1

Money and Finance After the Crisis

Taking Critical Stock

Brett Christophers, Andrew Leyshon
and Geoff Mann

COPYRIGHTED MATERIAL

Introduction

This is not another book about the financial crisis, or not exactly. It is, rather, a multidisciplinary collection of essays that dwell on the geographies of money and finance unfolding in its wake – the dynamic and sometimes volatile post-crisis financial and monetary worlds we inhabit. Indeed, the accounts of these geographies are perhaps best thought of as 'worldings': like the crisis itself, the contributions touch upon an extraordinary range of contemporary lifeworlds and social formations, including not only the complexities of modern debt-driven financial markets, but also their fascinating and unexpected connections to (for example) post-Apartheid South Africa, the 'War on Terror' and biodiversity conservation. They reveal, if we did not already know it, that there is neither a universal experience of the current situation, nor a single 'correct' analysis, nor is there any 'representative' agent, place or scale that captures its dynamics. The breadth and complexity of our monetary-financial conjuncture demands that we assemble a collection of a breadth and specificity adequate to it.

In addition to the benefits of the range of insights these chapters offer into the processes of financialization and the practices and imaginaries through which it proceeds, bringing them together in one collection illuminates dynamics and questions that would be much less visible without their juxtaposition. One of the most important of these, perhaps,

Money and Finance After the Crisis: Critical Thinking for Uncertain Times,
First Edition. Edited by Brett Christophers, Andrew Leyshon and Geoff Mann.
© 2017 John Wiley & Sons Ltd. Published 2017 by John Wiley & Sons Ltd.

concerns the status of the concept of 'crisis' itself. For it seems fair to say that in the serial nature of 'the' crisis – which in the simplest sense began in 2007–2008 in a specific set of asset markets in the United States, but has since continually rolled over into other markets, places, and realms of financialized modernity – the term 'crisis' has lost some purchase. This is not a merely 'academic' problem, and not only because such conditions make it very difficult to determine how, exactly, the financial crisis was made manifest: was it a crisis of the financial sector? Or of the state? Or capitalism? Perhaps neoliberalism? What about money or monetary governance? Or (almost certainly) some combination thereof? We must also consider the fact that if seemingly everything monetary or financial (and much else besides) appears to be always 'in crisis', or to sit permanently on the edge of a precipice, how much analytical help is the concept of 'crisis' anymore? In an historical moment we might be forgiven for confusing with Walter Benjamin's permanent state of emergency, it is the concept of 'crisis' that is in crisis. The 'beginnings' and 'ends' of crises are relative, not absolute; the solution of a crisis for some often means it has been passed on in a repackaged and repurposed form for others to bear (Christophers 2015a).

If so, the problem we confront is not simply terminological, but existential. The challenge is not just finding another category that can help us rearrange the conceptual bits and pieces. Even if we pretend that the time before the collapse of subprime mortgage-backed securities markets and the bankruptcy of the New York investment bank Lehman Brothers – two of the most commonly-identified 'beginnings' of the crisis – was somehow an untroubled era of normality (which would of course be absurd), we are forced to acknowledge that the monetary and financial geographies produced since then are not accurately described as 'post-crisis' geographies, as if 'the' crisis happened, ended, and now we live in its 'aftermath'. We do not inhabit 'post-crisis geographies', but 'crisis geographies' – spaces, places, imaginaries and practices – that have been and continue to be constituted in and by crisis.

Which means not only is it no longer necessarily possible to analytically isolate or recognize 'crises' by the specificity of their dynamics – which would rely on an old model in which crisis is by definition identifiable as an exception to 'normality' – but also that one of the key categories through which we narrate modernity has lost much of its concrete reference (Kosselleck 2006). In other words, if 'crisis' is both foreground and background, how do we identify it when we see it? If capitalism is defined by its tendency to crises, what does it mean when crises are no longer just tendential, but endemic, even constitutive?

The challenges these questions place before us cannot be dismissed, and as such they merge the analytical problems with the existential.

Money and finance are no longer 'containable' to their proper spheres, if they ever were. They are, today, some of the principal means by which 'crisis' becomes remarkably unremarkable, normal even, because immanent to both money and finance is a contradictory sense of possibility, one that always carries a potential 'solution' and a 'dissolution' to the future. In Kurt Vonnegut's *God Bless You, Mr. Rosewater* (1965, p. 171), a character defines money as 'dehydrated utopia', which in some respects it certainly is. But it is also, no less certainly, dehydrated disorder; a little bit of rain and it is apparently as likely to precipitate calamity as it is utopia – and it does so in geographically and historically specific ways. What can scholarship contribute at such a conjuncture? In some ways, it is as simple as keeping one's feet on the ground – in the world – at a moment when the temptation to exercise analytical control leads so many to unmoored abstraction. As the poet Anne Carson (2016, p. 4) put it, with precisely these challenges in mind, 'What can you control? Wrong question. Can you treat everything as an emergency without losing the reality of time, which continues to drip, laughtear by laughtear?'

The chapters in this book attempt something like this: to approach the (post-) crisis world as a collection of emergencies without losing the reality of time – *and* space. They illuminate the complex and often unpredictable variations on a monetary and financial theme, from the realms of orthodox finance capital to biodiversity conservation. The chapters were all written several years after the moment of 2007–2008, and draw attention to the significance of thinking about money and finance geographically, especially given that the roots of the crisis took hold in distinctive and interlinked geographies. These ranged from the global financial centres of New York and London, wherein financial innovation and alchemy was applied to ever more complex and interlayered financial products, through the surplus economies of Asia and the Middle East that provided the financial boom that preceded the crash with so much momentum and financial weight, to the everyday markets that shape, to no small extent, both the financial realm of investment and debt opportunities, and the vagaries of our collective and individual fortunes.

The remainder of this introductory chapter is organized as follows. In the section 'The Crisis and the Academy: "I told you so"' we explore the relationship between academic work and the financial crisis, focusing in particular on the constitutive role played by the discipline of economics in justifying the reregulation of markets and institutions that preceded the crisis, but also on the response to the crisis in that discipline and in cognate social sciences. Next, in 'The Crisis, the State and Regulation: "What have I done?"' we focus on the role of states, policy makers and regulators in the period preceding and following the crisis. 'The Crisis

and the Financial Sector: "What shall we do now?"' looks at the implications of the crisis for the financial services sector. The final section, 'The Content of the Book', provides a summary of the chapters that make up the rest of this volume.

The Crisis and the Academy: 'I told you so'

The political-economic upheaval that began in 2007–2008 has, in the years since, fundamentally reshaped research trajectories across the social sciences. For mainstream economics the implications are, of course, potentially soul-shattering, what Mirowski (2010; 2013) labels the 'Great Mortification'. Even those who still refuse to abandon the fortress of orthodoxy that defended the forces of financial chaos enjoy little peace, compelled as they have been to pull up the drawbridge and self-righteously repel wave after wave of critique from fellow-economists and non-economists alike (e.g., Lucas 2009). But the new 'economic reality' has effected significant, if less existential, changes in other social sciences too (as well as in the humanities, though that is not our focus here). In this, the extraordinary scholarly breadth of its impacts, the first major capitalist crisis of the twenty-first century is quite different than the Great Depression of the 1930s or the collapse of the post-World War II 'Long Boom' in the 1970s.

Of course, both those moments were important objects of scholarly analysis, and contemporary interest certainly extended beyond the halls of economics departments. Poverty, unemployment, homelessness, the relation between the state and markets – all of this was, unsurprisingly, on everyone's radar. But – to borrow a phrase from one of the most celebrated of orthodox economics' recent apologias (Reinhart and Rogoff 2009) – on the wide scholarly front, this time *is* different, in one crucial sense: never before have so many non-economists delved so deeply into the 'technical' details of modern (capitalist) economic science, policy and practice. Social scientists of all stripes have found the formerly impenetrable and even uninteresting fortress of economics and finance irresistible and, if not captured it, have certainly gathered a lot of intelligence about the goings on inside the walls. Geographers, anthropologists, sociologists, psychologists, historians, political scientists – all have in the last less-than-a-decade, written, often wisely and compellingly, on such once-esoteric subjects as mortgage securitization (Walks and Clifford 2015), credit risk (Ashton 2011), and investment strategy (Hansen 2015). Topics that might once have anaesthetized most non-economists, like the yield curve and accounting practices, have (justifiably) become hot topics (Christophers 2017; Joseph 2014;

Zaloom 2009). Economics and 'finance' in particular, are now, more than ever, more than economic.

It must be said that this explosion in scholarship – especially in its so-called 'critical' variety – is partly caught up in a somewhat irrepressible *Schadenfreude*. Almost every scholar outside orthodox 'neoclassical' economics has secretly (or not so secretly) enjoyed the crisis in the self-described 'queen of the social sciences' (Samuelson 1973, p. 6). Many, heterodox economists in particular, have understandably been unable to suppress the urge to say 'I told you so' (Wolff 2010; Taylor 2010; Mirowski 2013). But that is hardly the entirety of the non-mainstream contribution. Scholars across a variety of social science disciplines have discovered they actually have much to say about finance, and with economics' common sense seemingly proven so wrong by the continued unravelling of the global economy via financial meltdown, now they have an audience. This multidisciplinary project of unpacking money and finance has generated fascinating and crucial insight. While not suggesting that there are no pre-crisis foundations upon which to begin, one might even say it has shifted how we understand modernity, locating money and finance – social relations like valuation, debt-credit, and securitization – much nearer the centre of our conceptual consciousness.

If, for convenience's sake, we mark the full-blown implosion of the global financial system with Lehman Brothers' bankruptcy on 15 September 2008, we can retrospectively identify a few different developments in post-Lehman scholarship on money and finance. Of course, no such account can be comprehensive, if for no other reason than the dynamic and diverse forms 'crisis' is deemed to have taken in the intervening years, from 'subprime' to 'credit crunch' to 'sovereign debt' to 'Eurozone' to 'emerging markets', among others. Any path we try to map will always leave something out, suggesting a coherence within what is in fact a broad collection of many more-or-less related efforts we can only trace at a general scale. One of these scholarly dynamics, of course, is mostly internal to orthodox economics, in which 'progressive' forces batter away at a still-hegemonic old guard, while a 'reasonable' middle ground tries to mediate. A second is in what the American Economic Association (AEA) calls the 'allied social sciences', i.e., largely heterodox and radical economics and political economy, economic geography, economic sociology and political science. We can see a third dynamic in the more emphatically 'humanistic' cultural economy research in human geography broadly defined, anthropology, sociology, cultural studies and political and social theory. Again, however, all these developments impact each other, so telling a story that is too organized or clear would be a misrepresentation.

Perhaps the only thing we can know for certain is that the debates in economics have much more in common with those in 'allied' fields of knowledge, while these 'allies' tend to be in closer conversation with fields outside economics proper than orthodox economics itself, which generally isolates itself as much as possible, and dismisses critique from outside. This has only exacerbated one of the more fascinating scholarly effects of the crisis. For if Lehman's disintegration signals the bursting of the asset bubble that had inflated over the preceding quarter century at the heart of the richest economies on the planet, 2008 also marks the shattering of economics' disciplinary ego at its most distended. The burgeoning hubris of orthodox macroeconomics during the so-called Great Moderation of the 1990s and first half of the 2000s, hardly bothered by the Asian financial crisis of the late 1990s and the dot.com crash of the early 2000s (the rapid 'resolution' of which merely increased the mainstream's confidence), led to historically unprecedented self-congratulation (Fourcade, Ollion and Algan 2015). Sharpened by the rational expectations 'revolution' and a 'new neoclassical synthesis' captured in dynamic-stochastic general equilibrium models, macroeconomics declared itself virtually complete. Nobel-winner Robert Lucas, a key contributor to these technical developments, announced in his 2003 Presidential Address to the AEA that 'the central problem of depression prevention has been solved, for all practical purposes, and has in fact been solved for many decades' (Lucas 2003, p. 1). Four years later, itemizing mainstream economics' 'tremendous advances in knowledge' on the very eve of calamity, Harvard's Benjamin Friedman (2007, pp. 49–50) spoke to his colleagues of a 'well-earned complacency', since the 'past quarter-century has been about as good a run, at least in aggregate dimensions, as one is likely to get'.

Let us just say these declarations proved premature, and turn our attention to the unavoidably existential disciplinary implications that might follow a fall from such confident heights. Although it is simply not possible to do justice to the range of debates that have occupied economics since 2008, even if we narrow our focus to the subfields of macroeconomics, monetary or financial economics, one notable – and crucial – feature is the way in which the debate among economists has been almost entirely confined to the technical realm. The problem – whether it be leverage, risk, expectations, liquidity, employment or anything else you can think of – is always with the models or with policy (see Gorton and Metrick 2012; Lo 2012). Critique has thus focused on 'scientific' questions, like the so-called 'Gaussian copula' in the risk models of subprime asset-backed securities, which underplayed the likelihood of mass mortgage default, or on structural obstacles to policy shifts like 'labour market reform' (i.e., lower wages and reduced

social protection). The fix in either case is technical: better models, different policy, institutional tweaks (for example, Swagel 2015; Thimann 2015). This is true not only of the analyses of those fully committed to the status quo, but also of some of the most well-known internal 'critics' of economics' methods and ways of knowing (Rodrik 2015). Which is to say, as Rick Wolff (2009, p. 3) put it, for the vast majority of economists, the current problem *in* capitalism is not a problem *of* capitalism.

This is in no way to suggest technical questions are trivial or pedantic. For example, another, arguably much weightier, 'technical' question arose in the furore around econometric estimations of sustainable levels of sovereign debt (note that the very possibility of a furore over econometric modelling is arguably a function of the crisis: the controversy reached the op-ed pages of the *New York Times* and the *Financial Times* and was closely covered by the *New Yorker*). In a series of contributions beginning in 2009, influential orthodox economists Carmen Reinhart and Kenneth Rogoff turned their attention to public debt levels in an effort to understand the precarious situation of many states' finances following the meltdown and the ensuing banking crises. Their 2010 paper 'Growth in a Time of Debt' (Reinhart and Rogoff 2010) concluded that countries with public debt levels exceeding 90 per cent of annual gross domestic product (GDP) were prone to substantially lower growth than countries carrying debt below the 90 per cent threshold.

While Reinhart and Rogoff's research is of course not solely responsible for the imposition of austerity upon many polities since the beginning of the crisis, their energetic promotion of the paper and its austere implications definitely helped it along. In the Greek and Spanish debt crises, for example, it was a key piece of evidence for those forces insisting on strangling public finances, imposing crushing levels of taxation on the working and middle classes, and reducing or rescinding promised social support. That the stakes in such claims are not small is proof that 'technical' concerns are not necessarily minor. Indeed, it was no minor matter when Thomas Herndon and colleagues performed a 'critical replication' of the Reinhart–Rogoff analysis in 2014, uncovering errors and selective data exclusion in the original which completely biased the results, and showed there was no such thing as the 90 per cent debt-to-GDP threshold (Herndon, Ash and Pollin 2014). If the Troïka (the European Commission, the European Central Bank and the International Monetary Fund) had acknowledged that Reinhart and Rogoff's model, crucial to their austerity programme (Kumar and Woo 2010; Gongloff 2013), was founded in the same common sense that endorsed the dynamics that led to the financial collapse, or at least been willing to consider this alternative economic analysis, things would arguably look very different in southern Europe today (Chick and Dow 2012; Stiglitz 2013b).

The most common alternative economic analysis in the post-Lehman era, on which Herndon et al. and many other economists have been working, is best described as loosely Keynesian. The resurrection of Keynes and the explosion of Keynesian enthusiasm almost immediately upon the onset of financial chaos in 2007–2008 was firmly grounded in a scathing critique of mainstream economics (Backhouse and Bateman 2011; Eatwell and Milgate 2011; Skidelsky 2009; Taylor 2010; Temin and Vines 2014). While the uses of the term 'Keynesian' in the discipline of economics are quite varied, and often at odds with the 'welfare state' associations shared by most non-economists, at its broadest it describes analyses based on two fundamental axioms concerning 'actually existing' modern economies: first, there is no reason to expect economic activity to lead 'naturally' to full employment; and second, insuperable uncertainty about the future always shapes the present (Mann 2017; cf. Dymski, this volume). Both of these conditions are dismissed a priori by the orthodox economics to which Reinhart and Rogoff cling. That orthodoxy begins from the assumption that full employment equilibrium is 'free' markets' inevitable *telos*, and works on the basis of 'rational expectations', which is to say that economic actors are modelled as if they enjoyed what one might call adaptive omniscience. According to the theory of rational expectations, nothing is unexpected; even surprise is unsurprising: when Queen Elizabeth II (among others) asked during a visit to the London School of Economics why economists had failed to anticipate the economic wreckage, Lucas responded (in a comment in the *Economist*) that economics predicts that we cannot predict such events (Kay 2011).

The Keynesian revivalists are a relatively diverse bunch. They range from social democratic 'post-Keynesians' like Herndon, Ash and Pollin (2014) through pretty-close-to-orthodox 'New Keynesian' thought-leaders like Paul Krugman (2012) and Joseph Stiglitz (2010), to former champions of neoliberal deregulation like Richard Posner (2009) and the *Financial Times*' Martin Wolf (Wolf 2008a; Wolf 2008b). All generally agree on the most important lesson economists should take from the crisis: that coordinated public authorities need to keep a much closer eye and hand on the level of risk and volatility in the economy (and be ready to jump in to stabilize quickly and comprehensively) because, contrary to the assumptions of the neoclassical rational expectations 'revolutionaries' and their models, the future is not well-characterized by a series of calculable risk probabilities, but rather by the fundamental, qualitative uncertainty that Frank Knight (1921) famously distinguished from risk. When banks stopped lending in the 'credit crunch', or when bond markets would not touch Greek debt during the Eurozone's 'sovereign debt crisis', it was because the only thing that might give them confidence – state

and multilateral commitment to a stable future – was not forthcoming (DeLong and Summers 2012).

Even though Keynes' name was only briefly a commonplace – overwhelmed, some say, by the restoration of orthodox neoclassicism by 2011 – these broadly Keynesian ideas in fact had an enormous impact, if not in the programmatic and sustained manner some Keynesians called for (Stiglitz 2013a). For instance, the increasingly common phenomenon of negative interest rates (Sandbu 2016) and quantitative easing across Europe and the US (Palley 2011) are both premised on Keynesian thinking (even though they represent alternative approaches to the same problem, i.e., lack of investment demand). Even if the fiscal support system that many (unlike Keynes himself) associate with Keynesianism has not been reconstructed, macroeconomics and macro policy have nonetheless been deeply informed by Keynesian economists' diagnosis of the crisis. Whether this diagnosis enables states and elites to avoid similar collapses in the future or not, it is clear that many economists have come to embrace the Keynesian wisdom that we have very little idea what lies ahead, and things will not look after themselves, or certainly not soon enough.

This broadly 'Keynesian' realm is really an overlapping transition zone between the realm of mainstream economics and that of heterodox and radical economics and political economy, and economic geography and sociology. Indeed, outside the work of dissenting economists who, in the tradition of Hyman Minsky or Nicolas Kaldor, rely on mainstream methods and concepts but turn them to oppositional effect (for example, Seccareccia and Lavoie 2015; Taylor 2010), it is often difficult to identify any specifically disciplinary differences in this group of scholarly analyses of the crisis: economic geography can be indistinguishable from radical political economy (Harvey 2014) for example, or economic sociology (Krippner 2011) can frequently pass for post-Keynesian political economy (Schmidt 2009). What differences persist regarding the crisis lie less in the explanation of what went wrong than in the account of longer-term political-economic and social transformation in which the crisis is situated.

The range of such differences is usefully captured in the diverse reactions to what is by far the best-known scholarly product of the crisis, Thomas Piketty's *Capital in the Twenty-First Century* (Piketty 2014). While Piketty's argument is not focused specifically on the crisis-as-event, but rather on capitalism's instability because of inherently disequalizing forces (as described by Piketty's now famous inequality, $r > g$, i.e., return on capital generally exceeds the growth rate, so the 'haves' surge ahead as the 'have-nots' fall further and further behind), *Capital in the Twenty-First Century* is in many ways economics' crisis-book par excellence for the crisis world. It was motivated by, and appeared in, a

post-Lehman world obsessed with the causes and consequences of dynamics the crisis seemed to illuminate so clearly – financialization and seemingly absurd levels of finance-driven inequality, stagnating incomes and credit-based consumption, and the retreat of the state into deregulatory irresponsibility. However well written, it is safe to say that a massive tome sprinkled with graphs of economic growth rates would not have been a best-seller without the financial crisis. Its implicit moral economy, focused on the unequal (or even unearned) distribution of rewards, resonated with popular debates concerning the responsibility for the crisis and its social costs.

An eminent mainstream (if politically progressive) economist, Piketty understood *Capital in the Twenty-First Century* as a contribution to the debate in his discipline. And certainly it is; the book attracted extraordinary attention from economists, and in the process lit up the divide between Keynesians (of all stripes), who mostly celebrated it (Krugman 2014; Summers 2014), and the orthodox faithful, who denounced its conclusions, methods, data and so on (e.g., Mankiw 2015, or the dismissive reviews in the ultra-free-marketeering *Journal of Political Economy* (Blume and Durlauf 2015; Krusell and Smith 2015)). But the non-mathematical framing of the book, its historical sweep, and the macrosocial scale of its focus meant that it was also embraced enthusiastically if not uncritically among non-economists inside and outside the academy. In fact, it exemplifies a burgeoning trend in non-economists' analyses of the crises that have played out since 2007–2008: a turn from a fascination with the 'triggers' – the tools and techniques of modern finance like special purpose vehicles, or mark-to-model valuations – to an increasingly longer-run, structural or even 'epochal' understanding of the crisis (Postone 2012; Adjoran 2014). It is almost as if the feeling of wandering the corridors of the palace after the revolution, marvelling at the deceit and luxury now visible for all to see – epitomized by the films *Inside Job* and *The Big Short* and so common among critics of finance after the collapse of Lehman – has diminished as time has passed, and the *longue durée* of capitalist and (neo)liberal social relations is attracting widespread attention again (Fraser 2013; Panitch and Gindin 2013; Moore 2015; Christophers 2016b). Indeed, as discussed in the opening paragraphs, we should not be surprised that some are asking what exactly is in crisis, and how 'crisis' became so central to our conception of history (Roitman 2014; Fraser 2015).

This development has had the interesting effect of linking the general critical trend to the radical and Marxian literature to an unprecedented degree. As one might expect, Marxists were distinctive in the early moments of the crisis for their welcome effort to look past the

machinations of financial wizardry to understand the subprime crisis and credit crunch as the latest form of capitalism's ineradicable crisis tendency (Foster and Magdoff 2009; Duménil and Lévy 2011; McNally 2001). They pointed to the contradictions built into credit-based neoliberal political economies and the squeeze on workers in the wake of their relative successes during the post-World War II 'Long Boom', and positioned the present moment as only one more instantiation of a process at work for two centuries. In its broad outlines, this analysis has gained a great deal of traction across the social sciences; 'critical' scholars who would never have considered themselves Marxists have nonetheless embraced the accounts of committed Marxists like David Harvey (2010) and Leo Panitch and Sam Gindin (2013).

Yet, as compelling as many of these analyses are, it must be acknowledged they are not enough on their own. Since capitalism is crisis-producing, even increasingly so – an argument that can no longer be attributed solely to Marxists and Keynesians (Mann 2015), but rather now seems simple common sense – these analyses are of course essential. At the same time we must recognize that the specificity of crisis as a geographical and historical process – what is qualitatively and quantitatively particular to these times and these many places – can get lost or forgotten if its 'empirics' are reduced to merely the latest variation on a universal theme, whether it be accumulation and exploitative overaccumulation or $r>g$.

Even if such accounts of inevitable structural contradiction are perfectly accurate, they often tend to diminish or leave underexamined no small part of what matters: the widely varied and often harrowing experiences and implications of this particular complex of crises for the many different and overlapping groups that make up contemporary societies. Moreover, while efforts to concretize crisis 'in the world' by emphasizing histories of class struggle or examining specific national or international 'contexts' – of which there exists a long and laudable tradition (e.g., O'Connor 1973; Poulantzas 1976; Aglietta 1979; Bell 1982; Negri 1984; Harvey 2005; Marazzi 2010) – can contribute much to an understanding of the ways that political-economic crisis plays out, these more empirically or institutionally-founded accounts nonetheless generally leave aside the granular particulars of life in crisis. Some of these dynamics are touched upon by the 'cultural political economy' literature (Sum and Jessop 2013), but there the emphasis largely remains on the ways that political economy is 'culturalized' or culturally inflected. This is certainly a crucial insight, but what it does not illuminate are the ways in which, even within a given community or social group, the 'experience' of crisis can vary enormously even on relatively common 'cultural' terrain. The vastly differentiated impacts of mass home foreclosure

across lines of race, class and gender (Wyly et al. 2009; Wyly and Ponder 2011), the grossly uneven distribution of the burdens of austerity or so-called 'fiscal consolidation' (Glasmaier and Lee-Chuvala 2011; Palaskas et al. 2015), or the specifics of national and regional institutions (Fishman 2012; Quaglia and Royo 2015) are not just superstructural details, but (as Marx might have put it) what crisis 'in the concrete' actually looks like.

In this respect, as the chapters that follow demonstrate, the financial crises since 2007–2008 have motivated an enormous diversity of exciting, insightful and innovative scholarship. The disciplinary, geographic and empirical range of this research defies summary, but arguably its most significant general characteristic is the analytical centrality of debt and credit. Across the social sciences, even in work that is not explicitly oriented to the financial crisis per se, studies of finance as a social relation and financialization as a mode of modern life have exploded.

In the early post-Lehman moments, many of these accounts were motivated by a journalistic drive to expose the 'greed' and impunity of those involved (Madrick 2012). But as time has passed, this understandable urge to name the guilty has receded as the 'greed' at the heart of banking, for example, is understood less and less as a function of bad individuals, and more as a product of the social relations of financialized capitalism (Lapavitsas et al. 2012; Brown 2015; Lazzarato 2015). As a result, the debtor–creditor relation appears in much greater complexity, constituted as it is not only in predatory theft and misrepresentation, but also in consensual, historically-embedded, and irreducibly social relations at multiple temporal and spatial scales (Chu 2010; Graeber 2011; Kear 2013; James 2015). In other words, scholars have increasingly come to see the crises not simply as the result of individual opportunism which produced unlucky or accidental outcomes in an otherwise stable institutional setting, but of systemic or quasi-systemic processes that are nonetheless irreducibly contingent in their historical and geographical specificity, caught up in times and spaces that are always but never only political-economic.

Meanwhile, if scholars have had the relative luxury of grappling with the financial crisis in the abstract and at their leisure, governments and their various regulatory agencies have clearly not been so fortunate. Their responses have been more urgent and, of course, significantly more material. And while sometimes explicitly guided by scholarly interpretations – as with the uses and abuses of Reinhart and Rogoff's (2010) research – their inspiration has often been considerably harder to discern. It is to the state's response that we now turn.

The Crisis, the State and Regulation: 'What have I done?'

Amidst the period of peak anxiety about the fate of the financial system during the global financial crisis of 2007–2009, it is interesting to speculate how many central bankers and finance ministers experienced what might be described as a 'Lieutenant Colonel Nicholson moment'. Nicholson is a character played by Alec Guinness in the 1957 motion picture, *The Bridge on the River Kwai* (Lean 1957), who commands British prisoners of war put to work constructing a railway bridge in Burma for their Japanese captors. Seeing the completion of the bridge as a way of building morale among his troops, Nicholson not only encourages his men to do a good job but intervenes to improve its location and design. However, given the military significance of the railway, Allied commandos are dispatched to destroy the bridge – an intervention that in his pride Nicholson initially attempts to thwart. Almost too late, he recognizes his misplaced allegiances with the tragic question 'What have I done?': his attempt to protect the bridge is an act of collaboration. Injured in a melee between the saboteurs and Japanese soldiers, Nicholson falls on an explosive detonator, destroying himself and his bridge.

While there have been no recorded acts of self-immolation by politicians, regulators or central bankers in the wake of the financial crisis, there is some evidence to suggest that at least some of those involved in the regulation of money and finance in the period leading up to the crisis belatedly realized that they, like Nicholson, may have been labouring under a fatal misapprehension of their role and purpose. Through acts of commission and omission they helped build a bridge that intensified the connections between the high risk, high stakes world of global finance and the everyday lives of millions of people (cf. Pryke and Allen 2000). Andrew Haldane, now chief economist of the Bank of England, has insisted that the crisis was the product of nothing less than the 'failure of an entire system of financial sector governance' (Haldane 2012, p. 21).

Seduced by the 'Great Moderation', a long period of global economic growth combined with low inflation in the global economy from the mid-1990s onwards, many elites convinced themselves this benign macroeconomic outcome was a result of submitting to the power and *ex post* organizing logic of markets. The neoliberal prophets who had long advocated this form of market organization had surely been proved right, and all was set fair now the former belief that the state could intervene to organize markets *ex ante* was recognized as both mistaken and futile. 'Meddling' would only create distortions and inefficiencies in the

more beneficent, emergent 'spontaneous order' (Mirowski 2013; Peck 2010; Sayer 1995).

When the financial crisis broke, its unprecedented scale and scope soon became evident. Although it is impossible to know the precise number that would indicate the scale of economic loss, as Berry et al. (2016, p. 16) point out, even the lower limits are extraordinarily high for a financial crisis:

> Estimates of the GDP loss as a result of the crisis and ensuing recession, fuelled in part by the crunch in bank lending to productive firms, range from £1.8 trillion and £7.4 trillion (depending on how permanent the effects of the crisis were). New research by the Bank for International Settlements (BIS) suggests the figure is more likely to be higher than lower and that credit booms and busts inflict long-term damage on economies: 'First, credit booms tend to undermine productivity growth … Second, the impact … is much larger if a crisis follows.' Andrew Haldane has pointed out that the total loss of income and output caused by the banking crisis was equivalent to a World War.

Losses of this magnitude challenged the faith of some of the most devout believers in the self-organizing capacity of markets, including the high priest of central bankers, ex-Federal Reserve Chair Alan Greenspan. Long a vociferous advocate of neoliberal approaches to economic management, Greenspan had his own Nicholson moment in 2008 when, observing the damage to the financial system he had overseen for so long, he admitted he had 'discovered a flaw in the model that I perceived is the critical functioning structure that defines how the world works' (cited in Mann 2010, p. 601). Greenspan's ontological crisis was more practically observed under his successor, Ben Bernanke, who embraced neoliberal apostasy in the decision 'to block market verdicts on which banks should fail' (Mirowski 2014, p. 85), bailing out one failing institution after another in a process repeated across other leading financial economies.

The relationship between regulators and the regulated – that is, between the state and its agencies on the one hand, and financial institutions and their employees and customers on the other – is critical to understanding how financial systems evolve through time. The process of financial innovation has been described as 'bricolage' (Engelen et al. 2010), a process of 'creative tinkering' (MacKenzie 2003, p. 831) by financial institutions seeking ways around restrictions and limitations. As a result, financial innovation 'is contingent, resourceful and context-dependent' (Engelen et al. 2010, p. 54), ensuring the relationship between financial institutions and regulators is constantly in motion. This relationship is critical given the key role that money and finance play in the

economy, and how financial instability and crises have serious implications for the integrity of states and their systems of government. Indeed, contemporary financial markets evolve through a continuous process of reregulation, adapting in response to the evolution of and innovation in markets and the disposition of central banks, regulators and states towards risk and uncertainty at different conjunctures.

At times, and particularly in the wake of major financial crises, the relationship between regulators and regulated is adversarial, the state imposing new rules and restrictions on financial actors, seeking to tame money and finance and bring them to the service of broader societal, economic and political strategic goals. Perhaps the best example of this is the period following the financial crisis of the late 1920s and the depression of the 1930s, which saw the US embark upon a wholesale redrafting of financial regulation to 'put finance in its place' (French and Leyshon 2012). In an attempt to prevent financial contagion in the event of a crisis, regulators constructed clear demarcations between different financial markets, lines which financial institutions could not cross. These 'regulatory innovations' included the Glass–Steagall provisions of the US Banking Act of 1933, which institutionally separated investment and retail banking operations. This was followed later by the development of the Bretton Woods system, which sought to impose similar regulatory capacity and oversight at the level of the international financial system in order to facilitate post-war recovery.

However, the relationship between regulators and the regulated can also be more collaborative and tactical, as politicians become convinced of the benefits of unshackled financial services, which might accrue in the form of contributions to economic output and growth, overseas earnings and employment and tax income of various kinds (Lee et al. 2009). This cooperative relationship between the state and financial markets has dominated since at least the early 1980s, facilitated at least partly by the active and influential lobbying of financial services firms (Engelen et al. 2011), and their ability to offer lucrative careers to politicians and regulators beyond government. Indeed, Johnson and Kwak (2010, p. 6) describe the effective capture of US government by financial interests, with 'profits and bonuses in the financial sector … transmuted into political power through campaign contributions and the attraction of the revolving door'. The close links between the US Treasury Department and powerful financial interests were also identified as an influence on the heavily skewed disbursement of funds in the interests of banks by the Special Investigator General of the Troubled Asset Relief Program (TARP) that administered the US bailouts (Barofsky 2012), contrasting with TARP's far less diligently policed aim to 'preserve homeownership'. Nor is the revolving door between government and finance limited to the US.

For example, Tony Blair, Gordon Brown and Alistair Darling, accounting between them for every UK prime minister and/or chancellor of the exchequer in the 1997–2010 Labour government, were all offered lucrative post-government positions with leading financial institutions, and at the time of writing drew salaries from JP Morgan, Pimco and Morgan Stanley respectively (Pickard 2016). George Osborne, who succeeded Darling as chancellor following the 2010 general election, but who lost his job in the post-Brexit rise of Theresa May to prime minster, joined this exclusive club by subsequently accepting a job as an adviser to Blackrock, the world's largest fund manager (Treanor and Mason, 2017). For this reason the 'interests of the City of London' always figure strongly in UK debates about international treaties and accords, particularly with the European Union, despite the fact that any net economic gain from London's financial district needs to be set against the risk to the public finances from bailouts and a skewing of national economic development towards financial sector interests (Berry et al. 2016).

This is what made the result of the British referendum on the UK's membership in the European Union so shocking to the British banking industry, because the outcome of the vote to leave put membership of the single market in doubt. Since 1992, 'passporting' agreements have enabled financial services firms licensed in one EU member state to operate in any other, helping competitive and innovative UK firms gain market share across Europe. However, when the cost of the public bailout of the financial services industry was passed on to other parts of the British economy and society through a strategy of austerity realized in welfare cuts and reductions in public investment, it had particularly regressive impacts in those parts of the UK that missed out on the post-crisis economic 'recovery' (Gardiner et al. 2013). Many attribute the previously unimaginable election of Donald Trump to the US presidency in November 2016 to a similar sense of abandonment and alienation in so-called 'left-behind' sectors and places (Goodwin and Heath 2016; Coontz 2016; Stein 2016; Swain 2016).

Prior to these unprecedented political developments, the tight relationship between financial and government elites ensured the global financial crisis did not precipitate a return to the more restrictive regulatory mechanisms advocated by Keynesian economists – mechanisms like those, for example, that Keynes himself helped to introduce to the international policy arena during the creation of Bretton Woods. One reason for this, according to Helleiner (Helleiner 2010; Helleiner and Pagliari 2009), is simply that not enough time has passed. Writing in the immediate aftermath of the crisis, Helleiner argued it was inappropriate to compare the post-global financial crisis response to Bretton Woods because the latter had a long gestation during the economic and

political turmoil of the 1930s and 1940s, and there were years of preparation for the 1944 meeting in New Hampshire. The various G20 meetings called in the immediate aftermath of the more recent crisis were too impromptu and too focused on crisis management to permit proper deliberation about long-term structural reform. Moreover, in addition to time, there is also the matter of context. As a result of markedly 'different political circumstances' between the two periods, 'those hoping for a "Bretton Woods moment" in the wake of the 2007–2008 crisis have had unrealistic expectations' (Helleiner 2010, p. 622):

> The Bretton Woods 'moment' took place well over a decade after the momentous financial crises of the early 1930s. The delay was not just a product of the unique historical circumstances of the era. It took time for old ideas and practices to lose their legitimacy and for new ones to emerge as models for the future. Even the constitutive phase was a time consuming process involving complicated and painstaking preparations over several years (and this despite the favourable circumstances mentioned earlier of concentrated power, shared social purpose and wartime conditions). (ibid., 624–5)

More than half a decade after Helleiner wrote these words, rather than 'old ideas and practices losing their legitimacy', there remains little appetite for serious debate about either the central role that money and finance play in contemporary economy and society, or the existential threat the existing financial system poses through the looming threat of another debilitating crisis. Rather, on both sides of the Atlantic, there seems to have been a turn to another political trope of the 1930s, namely casting around for scapegoats to blame for economic austerity, usually minority and immigrant populations. But in the financial sphere, the predominant approach is a continuation of the mode of regulation that has prevailed since the 1980s (Christophers 2016a): a combination of permissiveness in terms of market behaviour that meekly attempts to ensure solvency through checks on the capitalization of the balance sheets of banks. The initial trigger for this latter form of supervision was the so-called Less Developed Countries debt crisis of 1982, which led to the introduction of the Bank for International Settlements' (BIS) first Basel Accord on capital adequacy ratios. The Accord required banks to set aside eight per cent of the value of outstanding loans as provision against default. Yet, at the same time, wholesale and retail financial markets were being reregulated across North America, Europe and Asia to increase competition, with the purpose of delivering greater efficiencies, profitability and consumer 'freedom'. This included, in 1999, the final elimination of the Glass–Steagall provisions, which had been gradually eroded since the 1960s but were finally swept away when the Financial

Modernization Act removed the regulatory firewall between investment and retail banking markets, part of a wider freeing up of financial rules during the 1990s (Dymski 1999).

This double movement – seeking to control balance sheet risk on the one hand, by focusing attention on capital adequacy, while also reregulating existing financial markets and permitting new ones on the other – also impacted the orientation of financial business models, which became much more focused on fee income than traditional bank intermediation (Erturk and Solari 2007). As we discuss in more detail in the next section, fee income had the advantage, inter alia, of generating profits without having to set aside capital, while the process of securitization allowed banks and other lenders to move debt assets off their books by selling investors rights to the repayment income (MacDonald 1996a, 1996b; Leyshon and Thrift 2007; Wainwright 2009, 2012).

Of course, in retrospect, we can see that it was the build-up of many such layers of ever more complex and interlinked securitized debt that helped trigger the financial crisis. This occurred despite the continuing efforts to 'de-risk' the financial system by updating the BIS capital adequacy framework (Basel II), which from 2004 sought to introduce more sophisticated and nuanced risk control by making capital adequacy requirements more flexible and responsive to financial institutions' internal risk control models. In other words, the greater the Value at Risk (VaR) to which a bank was exposed, the more capital the bank needed to hold for security and solvency. Clearly, this was unsuccessful, given the size of the bailouts required following the crisis.

In the wake of the crisis, while there have been regulatory reforms that work towards reintroducing some of the structural regulations that formerly separated different kinds of financial markets, they are pale imitations of those of the 1930s and 1940s (Langley 2015). For example, the Financial Services (Banking Reform) Bill in the UK, the Liikanen Review in the EU, and the Dodd–Frank Wall Street Reform and Consumer Protection Act in the US (if it survives the Trump administration plans to repeal it) all seek to pull apart more speculative investment and securities business from retail banking's more mainstream and quotidian activities (Erturk 2016). But they stop well short of the structural and institutional separation of investment and retail banking that was a feature of the US financial system for over fifty years. At the same time, the BIS has introduced Basel III, which 'aims to re-capitalise banks by improving the earlier Basel II framework by (i) a set of adjustments to the risk algorithm for loss absorbing capital, the minimum capital required against risk and the definition of what qualifies for capital and

(ii) introducing a new framework to measure and manage the liquidity risk that arises from pre-crisis over-reliance of banks on short-term volatile money market funds' (Erturk 2016, pp. 1–2).

These regulatory efforts to ring fence different parts of the banking system aim to ensure that in the event of another major financial crisis, banks will be saved by *bail-in* rather than bail-out; that is, regulators aim to avoid the moral hazard problems associated with 'too big to fail' by ensuring that the balance sheets of stricken banks are bolstered by their investors, and not by states and tax payers (Eichengreen and Rühl 2001). The 'just deserts' quality of this approach is appealing, but it is not unproblematic. For instance, Berry et al. (2016) are critical of the bail-in regulations because post-crisis attempts to separate wholesale and retail banking have not been comprehensive, so that the spread of problems from one area to the other in the event of a crisis remains highly likely. Moreover, such measures are almost certainly unlikely to provide the volumes of capital that will be required in the event of a very large and significant crisis. As Berry et al. (2016, p. 9) argue, 'if "bail-in bonds" are predominantly held by pension funds, insurance companies and other financial institutions, bank losses will still ultimately be borne by ordinary citizens', while 'if losses exceed the amount of equity and bail-in-able debt the losses will still have to be borne by someone – either depositors or the state. In both cases politicians may conclude that the costs to the wider economy are unacceptable and offer bail-out rather than bail-in.' Furthermore, compared to the early post-crisis years in both the UK and the US there has been a sea change in the prevailing attitude to banking regulation, with the focus moving back to classifying the banking sector as an economic boon rather than a burden, so that regulation has become more accommodating (Berry et al. 2016; Eichengreen 2015).

For Berry et al. (2016), the clearest signal of this accommodation within the UK economy was a statement by the Bank of England, in late 2015, that the 'post-crisis period' was over. This declaration was accompanied by 'a string of concessions to big banks' (p. 5). These concessions included:

> Changes to the bank levy which benefit large international banks such as HSBC at the expense of smaller challenger banks; the sacking of Martin Wheatley as Chief Executive of the Financial Conduct Authority (FCA), a move which has been followed by a number of inquiries and investigations being dropped; a watered-down set of proposals for implementing the ring fence between retail and investment banking, particularly in relation to economic links with the rest of the group; a disappointingly weak report from the Competition and Markets Authority, which rules out action to

> break up big banks and instead focuses on consumer switching behaviour; confirmation by the Bank of England that banks will not be asked to hold significantly more capital; imposing a time-limit on claims relating to mis-selling of payment protection insurance (PPI). (Berry et al. 2016, p. 5)

Along similar lines, Erturk (2016) argues that efforts to control default risk through some form of structural regulation involving improved capital adequacy requirements would have been insufficient on their own in any case. Driven by the demand for returns on capital to satisfy investors, yet feeling constrained by capital adequacy requirements, financial institutions have become ever more resourceful in the search for profits. Erturk draws attention to two 'post-global financial crisis' crises in markets beyond the focus of recent regulatory reform, but where the chasing of returns in ostensibly mundane markets – cash management and retail insurance – led to significant losses for leading US and UK banks (Erturk 2016). Here the risks go the other way, as it is retail market banking – in the form of poor cash management and compensation payments for mis-sold payment protection insurance – and not investment banking that is the source of crisis. A better solution, for Erturk (2016, p. 11), is to make retail banking closer to a utility which 'needs to be ring-fenced from the unrealistic return on equity expectations of stock markets'.

Erturk's analysis is notable for paying close attention to a subject often curiously absent or underplayed in discussion of post-crisis bank regulation: the actual details of banks' business models and of how these are (or are not) changing in the wake of the crisis and the governmental-regulatory response. In the context of the wider financial sector (i.e., beyond the big banks at the heart of the crisis), these changes are the focus of the third and final part of our critical post-crisis stock taking.

The Crisis and the Financial Sector: 'What shall we do now?'

Where the financial sectors (US and European) most immediately implicated in the financial crisis are concerned, it has frequently been said in the years since the heat of the crisis that little has fundamentally changed – lessons have not been learned, practices have not been transformed – but on close inspection it is clear this is simply not the case. To be sure, both the European and US financial sectors have strenuously resisted significant components of states' and regulators' reform agendas, often with great success; equally certainly, those agendas have been weaker than many observers had hoped. Consequently, changes

undertaken by financial institutions have undoubtedly been *less* material than they might otherwise have been. Nevertheless, the financial sector *has* responded to the crisis with change, and not only under political-regulatory duress. Institutions, practices and markets now all look markedly different than they did. In the following pages we offer a brief critical assessment of some of the most striking and significant responses and transformations. We do so through the lens of an attribute that has been much invoked where finance, crisis and reform are in question: the property of *risk*. We suggest that the financial sector in general – and major transnational banks in particular – have responded to the crisis by way of substantial strategic reorientation *to* risk, resulting in considerable reconfiguration of overall financial-risk landscapes.

Such reorientation and reconfiguration have resulted in part from the 'derisking' obliged by key regulatory developments, of which Basel III is probably the most important. Although its implementation has varied geographically and remains far from complete, its three central, closely-connected principles – touched upon in the previous section – concern capital adequacy (the amount of equity capital banks must hold against assets weighted according to their perceived riskiness, so-called 'risk-weighted assets'), leverage (equity-capital adequacy as simply measured against total assets), and liquidity (the liquid assets banks must hold to ensure they are able to meet short-term liabilities *and* the stable long-term borrowings they need in order to fund illiquid, long-term assets).

Banks have clearly reacted, although often they have done so more in anticipation of these new regulatory requirements than in response to their actual implementation, which has been widely delayed. Before the crisis, return on equity (ROE) had been financial institutions' and their executives' critical benchmark, the metric they targeted and according to which many of the latter were remunerated: leverage inevitably, and famously, rocketed since operating on wafer-thin equity-capital bases boosted returns. But the new capital adequacy requirements and long-term liquidity provisions encourage both a bolstering of equity and a simultaneous pruning of illiquid, long-term assets, which is to say those assets considered most risky (and previously considered essential to high ROE): things like loans to small businesses or subprime mortgages. A new mantra has therefore increasingly taken ROE's place: return on risk-weighted assets (RWA).

The upshot has been a widespread reconfiguration of bank balance sheets. Whereas before the crisis banks sought to shrink equity through share buybacks and the like, they have since focused on shrinking RWA and RWA-intensive business activities, with bond investment-and-trading a prime example. The Swiss bank UBS has emerged as the poster child of this new strategic paradigm, shedding traditionally-core divisions that

fall foul of Basel III strictures (Noonan 2015). Meanwhile, and partly as a corollary, interest-bearing deposits have typically grown their share on both the assets and liabilities side of bank balance sheets (for example, Bailey, Bekker and Holmes 2015, p. 3–4). As assets (i.e., cash deposited *by* the bank), they help provide the short-term liquidity demanded by Basel III. As liabilities (cash deposited *with* the bank), they help provide the stable funding source also demanded by Basel III, unlike the shorter-term liabilities – such as the unsecured 'commercial paper' issued by corporations – they have partially supplanted.

Have such developments made banks and the financial system stronger and safer? The jury remains out, and with good reason, for there are meaningful grounds for caution in both regards. Where banks themselves are concerned, plenty of observers believe the aforementioned regulations have not gone nearly far enough in forcing balance sheet transformation and, therefore, neither have the banks (for example, Admati and Hellwig 2013). For most systemically-important banks, the ratio of liquid assets to total assets has increased only relatively modestly – for example, from 11 to 15 per cent for US banks and from 20 to 23 per cent for UK banks between 2009 and 2014 (Haldane 2015, p. 6) – and increases in ratios of equity capital to total assets, risk-weighted or otherwise, have tended to be equally modest (for example, Team 2016). The axiom that equity is more expensive than debt continues to hold sway.

The safety of the financial system more broadly is of course a much wider and even more complicated question. For one thing, there is the problem of the types of financial institutions that step into the breach when banks, for regulatory reasons, are encouraged to step back and vacate the market – given that the activities from which banks withdraw do not usually simply disappear. Kneejerk criticism of banks has of course been something of a default 'left' position since the crisis, and deservedly so, but such criticism is often problematically narrow. Too few commentators have asked what and who takes the place of the much-maligned banks. Could it sometimes be a case of better-the-devil-you-know?

Consider some implications of the capital adequacy rules. If banks can improve capital ratios by raising more equity, they can also do so simply by reducing lending and investment – and thus assets accrued – in areas deemed risky. Since the crisis, this is exactly what many have done. Among the assets accorded high risk weightings by regulators, and thus requiring disproportionate (i.e., expensive) equity cushions, are long-term loans to business. Hence it is no surprise that banks have cut back on such credit, potentially threatening economic growth prospects in an already precarious macroeconomic environment of feeble recovery from recession. The *Economist* (2014) reported that 'bank lending to

businesses in America is still 6% below its 2008 high. In the euro zone, where it peaked in 2009, it has declined by 11%. In Britain it has plummeted by almost 30%.' But do such non-bank businesses simply cease attempting to borrow? Clearly not. They seek other sources, and the question of financial-system safety – not to mention customer protection – depends in part on what alternatives exist.

In the United Kingdom, as banks have withdrawn from lending to non-bank businesses, the latter have turned to two main alternative sources (ibid.). One is 'shadow banks' (non-bank financial intermediaries), which can lend more cheaply because they are not deemed banks nor regulated as such. Asset management companies have been prominent in this regard, and it is notable in a wider context that since the crisis the world's largest asset managers have become bigger, in terms of assets, than the world's largest banks (ibid.), prompting observers to wonder: 'The age of asset management?' (Haldane 2014). The second alternative source has been the bond markets – and again, not just in the United Kingdom: global corporate bond-issuance doubled between 2007 and 2012, to $1.7 trillion (*Economist* 2014). The combination of these two alternative sources – asset managers and bond markets – is writ large in the post-crisis growth of managed *bond funds*, the size of such funds in the United States, for example, more than doubling between 2009 and 2015, from $1.5 to $3.5 trillion (Haldane 2015, p. 6).

While we return to the significance of these bond funds in due course, here it bears asking what it might mean for financial-systemic safety as they supplement or even supplant banks as corporate funding sources in the post-crisis era. With cash and near-cash interest rates at historic lows, asset managers in search of yield have increasingly been investing in less liquid, more risky assets (i.e., precisely those that banks are abandoning). Haldane (2014, p. 3) reports that since 2008 high-yield bond funds have grown at an annual rate of around 40 per cent, 'outpacing growth in the global mutual fund industry by a factor of four.' Similarly, with the recent reemergence in the United Kingdom of the securitization of subprime mortgages as 'a major driver of the UK's overall securitisation market', it is notable that the main originators of these mortgages are not now the clearing banks but 'a new generation of lenders filling a void vacated by high street institutions' (Hale 2015). In short, there would appear to still be a great deal of risky investment taking place, only not by the banks. Does this mean we now have a safer financial system? It seems unlikely.

Furthermore, even if banks have improved their liquidity profiles since the crisis, this does not mean *markets* are more liquid (liquid markets being those facilitating rapid sale of an asset with little or no loss in its value). Bond and derivative markets have emerged as a particular source

of concern in the post-crisis years. These primarily 'over-the-counter' markets are less formal, rules-based, centralized and transparent than 'exchange-based' (e.g., equity) markets. In particular, they rely heavily on the risk-taking, market-making capacity – which is to say, the liquidity provision – of major wholesale and investment banks; they rely on such banks standing ever-ready to take a buy or sell counter-position (profiting on the spread between the two). Since 2008, however, such banks have substantially withdrawn market-making capacity from these markets and liquidity has dried up, to the tune of as much as 35 per cent (measured in terms of market volumes as a percentage of amounts outstanding) according to some estimates (Redburn Research 2013, pp. 12–13).

This is clearly a function at least in part of regulatory changes: not only are banks now encouraged not to hold illiquid assets, especially long-dated bonds, under Basel III – and are hence less willing to do so – but Dodd–Frank's prohibition of proprietary trading at Federal Deposit Insurance Corporation-insured banks also steers them away from such assets. Indeed, in late 2015, the net inventory of corporate bonds held by the US Federal Reserve's twenty-two primary dealers (those banks permitted to trade directly with the Fed) fell below zero for the first time (Eddings 2015). Perhaps this is a good thing? Again, it seems unlikely. For all their sins, in the face of steep bond-market price declines the banks in question could in the past generally be relied upon to step in as dealers/buyers of last resort. Today, they are much more reluctant to do so, and with new 'substitute' capital intermediaries such as asset managers showing no signs of playing a similar role, it is left to the Fed to act as last-resort dealer (cf. Mehrling 2011).

Of course, banks' post-crisis wariness of risky asset classes is by no means entirely a function of regulation. Having been through the wringer with the subprime crisis – often finding that the risk they *thought* they had transferred to investors through securitization in fact remained on their balance sheets (Acharya, Schnabl and Suarez 2013) – banks are not keen to go through the process again. Once bitten, twice shy. Indeed, in case one were inclined to believe that Basel III and Dodd–Frank have served to frustrate banks chomping at the bit of risk assumption, banks' response to those aspects of the latter regulation that would have required them to bear substantive risk should give pause. Dodd–Frank's initial 'credit risk retention' proposal stipulated that at least 5 per cent of the risk of mortgages and other loans should 'stay behind' with the loan issuer (typically, the bank) when such assets were pooled and securitized: the banks should be required to have skin in the game. But the banks baulked at even this relatively modest proposal, lobbied hard against it, and eventually won the day (Norris 2013; Ashton and Christophers 2016).

Furthermore, even before the financial crisis, major western banks were already moving *out* of activities requiring significant exposure to market and balance-sheet risk, instead prioritizing those involving much less proprietary risk assumption (Erturk and Solari 2007, pp. 375–8). Fee-earning activities such as mergers and acquisitions advisory, capital-raising, and prime brokerage were pushed to the fore. The post-crisis period has not seen a move back 'into' risk bearing, but rather a demonstrable continuation and deepening of this particular shift in banks' favoured 'value models' (Christophers 2015b, pp. 8–9; cf. Noonan 2015). This shift, we should be clear, is highly strategic, and is not only a result of post-crisis regulatory reform, even if the latter has tended to reinforce it.

Alongside and in addition to this active retreat from risk and the refusal to bear it when instructed to, perhaps more importantly still, the banks in question have plainly been active in the post-crisis period in transferring risk to others – customers, investors and other counterparties. Some instances of such transfer have of course been egregious. The scandals in the setting of benchmark rates (e.g., LIBOR) in both foreign exchange and credit markets, exposed and prosecuted by investigators in 2013 through 2015, were explicitly about risk and the concerted and often collusive attempt by traders to load that risk onto others while minimizing or even mitigating proprietary risk altogether (Ashton and Christophers 2015). These manipulations represent behaviours about as far from the heroic mythology of the financial markets – outsized, manly rewards for outsized, manly risks in the face of intense competitive pressure – as it is possible to imagine. It was, inter alia, these manipulations that the International Monetary Fund (IMF) chief Christine Lagarde had in mind in 2014 when lamenting that the financial sector 'has not changed fundamentally in a number of dimensions since the crisis' (cited in Monaghan 2014).

But, significantly, it is certainly not only banks that are implicated in the post-crisis redistribution of financial risk – it is also other types of financial intermediary. And such redistribution is not always egregious. Indeed, it seldom is, and critical scrutiny of less overt mechanisms of risk transfer is arguably even more important, precisely because of its lower visibility and the likelihood that it therefore goes unexamined. Let us revisit in this regard the abovementioned bond funds, which, as we have seen, represent funds that accept money from multiple end-investors and invest it in bonds or other debt securities (rather than in, say, equities). We noted earlier the striking post-crisis growth of such funds and their signal exposure to risky asset classes from which banks have sought to distance themselves, like long-term, often high-yield, corporate debt. What we did not identify, however, was how they mediate risk on the

liabilities side of the equation. Who is on the hook if things go awry, and what does it mean for system-wide stability?

This is an absolutely crucial issue. Asset managers that offer these funds are different *types* of intermediaries than banks, with markedly different risk exposures. 'Whereas a bank intermediates between savers and borrowers *by entering into separate transactions with each, with all the risk that entails*', explains the *Economist* (2014; emphasis added), the asset manager 'is merely a matchmaker, with no "skin in the game"'. In the specific case of today's UK bond funds, for example, end-investors give their money to their fund manager 'to lend to mid-sized British businesses. All the proceeds from the loans go to the investors, *who must also bear any losses*; [the manager] simply administers the portfolio of loans on their behalf and', naturally, 'charges them a fee' (ibid.). Unlike the bank, the manager does not bear risk; and thus in the post-crisis era not only, *pace* Haldane (2014, pp. 4–5), are managed funds 'increasingly being allocated into illiquid assets' (as we saw above), but also a 'progressively greater share of investment risk [is] being put back to end-investors, with commensurately less being borne by intermediaries and companies'.

So again, the question arises: what does this mean for post-crisis financial stability, safety and protection? The IMF (2015, p. 94) has recently had its say, arguing that 'the larger role of the asset management industry in intermediation has many benefits', particularly 'from a financial stability point of view'. How so? 'Banks are predominantly financed with short-term debt, exposing them to both solvency and liquidity risks. In contrast, most investment funds issue shares, and end investors bear all investment risk.' But of course, this is just as one-eyed as the same venerable institution's (in)famous celebration – in 2006, of all years – of securitization for helping 'make the banking and overall financial system more resilient' through 'the dispersion of credit risk by banks to a broader and more diverse group of investors' (IMF 2006, p. 51). In fact the parallels, at least to us, seem uncanny. As the altogether more astute Andrew Haldane (2014, p. 5), of the Bank of England, acknowledges, these post-crisis trends in 'the contractual structure of liabilities' have 'risk implications' not just for the financial system and its putative stability but also *specifically* for the end-investors that the IMF gaily sees 'bearing all' investment risk. 'A key question, here', Haldane (ibid.) correctly observes, 'is how household behaviour is likely to respond to bearing these additional risks, especially in situations of stress' (c.f. Berry et al. 2016). Haldane's answer – that it is likely to respond badly – is not very comforting.

One of the key insights of cultural-economy work on finance over the past decade or so, meanwhile, has been that the active transfer and redistribution (to others) of financial risk, epitomized by the asset management

industry, entails and relies upon the creation and enrolment of new risk-bearing subjects (Maurer 1999): subjects who, under conditions not of their own choosing, come to feel some combination of capability, compulsion and/or craving to embrace the risk inherent in financial products. These processes of subject-formation were, of course, much in evidence before the crisis, and indeed were arguably essential to its materialization (Langley 2007; Kear 2014); but they have only intensified in the years since, as finance capital seeks to extend and expand its accumulative ambit by adding, at economics' storied 'margins', new, previously-excluded financial subjects and thus new risk-bearers to the ranks of 'homo subprimicus' (Kear 2013) and the like. Roy's (2010) analysis of microfinance and the new population of entrepreneurial debtors it has crystallized in the Global South highlights a relatively well-known and much-studied example. Less well known, but arguably just as important, is the largely post-crisis growth in the same parts of the world of index-insurance products that help render rural smallholders creditworthy – calculated as capable of bearing debt – in the first place (Johnson 2013).

We submit that like other notable features of the post-crisis landscape of money and finance, these new risk-bearing subjects – so crucial to finance capital's expansive imperative – can be helpfully and critically understood in terms of the conjuncture of three sets of closely interrelated phenomena. One is the set of transformative developments in modern-day capitalism often brought together under the umbrella concept of 'financialization': the intensification of financial logics and dynamics within realms where capitalist finance has long been present, if you like, alongside such finance's colonization of hitherto non-financialized domains (as with microfinance and index insurance). The second phenomenon comprises the actual substantive financial practices that, amongst other things, effect financialization and give it purchase. Critical scholarship on money and finance cannot eschew engagement with the nitty-gritty of how, in practice, they 'work' (Ho 2009; Luyendijk 2015); if it does not understand practices, it veers more or less inevitably towards acritical abstraction. What is the business model of microfinance? Of index insurance? What exactly do they require of their customers, and how do they configure and apportion risk? We need to know. And third, we need to recognize the power of ideas and imaginaries. The political and cultural economy of capitalist society is indelibly shaped by the knowledges it generates and that circulate within it – no more so, we suggest, than in the context of money and finance (Christophers 2013). These imaginaries include those of the 'defunct economists' famously highlighted by Keynes (1965, p. 383), but are not limited to them. Indeed, if the chapters that follow tend to focus

somewhat more on the realm of finance than on that of the monetary in general, it is perhaps a product of these irreducibly social imaginaries, since for most of us, the realm of money comes to life in the category of finance. In sum, we urge critical scholarship on post-crisis money and finance at the intersection of financialization, financial practices and financial imaginaries. The contributions in this book fulsomely demonstrate the significance of each of these themes.

The Content of the Book

The remaining chapters in this book are organized into the three broad aforementioned categories. First, there are those chapters that address *financial imaginaries* of one kind or another. For example, Dick Bryan, Michael Rafferty and Duncan Wigan explore the ways in which financial techniques and practices have evolved and developed in relation to the power and authority of the state, and how such techniques and practices have challenged established spatial framings and understandings of the national interest and appropriate jurisdiction. Bryan, Rafferty and Wigan focus on struggles to define the appropriate spatial scale for both understanding and governing money and finance. Many accounts of the development of the global financial system see it as a process that involves a shift from a constellation of inter-connected but internally coherent national financial economies to one that now better resembles a space of flows, wherein the power of financial capital has usurped that of the state. However, Bryan, Rafferty and Wigan argue that this linear account that moves from the national to the global scale is too simplistic, and that it is necessary to identify an 'in-between' financial imaginary, where both the mobility of capital and the residual obduracy and fiscal base of the state matters. Traditional means of national accounting and framing have indeed been undermined and subverted by financial innovation, and by the development in particular of financial derivatives. The ways in which financial derivatives allow capital to bend and distort established understandings of where financial activity takes place has helped to undermine the concept of a national economy. Nevertheless, geographically-distinctive economies, backed up by the power of the state, remain important to global finance. For example, the existence of discontinuous juridical spaces in the global economy provides ample opportunities for financial institutions to engage in regulatory arbitrage, which in turn expedites the reregulation of financial markets in favour of mobile and fungible capital. Moreover, as the world's most state-subsidized economic activity, finance remains reliant on nation states: private losses were socialized during the bail-outs of the financial

crisis and less mobile citizens were called upon to recapitalize financial institutions through national tax systems.

Meanwhile, Paul Langley undertakes a critical analysis of the ways in which spatial imaginaries underlie the speculative circulations of financial capitalism, and how the mobility and freedom of capital has been justified as 'vital' to economic well-being. Langley reveals the metaphors that underpin understandings of the contemporary financial system, and how these are used to justify an order that supports and validates the unhindered circulation of money. Thus, the breaking of the financial crisis was a threat to 'liquidity' and to the ability of money and finance to flow where it was 'needed', or at least where it could turn a profit, without which the wheels of the economy would, it was claimed, seize up. Within this spatial imaginary, it was imperative that the speculative circulations of finance be restored, justifying state intervention that would take responsibility for nonperforming assets and repair the balance sheets of banks and other financial institutions so that capital could flow freely once more. But, as Langley points out, in the management of the crisis there was very little consideration of alternative spatial imaginaries that might have looked to constrain the speculative tendencies of capital, as happened in the wake of the financial crisis of the 1920s and 1930s. This, he suggests, may be indicative of how financial elites had managed to successfully place certain aspects of the financial system beyond political scrutiny even in the midst of a catastrophic crisis.

One of the reasons for this, Gary Dymski suggests, is the ways in which orthodox economics has become so powerful in framing economic policy. Dymski argues that one way of challenging this dominance and economics' rather simplistic and reductionist spatial imaginary would be for geographical research into money and finance to properly incorporate concepts of financial instability into their accounts. Despite geographers' extensive writings on crises of various kinds, Dymski identifies the lack of engagement with economics as a weakness, in as much as it prevents economic geography making stronger analytical connections with otherwise likeminded heterodox economists, and particularly those that seek to develop the ideas of Keynes and followers such as Minsky. Given the importance of orthodox economic ideas in the development and formulation of policy, Dymski argues that notwithstanding geography's spatial insights, unless Keynesian ideas are brought into the geographies of money and finance this body of research will lack the conceptual firepower to effectively counter the practices and policies that lead to endemic instability in the first place and then the production of austerity as a remedial counter measure. Although this call is a challenge, Dymski also claims it is an opportunity because by engaging with Keynesian ideas geographers would bring a greater spatial awareness to

an allied non-orthodox account and so be better able to challenge the geographical blindness inherent within orthodox economic accounts.

Second, there are those chapters that broadly deal with the conduct of *financial practices* of various kinds. Marieke de Goede explores the emergence of what she describes as a 'finance-security assemblage', and the ways in which financial institutions can be called to account by states – and by the United States in particular – for actions that may be interpreted as enabling terrorist activity. In so doing, de Goede also draws attention to the power exerted by the US in bringing financial institutions into line through punitive sanctions. Her chapter connects to the arguments in previous chapters, in that to counter the perceived threat from terrorist financing, a new spatial imaginary was required; and here the US sees its jurisdictional power as transactional, which extends to those places where exchanges in dollars take place, rather than being territorially limited to domestic space. This transactional lens gives the US global reach in such matters, and has had material consequences for the practices of banks in regards to compliance and the calculation of risk. As de Goede illustrates, such is the fear of the large penalties that can be imposed for facilitating the financing of terrorism that many financial institutions have adopted a highly conservative approach to lending where transactions may be 'red flagged' by a combination of software and professional judgement. As a result, some international banks have chosen to deny service to some customers associated with Muslim faith groups and charities, even when there is no material evidence of a link with terrorist activity. This process of anticipatory 'derisking' is having equity effects, particularly when account closures have interfered with the flow of remittances to impoverished parts of the world that have come to rely on them for development needs.

Unintended equity effects are also addressed in Deborah James' chapter, which focuses on efforts to address the 'credit apartheid' that emerged during the period of white minority rule in South Africa. What James illustrates is that while states may wish to enact reregulation to bring about social and economic change, such intentions are often subverted by the intervention and practices of intermediaries that operate in the institutional and market spaces that are the target of such regulations. The impoverishment of black South Africans has its roots in the apartheid regime and James outlines how a long history of low wages and exploitation enabled the credit industry – both licensed and unlicensed – to incorporate itself into the lives of poor communities by offering, for a price, a level of consumption that would otherwise have been impossible. However, because blacks were denied access to property, creditors sought ways to attempt to 'secure' unsecured debt, which saw the state intervene to enable creditors to have access to workers'

salaries so that loans could be repaid at source. But while the overhaul of this iniquitous credit system was a priority following the introduction of democracy in the 1990s, in practice the eradication of exploitative credit relations has proved problematic. For one thing, a democratic political system saw a democratization of access to credit as firms flooded into the market to provide credit to a population that was enthusiastic and optimistic about social and economic progression. But this process of financial inclusion increased problems of indebtedness. Indeed, as James reveals, attempts to reform the credit system to make it more responsible have been undermined by both creditors and debtors: by the former in their desire to make money, and by the latter in their desire to obtain money to consume in an environment of rising but still low incomes. Indeed, some borrowers used their loans to set up new micro lending businesses through which they could pass on their debts, at a profit, both deepening and extending networks of credit and debt.

The third set of chapters focuses on processes of *financialization*, broadly defined. Phillip O'Neill looks at the ways in which the building of urban infrastructure, long a preserve of the state and paid for by public funding, has increasingly been financed by private capital as a way of building public goods but without recourse to public sector financing. The requirements for managers of large pools of financial capital to locate long-term assets to generate returns has seen investment funds pay for a wide range of infrastructure assets so that rents can be extracted from their use. While this shift from public to private sector funding has permitted the building of infrastructure that may not otherwise have taken place within states averse to public sector borrowing and tax increases, O'Neill argues that the financialization of infrastructure construction and the giving over of once public assets to private financial interests has implications both for our understanding of public goods and the expectations of positive socio-environmental externalities that are traditionally produced by urban infrastructure.

Jessica Dempsey's chapter, meanwhile, considers the financialization of nature. Its advocates claim that this process is a way of preventing biodiversity loss by placing the environment within an economic and financial calculative frame; the development of concepts such as ecosystems services and natural capital seeks to encourage investors to view the environment as a potential asset that is more valuable when preserved and exploited in a sustainable and non-disruptive manner. However, Dempsey argues that three connected sets of concerns and uncertainties continue to surround the financialization of biodiversity and critical perspectives on it. First, the production of guaranteed income streams from conservation financialization has in fact proved more elusive that many critics suggest. Second, it is therefore unclear what the effects of such

financialization will be, if and when it materializes more substantively. Third – and perhaps most thornily for critics of financialization – might a robust flow of profit-seeking finance capital into conservation actually represent an improvement on the status quo, which is arguably one of too little conservation-oriented capital of *any* description?

Finally, Karen Lai and Joseph Daniels' chapter focuses on the state-sponsored financialization of Singaporean banks, which sought to make the financial system more resilient and better suited to competing within global financial markets and delivering developmental outcomes to Singapore. Regulatory reform ushered in processes of capital centralization and concentration so that Singaporean banks became bigger with higher levels of capitalization. However, as Lai and Daniels argue, making reference to the variegated capitalism literature, a uniform programme of regulatory change produced a complex financial ecology as financial services firms responded in different ways to the state's injunctions, which produced a set of distinctive global financial institutions. Moreover, although Singaporean banks were damaged in the global financial crisis, they were not put in peril as was the case in Europe and North America. As Lai and Daniels argue, this is an important reminder that the global financial crisis did not necessarily carry the same historical and political significance in Asia as it did in the North Atlantic.

In sum, the chapters that follow analyse a wide range of 'post-crisis' monetary and financial issues from a wide range of critical perspectives. They do not cover the entire spectrum of money and finance, by any means; but they do demonstrate the centrality of money and finance to contemporary capitalism and its political and cultural economies. Nor do the chapters approach money and finance from a unified 'critical' perspective; but they do show that a critical perspective of some sort is essential to grappling with the capitalist present in its proliferating monetary and financial incarnations. We hope, as such, that the chapters can serve as something of a touchstone or lightning rod for similarly-inclined critical analysis in the years ahead.

References

Acharya, V., P. Schnabl, and G. Suarez. 2013. Securitization without risk transfer. *Journal of Financial Economics* 107:515–36.

Adjoran, I. 2014. The fetish of finance: metatheoretical reflections on understandings of the 2008 crisis. *Critical Historical Studies* 1:285–313.

Admati, A., and M. Hellwig. 2013. *The Bankers' New Clothes: What's Wrong with Banking and What to Do About It*. Princeton, NJ: Princeton University Press.

Aglietta, M. 1979. *A Theory of Capitalist regulation: The US Experience*. London: New Left Books.
Ashton, P. 2011. The financial exception and the reconfiguration of credit risk in US mortgage markets. *Environment and Planning A* 43 (8):1796–812.
Ashton, P., and B. Christophers. 2015. On arbitration, arbitrage and arbitrariness in financial markets and their governance: Unpacking LIBOR and the LIBOR scandal. *Economy and Society* 44 (44):188–217.
Ashton, P., and B. Christophers. 2016. Remaking mortgage markets by remaking mortgages: US housing finance after the crisis. *Economic Geography* doi: 10.1080/00130095.2016.1229125.
Backhouse, R., and B. Bateman. 2011. *Capitalist Revolutionary: John Maynard Keynes*. Cambridge: Cambridge University Press.
Bailey, M., W. Bekker, and S. Holmes. 2015. The big four banks: The evolution of the financial sector, Part I, https://www.brookings.edu/wp-content/uploads/2016/06/big_four_banks_evolution_financial_sector_pt1_final.pdf.
Barofsky, N. 2012. *Bailout: An Inside Account of How Washington Abandoned Main Street While Rescuing Wall Street*. New York: Free Press.
Bell P., and H. Cleaver. 1982. Marx's crisis theory as a theory of class struggle. *Research in Political Economy* 5:189–261.
Berry, C., D. Lindo, and J. Ryan-Collins. 2016. Our friends in the City: Why banking's return to business as usual threatens our economy. London: New Economics Foundation.
Blume, L.E., and S.N. Durlauf. 2016. Capital in the twenty-first century: a review essay. *Journal of Political Economy* 123:749–77.
Brown, W. 2015. *Undoing the Demos: Neoliberalism's Stealth Revolution*. Brooklyn, NY: Zone Books.
Carson, A. 2016. What to say of entirety? *New York Review of Books*:25 February, p. 4.
Chick, V., and S. Dow. 2012. On causes and outcomes of the European crisis: ideas, institutions and reality. *Contributions to Political Economy* 31:51–66.
Christophers, B. 2013. *Banking across Boundaries: Placing Finance in Capitalism*. Oxford: Wiley-Blackwell.
Christophers, B. 2015a. Geographies of finance II: Crisis, space and political-economic transformation. *Progress in Human Geography* 39 (2):205–13.
Christophers, B. 2015b. Value models: finance, risk, and political economy. *Finance and Society* 1 (2):1–22.
Christophers, B. 2016a. Geographies of finance III: Regulation and 'after-crisis' financial futures. *Progress in Human Geography* 40 (1):138–48.
Christophers, B. 2016b. *The Great Leveler: Capitalism and Competition in the Court of Law*. Cambridge, MA: Harvard University Press.
Christophers, B. 2017. The performativity of the yield curve. *Journal of Cultural Economy* 10 (1):63–80.
Chu, J. 2010. *Cosmologies of Credit: Transnational Mobility and the Politics of Destination in China*. Durham, NC: Duke University Press.
Coontz, S. 2016. Why the white working class ditched Clinton. CNN: 11 November, http://www.cnn.com/2016/11/10/opinions/how-clinton-lost-the-working-class-coontz/.

DeLong, J.B., and L.H. Summers. 2012. Fiscal policy in a depressed economy. *Brookings Papers in Economic Activity* Spring:233–74.

Duménil, G., and D. Lévy. 2011. *The Crisis of Neoliberalism*. Cambridge, MA: Harvard University Press.

Dymski, G.A. 1999. *The Bank Merger Wave: The Economic Causes and Social Consequences of Financial Consolidation*. Armonk, New York: M.E. Sharpe.

Eatwell, J., and M. Milgate. 2011. *The Fall and Rise of Keynesian Economics*. Oxford: Oxford University Press.

Eddings, C. 2015. Goldman contrarian joins chorus warning on bond-market liquidity. *Bloomberg Business*: 10 November, https://www.bloomberg.com/news/articles/2015-11-10/goldman-contrarian-joins-chorus-warning-on-bond-market-liquidity.

Eichengreen, B. 2015. Financial crisis: revisiting the banking rules that died by a thousand small cuts. *Fortune*:16 January 2015: http://fortune.com/2015/01/16/financial-crisis-bank-regulation/.

Eichengreen, B., and C. Rühl. 2001. The bail-in problem: systematic goals, ad hoc means. *Economic Systems* 25 (1):3–32.

Engelen, E., I. Erturk, J. Froud, S. Johal, A. Leaver, M. Moran, A. Nilsson and K. Williams. 2011. *After the Great Complacence: Financial Crisis and the Politics of Reform*. Oxford: Oxford University Press.

Engelen, E., I. Erturk, J. Froud, A. Leaver and K. Williams. 2010. Reconceptualizing financial innovation: frame, conjuncture and bricolage. *Economy and Society* 39 (1):33–63.

Erturk, I. 2016. Financialization, bank business models and the limits of post-crisis bank regulation. *Journal of Bank Regulation* 17 (1):60–72.

Erturk, I., and S. Solari. 2007. Banks as continuous reinvention. *New Political Economy* 23 (3):369–83.

Fishman, R.M. 2012. Anomalies of Spain's economy and economic policy-making. *Contributions to Political Economy* 31:67–76.

Foster, J.B., and H. Magdoff. 2009. *The Great Financial Crisis: Causes and Consequences*. New York, NY: Monthly Review Press.

Fourcade, M., E. Ollion and Y. Algan. 2015. The superiority of economists. *Journal of Economic Perspectives* 29 (1):89–114.

Fraser, N. 2013. *Fortunes of Feminism: From State-managed capitalism to Neoliberal crisis*. London: Verso.

Fraser, N. 2015. Legitimation crisis? On the political contradictions of financialized capitalism. *Critical Historical Studies* 2 (2):157–89.

French, S., and A. Leyshon. 2012. Dead pledges: mortgaging time and space. In *The Oxford Handbook of the Sociology of Finance*, eds K. Knorr Cetina and A. Preda, 357–75. Oxford: Oxford University Press.

Friedman, B. 2007. What we still don't know about monetary and fiscal policy. *Brookings Papers in Economic Activity* Fall:49–71.

Gardiner, B., R. Martin, P. Sunley and P. Tyler. 2013. Spatially unbalanced growth in the British economy. *Journal of Economic Geography* 13 (6):889–928.

Glasmaier, A.K., and C.R. Lee-Chuvala. 2011. Austerity in America: gender and community consequences of restructuring the public sector. *Cambridge Journal of Regions, Economy and Society* 4:457–74.

Gongloff, M. 2013. Reinhart, Rogoff backing furiously away from austerity movement. *Huffington Post*: 3 May, http://www.huffingtonpost.com/2013/05/02/reinhart-rogoff-austerity_n_3201453.html.

Goodwin, M.J., and O. Heath. 2016. The 2016 referendum, Brexit and the left behind: an aggregate-level analysis of the result. *The Political Quarterly* 87 (3):323–32.

Gorton, G., and A. Metrick. 2012. Getting up to speed on the financial crisis: a one-weekend-reader's guide. *Journal of Economic Literature* 50:128–50.

Graeber, D. 2011. *Debt: The First 5000 Years*. Brooklyn, NJ: Melville House.

Haldane, A. 2012. The doom loop. *London Review of Books* 34 (5):21–2.

Haldane, A. 2014. The age of asset management? Speech given by Andrew G. Haldane, Executive Director, Financial Stability and member of the Financial Policy Committee, 4 April, http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech723.pdf.

Haldane, A. 2015. Stuck. Speech given by Andrew G. Haldane, Chief Economist, Bank of England, 30 June, http://www.bankofengland.co.uk/publications/Documents/speeches/2015/speech828.pdf.

Hale, T. 2015. Bundling of risky UK mortgages booms. *Financial Times*: 8 October, http://www.ft.com/intl/cms/s/0/88bc8cfa-6ce4-11e5-8171-ba1968cf791a.html#axzz3yLFngRWF.

Hansen, K.B. 2015. Contrarian investment philosophy in the American stock market: on investment advice and the crowd conundrum. *Economy and Society* 44 (4):616–38.

Harvey, D. 2005. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Harvey, D. 2010. *The Enigma of Capital and the Crises of Capitalism*. London: Profile.

Harvey, D. 2014. *Seventeen Contradictions and the End of Capitalism*. Oxford: Oxford University Press.

Helleiner, E. 2010. A Bretton Woods moment? The 2007–2008 crisis and the future of global finance. *International Affairs* 86 (3):619–36.

Helleiner, E., and S. Pagliari. 2009. Towards a new Bretton Woods? The first G20 leaders summit and the regulation of global finance. *New Political Economy* 14 (2):275–87.

Herndon, T., M. Ash, and M. Pollin. 2014. Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff. *Cambridge Journal of Economics* 38:257–79.

Ho, K. 2009. *Liquidated: An Ethnography of Wall Street*. Durham NC and London: Duke University Press.

IMF. 2006. Global financial stability report April 2006: market developments and issues. https://www.imf.org/external/pubs/ft/GFSR/2006/01/index.htm.

IMF. 2015. Global financial stability report April 2015: navigating monetary policy challenges and managing risks. http://www.imf.org/External/Pubs/FT/GFSR/2015/01/pdf/text.pdf.

James, D. 2015. *Money From Nothing: Indebtedness and Aspiration in South Africa*. Palo Alto, CA: Stanford University Press.

Johnson, L. 2013. Index insurance and the articulation of risk-bearing subjects. *Environment and Planning A* 45:2663–681.

Johnson, S., and J. Kwak. 2010. *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown*. New York: Pantheon.

Joseph, M. 2014. *Debt to Society: Accounting for Life Under Capitalism*. Minneapolis, MN: University of Minnesota Press.

Kay, J. 2011. The map is not the territory: an essay on the state of modern economics. Institute for New Economic Thinking, 4 October. https://www.johnkay.com/2011/10/04/the-map-is-not-the-territory-an-essay-on-the-state-of-economics.

Kear, M. 2013. Governing homo subprimicus: beyond financial citizenship, exclusion, and rights. *Antipode* 45 (4):926–46.

Kear, M. 2014. The scale effects of financialization: The Fair Credit Reporting Act and the production of financial space and subjects. *Geoforum* 57:99–109.

Keynes, J.M. 1965. *The General Theory of Employment, Interest and Money*. London: Macmillan.

Knight, F.H. 1921. *Risk, Uncertainty and Profit*. Boston, MA: Houghton Mifflin.

Kosselleck, R. 2006. Crisis. Trans.M. Richter. *Journal of the History of Ideas* 62 (2):357–400.

Krippner, G.R. 2011. *Capitalizing on Crisis: The Political Origins of the Rise of Finance*. Cambridge, MA: Harvard University Press.

Krugman, P. 2012. *End this Depression Now!*. New York, NY: W.W. Norton.

Krugman, P. 2014. Why we're in a new gilded age. *New York Review of Books*: 8 May.

Krusell, P., and A.A. Smith. 2015. Is Piketty's 'second law of capitalism' fundamental? *Journal of Political Economy* 123:725–48.

Kumar, M., and J. Woo. 2010. Public debt and growth. International Monetary Fund Working Paper WP/10/174.

Langley, P. 2007. Uncertain subjects of Anglo-American financialization. *Cultural Critique* 65:67–91.

Langley, P. 2015. *Liquidity Lost*. Oxford: Oxford University Press.

Lapavitsas, C., A. Kaltenbrunner, G. Labrinidis, D. Lindo, J. Meadway, J. Michell, J.P. Painceira, E. Pires, J. Powell, A. Stenfors, N. Teles and L. Vatikiotis. 2012. *Crisis in the Eurozone*. London: Verso.

Lazzarato, M. 2015. *Governing by Debt*. South Pasadena, CA: Semiotext(e).

Lean, D. 1957. *The Bridge on the River Kwai*. Los Angeles: Columbia Pictures.

Lee, R., G.L. Clark, J. Pollard and A. Leyshon. 2009. The remit of financial geography: before and after the crisis. *Journal of Economic Geography* 9 (5):723–47.

Leyshon, A., and N. Thrift. 2007. The capitalization of almost everything: the future of finance and capitalism. *Theory, Culture & Society* 24:97–115.

Lo, A.W. 2012. Reading about the financial crisis: a twenty-one book review. *Journal of Economic Literature* 50:151–78.

Lucas, R. 2003. Macroeconomic priorities. *American Economic Review* 93:1–14.

Lucas, R. 2009. In defense of the dismal science. *The Economist*: 6 August.

Luyendijk, J. 2015. *Swimming With Sharks: My Journey into the World of the Bankers*. London: Guardian Faber.

MacDonald, H. 1996a. Expanding access to the secondary mortgage markets: the role of central city lending goals. *Growth and Change* 27 (3):298–312.

MacDonald, H. 1996b. The rise of mortgage-backed securities: Struggles to reshape access to credit in the USA. *Environment and Planning A* 28 (7):1179–98.

MacKenzie, D. 2003. An equation and its worlds: bricolage, exemplars, disunity and performativity in financial economics. *Social Studies of Science* 33 (6):831–68.

Madrick, J. 2012. *Age of Greed: The Triumph of Finance and the Decline of America, 1970 to the Present*. New York, NY: Vintage.

Mankiw, G. 2015. Yes, r > g. So what?'. *American Economic Review* 105 (5):43–7.

Mann, G. 2010. Hobbes' redoubt? Toward a geography of monetary policy. *Progress in Human Geography* 34 (5):601–25.

Mann, G. 2015. A General theory for our time: on Piketty. *Historical Materialism* 23:106–40.

Mann, G. 2017. *In the Long Run We are All Dead: Keynesianism, Political Economy and Revolution*. London: Verso.

Marazzi, C. 2010. *The Violence of Financial Capitalism*. Cambridge: MIT Press.

Maurer, B. 1999. Forget Locke? From proprietor to risk-bearer in new logics of finance. In *Public Culture*, 47–67: Duke University Press.

McNally, D. 2001. *Global Slump: The Economics and Politics of Crisis and Resistance*. Oakland, CA: PM Press.

Mehrling, P. 2011. *The New Lombard Street: How the Fed Became the Dealer of Last Resort*. Princeton, NJ: Princeton University Press.

Mirowski, P. 2010. The great mortification: economists' responses to the crisis of 2007: (and counting). *The Hedgehog Review* 12 (2): http://www.iasc-culture.org/THR/THR_article_2010_Summer_Mirowski.php.

Mirowski, P. 2013. *Never Let a Serious Crisis go to Waste: How Neoliberalism Survived the Financial Meltdown*. London: Verso.

Monaghan, A. 2014. IMF chief says banks haven't changed since financial crisis. *Guardian*: 27 May, http://www.theguardian.com/business/2014/may/27/imf-chief-lagarde-bankers-ethics-risks.

Moore, J.W. 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London: Verso.

Negri, A. 1989. *Marx beyond Marx: Lessons on the* Grundrisse. Baltimore: AK Press.

Noonan, L. 2015. Regulatory changes force investment banks into 'capital light' activities. *Financial Times*:13 December, http://www.ft.com/cms/s/0/566ed97e-8a2b-11e5-90de-f44762bf9896.html.

Norris, F. 2013. Mortgages without risk, at least for the banks. *The New York Times*: 28 November, http://www.nytimes.com/2013/11/29/business/mortgages-without-risk-at-least-for-the-banks.html?_r=0.

O'Connor, J. 1973. *The Fiscal Crisis of the State*. Piscataway NJ: Transaction.

Palaskas, T., Y. Psycharis, A. Rovolis and C. Stoforos. 2015. The asymmetrical impact of the economic crisis on unemployment and welfare in Greek urban economies. *Journal of Economic Geography* 15:973–1007.

Palley, T. 2011. Quantitative easing: a Keynesian critique. *Investigación Económica* 70 (2):69–86.

Panitch, L., and S. Gindin. 2013. *The Making of Global Capitalism: The Political Economy of American Empire*. London: Verso.

Peck, J. 2010. *Constructions of Neoliberal Reason*. Oxford: Oxford University Press.

Pickard, J. 2016. Labour figures swap politics for prominent business roles. *Financial Times*:2 February: http://www.ft.com/cms/s/0/3c1d0e58-c8f4-11e5-a8ef-ea66e967dd44.html#axzz40cAAKjED.

Piketty, T. 2014. *Capital in the Twenty-first Century*. Cambridge, MA: Belknap Press.

Posner, R. 2009. Liberals forgetting Keynes. *The Atlantic*:27 July.

Postone, M. 2012. Thinking the global crisis. *South Atlantic Quarterly* 111:227–49.

Poulantzas, N. 1976. *The Crisis of the Dictatorships: Portugal, Greece, Spain*. London: New Left Books.

Pryke, M., and J. Allen. 2000. Monetized time–space: derivatives – money's 'new imaginary'? *Economy and Society* 29 (2):264–84.

Quaglia, L., and S. Royo. 2015. Banks and the political economy of the sovereign debt crisis in Italy and Spain. *Review of International Political Economy* 22:485–507.

Redburn Research. 2013. Capital markets: the arteries are clogging. (Personal communication: copy available from authors on request.)

Reinhart, C.M., and K. Rogoff. 2009. *This Time is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.

Reinhart, C.M., and K. Rogoff. 2010. Growth in a time of debt. *American Economic Review* 100 (2):573–8.

Rodrik, D. 2015. *Economics Rules: The Rights and Wrongs of the Dismal Science*. New York, NY: Norton.

Roitman, J. 2014. *Anti-crisis*. Durham, NC: Duke University Press.

Roy, A. 2010. *Poverty Capital: Microfinance and the Making of Development*. London: Routledge.

Samuelson, P.A. 1973. *Economics*, 9th edn. New York, NY: McGraw Hill.

Sandbu, M. 2016. There is no lower bound. *Financial Times*:4 February.

Sayer, A. 1995. *Radical Political Economy: A Critique*. Oxford: Blackwell.

Schmidt, V. 2009. Putting the political back into political economy by bringing the state back in yet again. *World Politics* 61:516–46.

Seccareccia, M., and M. Lavoie. 2015. Income distribution, rentiers and their role in a capitalist economy: a Keynes–Pasinetti perspective. In *Institute for New Economic Thinking Conference, Liberté, Égalité, Fragilité*. Paris, April 2015, https://www.ineteconomics.org/uploads/papers/Seccareccia-Lavoie-Paris-INET-27-03-15.pdf.

Skidelsky, R. 2009. *Keynes: The Return of the Master*. New York, NY: Penguin.

Stein, J. 2016. A losing coalition. *Jacobin*: 14 November, https://www.jacobinmag.com/2016/11/hillary-clinton-donald-trump-working-class-election/.

Stiglitz, J.E. 2010. *Freefall: America, Free Markets, and the Sinking of the World Economy*. New York, NY: W.W. Norton.

Stiglitz, J.E. 2013a. After the financial crisis we were all Keynesians – but not for long enough. *Guardian*: 10 October, https://www.theguardian.com/business/economics-blog/2013/oct/10/financial-crisis-keynesians-eurozone-recession.

Stiglitz, J.E. 2013b. Social protection without protectionism. In *The Quest for Security: Protection Without Protectionism and the Challenge of Global Governance*, eds J.E. Stiglitz and M. Kaldor, 24–47. New York, NY: Columbia University Press.

Sum, N.-L., and B. Jessop. 2013. *Towards a Cultural Political Economy: Putting Culture in its Place in Political Economy*. Cheltenham: Edward Elgar.

Summers, L.H. 2014. The inequality puzzle. *Democracy: A Journal of Ideas* 33: http://democracyjournal.org/magazine/33/the-inequality-puzzle/.

Swagel, P. 2015. Legal, political and institutional constraints on the financial crisis policy response. *Journal of Economic Perspectives* 29 (2):107–22.

Swain, J. 2016. White, working class and angry: Ohio's working class help Trump to stunning win. *Guardian*: 9 November, https://www.theguardian.com/us-news/2016/nov/09/donald-trump-ohio-youngstown-voters.

Taylor, L. 2010. *Maynard's Revenge: The Collapse of Free Market Macroeconomics*. Cambridge, MA: Harvard University Press.

Team, T. 2016. A look at common equity tier 1 capital ratios for the largest U.S. banks. *Forbes*: 6 March, www.forbes.com/sites/greatspeculations/2015/03/06/a-look-at-common-equity-tier-1-capital-ratios-for-the-largest-u-s-banks/.

Temin, P., and D. Vines. 2014. *Keynes: Useful Economics for the World Economy*. Cambridge, MA: MIT Press.

The Economist. 2014. Shadow and substance. *The Economist*: 10 May, http://www.economist.com/news/special-report/21601621-banks-retreat-wake-financial-crisis-shadow-banks-are-taking-growing.

Thimann, C. 2015. The microeconomic dimensions of the eurozone crisis and why European politics cannot solve them. *Journal of Economic Perspectives* 29 (3):141–64.

Treanor, J., and Mason, R. 2017. Buy George? World's largest fund manager hires Osborne as advisor. *Guardian*: 20 January, https://www.theguardian.com/politics/2017/jan/20/george-osborne-investment-advice-blackrock-fund-manager.

Vonnegut, K. 1965. *God Bless You, Mr Rosewater*. New York, NY: Bantam.

Wainwright, T. 2009. Laying the foundations for a crisis: mapping the historico-geographical construction of residential mortgage backed securitization in the UK. *International Journal of Urban and Regional Research* 33 (2):372–88.

Wainwright, T. 2012. Number crunching: financialization and spatial strategies of risk organization. *Journal of Economic Geography* 12 (6):1267–91.

Walks, A., and B. Clifford. 2015. The political economy of mortgage securitization and the neoliberalization of housing policy in Canada. *Environment and Planning A* 47 (8):1624–42.

Wolf, M. 2008a. *Fixing Global Finance*. Baltimore: Johns Hopkins University Press.

Wolf, M. 2008b. Keynes offers us the best way to think about the financial crisis. *Financial Times*:23 December.

Wolff, R.D. 2009. Economic crisis from a socialist perspective. *Socialism and Democracy* 23 (2):3–20.

Wolff, R.D. 2010. *Capitalism Hits the Fan: The Global Economic Meltdown and What to Do About It*. Northampton, MA: Olive Branch.

Wyly, E.K., and C.S. Ponder. 2011. Gender, age, and race in subprime America. *Housing Policy Debate* 21:529–64.

Wyly, E., M. Moos, D. Hammel, and E. Kabahizi. 2009. Cartographies of race and class: mapping the class-monopoly rents of American subprime mortgage capital. *International Journal of Urban and Regional Research* 33 (2):332–54.

Zaloom, C. 2009. How to read the future: the yield curve, affect and financial prediction. *Public Culture* 21 (2):245–68.