter highlights a need to engage these debates as important starting points for registering the political potentials that already reside within the industry. Fintech cannot be reduced to a singular entrepreneurialism, as there are active attempts to change the corporate culture of finance into a more inclusive and less exploitative one. One role of critical research can thus be to engage and develop these attempts.

Fintech research as everyday politics
The findings of each of the three empirical chapters can be read as individual contributions or commentaries to specific, ongoing debates within fintech. But they jointly contribute to support the overarching argument of the thesis: that fintech can be taken seriously as a political arena itself; that it can produce valuable arguments and reflections about finance, technology, and the global economy; and that it is therefore worth to pursue a thinking alongside rather than about the industry. This amounts to three substantial contributions of the thesis:

First, on a theoretical level, the thesis promotes a heightened level of reflexivity to the contingency and heterogeneity of the fintech industry. As has been highlighted throughout the chapters, too often the focus and fascination rests with the power of the top dogs of the industry. While not inappropriate, it entails the danger of a hype-y critique that uncritically accepts the supposed power of big corporations and flips it to discuss it as risk. Hence, the aim of the thesis has not been to contradict or undermine existing critiques of fintech but to complicate them and promote a wider awareness that the politics of fintech are more plural and open-ended than is often implied. Thus, fintech is not some dystopian monoculture imposed on society from above. Rather, it is a contested and contestable process. It includes corporate surveillance and debt-induced misery. But it also entails a rethinking of banking as a lived social practice, it entails creative bursts of hacking and tinkering, and it entails deliberations and performances broadcasted on podcasts that relate to the social and economic value of the industry.

Second, on a methodological level, the thesis contributes a theoretically situated 'everyday approach' to the study of fintech. This approach invites scholars to address
seemingly mundane aspects of the industry as a vantage point for rethinking well-rehearsed arguments, theorisations, and debates. As has been argued throughout the thesis, the everyday can serve as a lens to emphasise the generative quality of fintech, and to examine and articulate contingencies that otherwise recede from view. Moreover, it offers a register for articulating critical perspectives that do not rely on universalising or totalising assumptions about what or where the politics of fintech are. Hence, the everyday can open up a thinking that side-steps the question of analytical bias by giving up the ambition of a ‘more complete’ picture of the fintech industry. Instead it can serve a research that recognises that the same phenomenon can be understood in inconsistent ways and that this inextricable difference may be a fruitful condition of academic engagement.

Third, on an empirical level, the thesis contributes a wealth of material that documents key political, economic, cultural, and technical developments in UK fintech, during its formative years. This material spans notes, pictures, and recordings from fintech conferences, hackathons, meetups, and more; screenshots, pictures, and commentary on specific fintech apps; an archive of online web sources that includes fintech news outlets, websites, blogs, and podcasts; and recordings from three interviews.

**Scope and future research**

Having acknowledged these contributions, the rest of this conclusion seeks to highlight several routes forward from this point, suggesting possible areas of future research and theoretical work from this thesis.

First, the thesis has drawn extensively on the intellectual achievements of poststructuralist feminists to develop its use of the everyday not as an empirical category, but a specific vantage point for re-thinking, extending, or complication conventional understandings of the politics of the industry. The specific intentions and focuses of the thesis were thus that feminist IPE was used methodologically to respond to the problem of analytical bias and to the question of how to escape the latent and limiting universalism of current critiques of fintech. Yet, the gendered politics of fintech did not remain a central analytical concern. Here I want to suggest that much might be gained from drawing on feminist IPE not only methodologically, but also theoretically.
and practically in future research as a central dimension of fintech politics, as gender is clearly a constitutive and pervasive force of the industry. For instance, within the context of app-based banking, there has been an ongoing discussion about the need to have diverse developers building diverse app-functionalities, a sustained lack of female workers in fintech startups and more. Hence, a focus on gender opens up questions about whose 'social situatedness' the banks exactly seek to attend to. Similarly, the attraction of hacking as an entrepreneurial practice is clearly linked to the rise of geekiness as an increasingly popular masculine identity. Finally, the Fintech Insider podcast performs fintech in explicitly gendered terms. Think of a clash between the Wall-Street trader masculinity and the geeky Silicon Valley men, or the sexualised banter that went on in Episode 146. Or think about the fact that it was women throughout that challenged Storonsky’s justification of toxic work cultures.

Second, chapter three has introduced the growing number of critical app studies to highlight how app-based banks have strategically mobilised the mundane capabilities of apps to compete with traditional banks. But the scope of the chapter remained limited to the very specific case of app-based challenger banks in the UK, on the one hand, and to the very specific perspective of fintech practitioners, on the other. Thus, there are multiple further synergies to be explored. First, there is the question of how fintech companies in other market segments, such as remittances, foreign exchange, payday lending, mobilise apps' mundane capabilities. Second, there is a question of how it is done in other countries, and whether distinct functionalities travel globally, or if they remain invested in the distinct circumstance of a particular country, city, or indeed, consumer segment. Third, there is scope to assess how apps may prompt not practitioners but users to re-think banking and finance in unexpected ways. While apps have prompted fintech enthusiasts to rethink banking as a lived social practice, how does it change user perspectives of the role of banking in their daily goings, or in society writ large? Fourth, there is an almost intuitive way in which a focus on apps speaks to the recent rise of interest in infrastructures. As chapter three indicated, apps rely on a host of physical and technical infrastructures that make their operations at once possible and valuable. So, future studies of fintech may use apps to make visible, problematise, and discuss the different infrastructural settings in which apps are situated.
Third, chapter two and four have pointed to the importance of fintech events in the making and remaking of the industry. Hackathons are only one prominent format, but there is a thriving landscape of fintech conferences, summits, meetups, and more, in the industry, that have now been moved online in response to the global public health crisis caused by COVID-19. On the one hand, fintech events are notoriously under-theorised as a constitutive element of the industry. What is their role in circulating knowledges, ideas and narratives? On the other hand, fintech events point a practical challenge to fintech researchers: how can they be systematically studied? What kind of pragmatic research strategies exist to generate insight from attending fintech events, especially the growing number of events that now take place online? The lack of a literature that engages events as an object of study or a source of empirical insight in critical fintech studies and in IPE more widely thus invites further research.
References


Financial Times (2017a) *Digital banking: a tough way to make money.* Nov 29: https://www.ft.com/content/584f2aba-a17a-3332-843b-6e68a6f97af0 (Accessed 31 March 2021).

Financial Times (2017b) *Tech start-ups raise $1.3bn this year from initial coin offerings.* Jul 17: https://www.ft.com/content/1a164d6c-6b12-11e7-bfeb-33fe0c5b7ea0 (Accessed 31 March 2021).


Financial Times (2019b) *German online bank N26 valued at $3.5bn after $170m investment.* Jul 18: https://www.ft.com/content/4d31c764-a8c6-11e9-984c-fac8325aa04 (Accessed 31 March 2021).


Financial Times (2020) *The virus has crushed the challenger bank dream.* Nov 2: https://www.ft.com/content/8522829e-231e-4476-9d52-b0e9e731f2f6 (Accessed 31 March 2021).


KPMG (2017) *Value of Fintech*. Oct 2017:

KPMG (2019) *Pulse of Fintech H2*. Feb:

KPMG (2020) *Pulse of Fintech H2*. February:


Lorenz, E. (1972) 'Predictability: Does the flap of a butterfly's wings in Brazil set off a tornado in Texas?', *Presented before the American Association for the Advancement of Science, December 29*.


Paßmann (2019) 'Less mutable, more mobile: The role of Twitter apps in the history of the retweet button', Computational Culture, 7.


PYMNTS (2019a) Apple card officially released in US. Aug 20:

PYMNTS (2019b) Google dives into DDAs. Nov 13:

PYMNTS (2020) Transferwise is now a unicorn. May 26:


Reuters (2015a) The strange new age of the social media publicity stunt. Apr 6:


Reuters (2017) Britain’s digital banks: Profitable or just popular? Dec 21:

Reuters (2020a) Breaking views - China’s Ant can gobble up $200 bln valuation. Aug 25:

Reuters (2020b) China slams the brakes on Ant Group's $37 billion listing. 3 Nov:


Rosamond, E. (2016) 'All data is credit data: Reputation, regulation and character in the entrepreneurial imaginary', Paragrana, 25(2).


Sil, R. and Katzenstein, P. J. 'What is analytic eclecticism and why do we need it? A pragmatist perspective on problems and mechanisms in the study of world politics', Annual Meeting of the American Political Science Association, Washington, DC.


The Guardian (2016b) *Would you do your banking with a tech startup?* Oct 19:

The Guardian (2016c) *This article is more than 4 years old Misconduct 'has cost UK's banks £53bn over 15 years'.* Apr 11:

The Guardian (2020) *NHS developing app to trace close contacts of coronavirus carriers.* Mar 31:


Wewege, L. and Thomsett, M. C. (2020) 'The digital banking revolution: How fintech companies are transforming the retail banking industry through disruptive financial innovation', [online only]: De Gruyter.


