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Citation: Nesvetailova, A. (2014). A Crisis of the Overcrowded Future: Shadow Banking and the Political Economy of Financial Innovation. *New Political Economy*, 20(3), pp. 431-453. doi: 10.1080/13563467.2014.951428

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A Crisis of the Overcrowded Future: Shadow Banking and the Political Economy of Financial Innovation

ANASTASIA NESVETAILOVA

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This article focuses on the role the shadow banking system played in the financial crisis of 2007–9. Engaging with emergent theories of shadow banking, I inquire into its structural role in contemporary capitalism. My main premise here is that the crisis of 2007–9 is distinct in financial history because it did not centre on any organised market. Rather, it was crisis of the overcrowded financial channels bridging the present and the future, which have become congested because of the massive concentration of financial values generated, yet not sustained, through the shadow banking network. My analysis suggests that shadow banking has determined the nature of financial crisis of 2007–9 and continues to play a necessary role in financial capitalism based on futurity. Drawing on scholarship in financial Keynesianism, contemporary legal studies and early evolutionary political economy, I argue that shadow banking is best seen as the organic institutional infrastructure of financialised capitalism based on debt and geared towards futurity, a concept originally developed by John Commons.

Keywords: shadow banking, securitisation, financial innovation, debt, futurity

1. Introduction

In this article, I examine the lessons posed to students of political economy of finance by the phenomenon of shadow banking, in the light of the 2007–9 financial meltdown. My main premise here is that in retrospect, the global financial meltdown was a peculiar crisis. Although it was quickly diagnosed as a credit crunch and a financial crisis, it was not triggered by a collapse of an overvalued financial market, like, for instance, the dotcom crash in 2001. Similarly, while it quickly matured into an international banking crisis, it did not involve a classical bank run which remains an anachronism in the age of deposit insurance guaranteed by the state. Finally and perhaps most peculiarly, although chronologically

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the crisis signalled the end of the credit boom of 2002–7, the global crisis did not centre on investor mania or irrational market speculation (cf. Sanches 2014).

Instead, in August 2007, the crisis was triggered by the inability of one bank, BNP Paribas, to value three of its special investment funds that were exposed to problems in US asset-backed securities. Typically, such financial structures were traded over-the-counter (OTC) and involved highly complex, tailor-made financial instruments created by the financial industry primarily through the practice of securitisation (transforming illiquid loans into financial securities). In 2007, the scale of this web of financial innovation was captured by Paul McCulley who argued that ‘the growth of the shadow banking system, which operated legally yet entirely outside the regulatory realm drove one of the biggest lending booms in history, and collapsed into one of the most crushing financial crises we’ve ever seen’ (McCulley 2009). Soon after McCulley first gave the name to the complex industry of financial innovation, it would become clear that ‘shadow banking’ is an unfortunate term because it brings rather pejorative connotations into a concept that describes a vital part of the global financial system today. Yet the term has stuck, as McCulley’s focus on the complex, opaque and under-reported world of private financial innovation and credit creation spurred a wave of further studies of the phenomenon of the shadow banking system.

The literature that has developed in the academic and policy world since McCulley’s first mention of shadow banking has yielded some startling revelations. Over the past three or four decades, banks and other financial institutions have developed what amounts to a parallel financial universe. Today, behind the facade of any major banking conglomerate, there is a plethora of entities, transactions and quasi-legal cells, many of which are ‘orphaned’ from the visible part of the bank by complex legal and financial operations, yet which have become absolutely integral to the functioning of our banks. These practices and cells of credit creation include the rather obscure entities such as special purpose entities (SPEs) or special investment vehicles (SIVs),¹ structures of collateralised debt obligations (CDOs) and asset-backed commercial paper (ABCP),² as well as more established institutions and practices, such as asset-backed securities (ABSs), hedge funds, funds of funds, money-market funds and government sponsored financial institutions like the US mortgage giants, Fannie Mae and Freddie Mac. And although some leading authors on the topic suggest that shadow banking is an American phenomenon (Pozsar et al. 2010, Mehrling et al. 2013), recent research shows that shadow banking is geographically and functionally diverse. Interestingly, while its contours were influenced by the crisis of 2007–9, the system has continued to evolve and grow in scope in Europe and the emerging markets in the wake of the global crisis. According to data from the Financial Stability Board (FSB) globally, the shadow banking system accommodated around \$71 trillion worth of assets in 2013.

Drawing on the lessons of the 2007–9 crisis, in this article, I inquire into the structural role of financial innovation through shadow banking. Using insights from the academic tradition of financial Keynesianism, the socio-legal studies of finance and early scholarship in institutional economics, I show that the crisis of 2007–9 was not only a crisis of the shadow banking system, but can also be understood as the first system-wide crisis of financial capitalism based

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in what John Commons understood as futurity. I demonstrate that thriving on complexity and opacity, the shadow banking system has evolved as a largely undetected yet vital 'infrastructure of the infrastructure' of the economy driven by search for high-quality assets, to paraphrase Cerny (1996). In the context of the economic system, shadow banking plays a dual role: it plays a facilitating role in the individual credit strategies of 'visible' financial institutions, while at the systemic level, employing securitised debt, it generates new forms of private credit. In this process, the institutions, products and practices of financial innovation augmented the shadow banking system into a distinct financial-legal space, defined by concentration of values, opaque liability and ownership structures, and high degree of complexity.

The article is organised as follows. Section 2 reviews major approaches to the financial crisis of 2007–9 and explains why the crisis of 2007–9 was not a conventional market crash, but a meltdown of value channelled through the institutions of the shadow banking system. Section 3 critically reviews the emergent approaches to the shadow banking system and analyses its role in the crisis. Section 4 aims to build a theoretical framework based on the synthesis of financial Keynesianism and old institutional economics which would allow us to conceptualise the place of the infrastructure of shadow banking in the capitalism geared towards harvesting the financial future through debt.

2. A rather unusual crisis

By now, the accounts of the global financial turmoil of 2007–9/12 have become stylised. Triggered by the collapse in the US subprime mortgage market, a liquidity crunch that started in the interbank market in August 2007 soon became a credit crunch. By September 2008, it transformed into a cross-border banking crisis, causing a severe economic contraction now known as the Great Recession. In Europe between 2010 and 2012, the rescue of private banks by public authorities led to a sovereign debt crisis and near-defaults of several states. A financial meltdown of such magnitude (estimates put the global costs of the crisis at around \$15 trillion; Yoon 2012) could not but nurture a massive effort to theorise the crisis.

Here, while it is widely recognised as a very complex and multi-layered phenomenon, in narrow technical terms, the crisis tends to be seen as the result of the failure of the price mechanism in the financial market (Acharya et al. 2009). The breakdown of price mechanism, in turn, is attributed to the problematic assumptions and lack of data in the models used in the financial markets; or at a systemic level, to the failure to capture the fragility of interconnections and systemic risk in the financial system, which originate in investors' behaviour (Dow 2011). The emphasis on the psychological factors, behaviour and information deficits leads many observers to draw a causal link between these factors and the speculation stages in the financial cycle. On the one hand, conventional accounts interpret the crisis as the collapse of the 'super-bubble', especially because it heralded the end of the preceding credit and real estate boom (Soros 2008, Brunnermeier 2009). On the other, speculative price surges in other segments of the economy have been viewed as the consequence of the globalisation of the



crisis: '[t]he same kind of speculative thinking that has propelled the stock market and housing market in the recent past seems to be at work in [energy and commodities] markets as well' (Shiller 2008: 9).

Price mechanics, while important for understanding the trajectory of the evolution of individual financial products and practices that were introduced during the first half of the 2000s, tell only part of the story of the political economy of the crisis (Samman 2012). Perhaps the most distinguishing feature of the 2007–9 crisis is that, despite recurring references to speculative motives in banking and asset bubbles as the underlying factors of the crisis, the meltdown of 2007–9 'was not just another credit-fuelled asset price bubble in equities or property markets' (Hindmoor and McConnell 2013: 543). Centred on a web of opaque, complex and bespoke financial products, the crisis only superficially was expressed as a breakdown of price mechanism of the market. In more fundamental terms, the crisis originated in the complex institutional mechanisms of value creation and value extraction that have become paramount to the functioning of the banking system and the economy as a whole.

These mechanisms can only nominally be referred to as the 'financial market'. To appreciate why, one needs to engage closer with the mechanisms of pricing and valuation of financial products that have been at the centre of the credit boom of 2002–7 and its collapse. Key to such an inquiry is the notion of liquidity. Although the initial stages of the meltdown were visible in 2006 and early 2007, those involved mainly financial institutions in the USA and were directly linked to the deteriorating conditions in US mortgage market. The international phase of the financial crisis started in August 2007 when BNP Paribas halted withdrawals from three investment funds (BNP Paribas ABS Eonia, Parvest Dynamic ABS and BNP Paribas ABS Euribor) because it could not 'fairly' value their holdings after US subprime mortgage losses roiled credit markets. The funds had about 1.6 billion euros (\$2.2 billion) of assets on 7 August 2007.³

The failure to obtain a price or to value complex financial structures of ABSs was the result, on the one hand, of the disappearance of the presumed liquidity of the new assets (financial securities created out of pools of illiquid loans), and on the other, of the lack of liquidity of the market in which these financial securities were traded. The institutional and social foundations sustaining liquidity in the financial system would become crucial for understanding the distinct nature of the 2007–9 collapse (Langley 2010). In the event, it was the *absence* of a functioning system of market pricing for complex securities structures sponsored by BNP Paribas and other banks that triggered the wider financial crisis. As one asset manager commented on the day: 'There are securities which simply can't be priced because there is no trading in them. There are no bids for them. Asset-backed securities, mortgage loans, especially subprime loans, don't have any buyers' (Timothy Ghriskey, cited by Bloomberg).

How deep and how widespread were those initial stages of the financial crisis? Two observations need to be made here. First, while the collapse of the US housing market created problems in the ABS markets, the channel that served to transmit the initial shockwaves into a system-wide meltdown was the space for CDOs⁴. Second, while liquidity has multiple definitions, in its systemic meaning, liquidity indicates 'the extent to which an asset is a generalised, fungible

resource' (Carruthers and Stinchcombe 1999). It is the functioning market that ensures the liquidity of an asset. In this sense, the evaporation of (presumed) liquidity in August 2007 indicated the absence of the underlying market for newly created financial securities. The complete evaporation of liquidity in certain market segments of the U.S. securitization market has made it impossible to value certain assets fairly regardless of their quality or credit rating. BNP Paribas said in a press release on the day (BNP Paribas, 9 August 2007).

The lack of an obtainable price for the three funds controlled by BNP Paribas and similar problems at other institutions that soon followed only confirmed the observation that in a market mechanism, it is generalised knowledge of value that engenders liquidity (Carruthers and Stinchcombe 1999: 364). Most of the newly created financial structures were highly bespoke products, held off balance sheets of the banks and sold as complex structures to investors OTC and not on any organised exchange. These products were created and sold in the environment of highly specialised skills and expertise, framed by what Tett (2009) calls silos of knowledge, or 'self-contained realms of activity and knowledge that only the experts in that silo can truly understand' (xiv). These silos prevented different financial institutions, and different teams within each financial institution, from seeing the big picture. In parallel, she continues reflecting the ever-increasing specialisation and complexity in finance, an area of social silence about the workings of the financial system generally, and about specific innovations such as the credit derivative, emerged both inside and outside the banking system. Partly this social silence was a consequence of the sheer opacity built into the bespoke structures, but crucially, it reflected the faith in the efficiency of the financial markets held axiomatically by the economic mainstream and policy-makers (Turner 2012a).

The financial crisis, therefore, did not centre on any given market platform, but on the innovative vehicles of debt-derived value created by the financial system. This complex network is centred on securitisation. Conventionally in finance, securitisation is defined as a transformation, through the process of financial engineering, of an illiquid asset (typically, a loan) or a group of assets, into a financial security. Originating in the late 1970s US mortgage markets, the practice of securitisation evolved along with the change within the banking industry, from the traditional practice of liability management to present-day model of asset management. The securitisation process 'takes loans that traditionally would have been held on bank's balance sheet by the originating firm and creates marketable securities that can be sold and traded via the off-balance sheet SPV' (McIntire 2014: 6). In its functional meaning, securitisation is a form of financial innovation and, more specifically, a form of arbitrage. The slicing and dicing of cash flows and credit risk are a way to close the gap between less efficient debt market and more efficient capital markets and to profit on the differentials that exist' (Fink 2000: 117). Interestingly, it is typically the least profitable loans (e.g. subprime mortgage or student loans) that banks select for securitisation schemes. At a broader scale, three factors have been critical to transforming securitisation from being an innovative financial markets concept to a new industrial practice in banking and finance: changes in securities laws and the legal investor powers

of institutions; changes in IT and computer technologies; and changes in investor understanding of securitisation (Fink 2000: 118).

At the same time, like all forms of financial innovation, securitisation is not only a financial market process but necessarily also a legal practice. Developing at a nexus between finance and law, the economic functions of securitisation ultimately are framed by a set of legal techniques, which means that securitisation can assume a variety of forms. Lipson (2011/12: 1233) suggests that a ‘true securitisation’ is defined as a purchase of primary payment rights which necessarily includes two conditions: (1) that it legally isolates such payment rights from a bankruptcy (or similar insolvency) estate of the originator; and (2) results, directly or indirectly, in the issuance of securities whose value is determined by the payment rights so purchased. As he explains, it is the legal isolation of the inputs (payment rights) from the credit risk of the originator that provides the structural key to securitisation. This is often accomplished by a ‘true sale’ of the input assets from the originator to an ‘SPE’ or special purpose vehicle that is legally ‘remote’ from the originator should the originator go into bankruptcy or a similar insolvency proceeding (Lipson 2011/12: 1240).

The web of SPVs, SPEs and SIVs comprises the institutional core of the legal processes that underpin securitisation schemes and structured finance. These entities are typically easy and relatively inexpensive to set up, as they require neither staff nor capital costs. Across the world, financial centres host thousands of such entities. Recent data from the Bank of England reveal 1968 SPVs owned by UK MFIs (as distinct from all SPVs registered in the UK) (Bank of England 2013), while the Netherlands is estimated to accommodate more than 10,000 of various SPVs (Peters 2013). Typically, SPVs are set up in offshore financial havens such as Cayman Islands, Ireland, British Virgin Islands, and so on. Together, the expansion of financial engineering and the legal infrastructure needed in the operations with various debt-based instruments had enabled the development of a complex and largely undetected institutional framework for financial innovation.

It would be in 2007 that the system would be given a name. In the midst of the unfolding financial meltdown Paul McCulley, then a senior partner at PIMCO, singled out the role of ‘unregulated shadow banks that [unlike regulated banks], fund themselves with uninsured short-term funding, which may or may not be backstopped by liquidity lines from real banks’. Because they fly below the radar of traditional bank regulation, he argued, these levered-up intermediaries operate in the shadows without backstopping from the Fed’s discount lending window or access to FDIC (Federal Deposit Insurance Corporation) deposit insurance (McCulley 2009: 257).

The global financial crisis would soon be started to be described as the crisis of the shadow banking system (McCulley 2009, Pozsar 2013, Sanches 2014), a diagnosis that would facilitate the emergence of several strands of economic, legal and regulatory literature on the phenomenon shadow banking. Most of these studies focus on shadow banking as a set of non-traditional channels of the credit system and describe it as a complex network of financial intermediation that takes place outside the balance sheets of the regulated banks, and thus remains invisible to the regulatory bodies. Data gathered on the shadow banking system

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have revealed that at the eve of the crisis in the USA, the size of the shadow banking system was larger than the size of the official, regulated banking system. Working with Flow of Funds data, Pozsar *et al.* have estimated that the gross measure of shadow bank liabilities grew to nearly \$22 trillion in June 2007; while total traditional banking liabilities were around \$14 trillion in 2007 (2013: 6). Globally, while the 2007–9 crisis has affected some segments of the shadow banking system, it did continue to expand after 2009. Using non-bank financial intermediation as a proxy for shadow banking, the FSB estimates that that global size of the shadow banking system is around \$71 trillion worth of assets (2013: 2).

Yet disagreements about the precise definition of a shadow bank and shadow banking do continue. The differences of opinion go beyond linguistics; including or excluding certain practices or entities under the umbrella of shadow banking has important implications for regulatory politics and understanding the legal arrangements of financial innovation. Table 1 summarises major approaches to shadow banking, with key points of conceptual disagreement highlighted in *italics*.

3. The role of shadow banking in the crisis of 2007–9

If the disagreements about what shadow banking does and what a shadow bank is are set to continue in the post-crisis regulatory politics, there are several important points around which academic and policy analyses of shadow banking now converge. First, the term ‘shadow’ banking is widely seen as an unfortunate choice, since it is being used to describe a vital part of the financial system. Shadow banks in the form of mortgage giants and non-bank financial institutions have been part of the system of capitalist finance for most of the twentieth century. Their emergence was enabled by the regulators and facilitated by the government, and these non-banking institutions have been playing an important function in the credit intermediation process (McIntire 2014). Second, there is a wide recognition that the shadow banking system is important to financial stability, having played a major role in the global financial crisis (McCulley 2009, Pozsar *et al.* 2013, Lysandrou and Nesvetailova 2014). As Krugman noted:

as the shadow banking system expanded to rival or even surpass conventional banking in importance, politicians and government officials should have realized that they were re-creating the kind of financial vulnerability that made the Great Depression possible – and they should have responded by extending regulations and the financial safety net to cover these new institutions. (2009, cited in Moe 2012: 36–7)

More recently, Mark Carney, the governor of the Bank of England, identified shadow banking in the emerging markets as the greatest challenge to the world economy (The Economist 2014: 9).

Third, while it is clear that the use of securitisation is ‘the fulcrum of the shadow banking system’ (Hindmoor and McConnell 2013: 546), shadow

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TABLE 1. Major definitions of shadow banking

Functional	Legal	Political-economic
Shadow banks are financial intermediaries that conduct maturity, credit and liquidity transformation <i>without access</i> to central bank liquidity or public sector credit guarantees (Pozsar et al. 2010)	Shadow banking refers to maturity transformation that takes place outside the terms of the banking social contract. A non-exhaustive list of shadow banking institutions would include: repo-financed dealer firms; securities lenders; structured investment vehicles (SIVs) conduits; some varieties of credit-oriented hedge funds and, most importantly, money market mutual funds, which absorb other forms of short-term credit and transform them into true demand obligations (Ricks 2011)	A system of credit intermediation that involves entities and activities outside the regular banking system, and raises (i) systemic risk concerns, in particular, by maturity/liquidity transformation, leverage and flawed credit risk transfer, and/or (ii) regulatory arbitrage concerns (FSB 2011)
Shadow banking is money-market funding of capital market lending (Mehrling et al 2013)		Shadow banking is a market-funded, credit intermediation system involving maturity and/or liquidity transformation through securitisation and secured-funding mechanisms. It exists at least partly outside of the traditional banking system and <i>does not have government guarantees</i> in the form of insurance or access to the central bank (Deloitte 2012)

(Table continued)

TABLE 1. Continued

Functional	Legal	Political-economic
The shadow banking industry is a system of securitised banking that is composed of (1) the securitisation process and (2) the repurchase market (McIntire 2014). The shadow banking system is a system of unregulated off-bank balance sheet credit intermediation and maturity and liquidity transformation activities conducted by bank-owned or sponsored entities in the capital and money-market domains for the primary purpose of expanding the rate of production of yield bearing debt securities required by the global investor community' (Lysandrou and Nesvetailova 2014)	The shadow banking system describes a web of financial instruments (ABSs, credit derivatives, money-market mutual funds and repurchase agreements) that connects commercial and household borrowers to investors in capital markets. The shadow banking system <i>generates funding and additional credit</i> (Gerding 2011).	Shadow banking includes all financial activities, except traditional banking, which require a private or public backstop to operate (Claessens and Ratnovski 2014).

banking is not confined to the process of converting illiquid loans into financial securities (McIntire 2014). According to Turner (2012a: 12) shadow banking, denoting the creation of credit outside traditional banking space, includes ‘a set of activities, markets and contracts, as well as institutions; and the institutions are linked together via a myriad of multi-step chains’. As a result, the institutional infrastructure of shadow banking is organisationally complex. As suggested in Table 1, the inhabitants of the shadow banking system vary in size and function. Often, shadow banks straddle the line between traditional and shadow banking, such as in the case of a regulated bank sponsoring an SPV (Luttrell et al. 2012: 5–6). Several non-bank entities linked in a chain of financial and legal operations, can function as a *de facto*, if not *de jure*, banking structure.

Organisational complexity in turn suggests that while fuelled by securitisation-related income, the activities and entities of shadow banking system are heterogeneous and serve different functions. For instance, the SPEs used in shadow banking are themselves divided into three categories of investment vehicles: (1) the bank-owned SPEs that transformed bank loans into securities, (2) the SIVs sponsored by the commercial banks or operated by the investment banks that transformed securities into CDOs and (3) the conduits, most of which were owned or sponsored by the commercial banks. The first two types of these vehicles were at the heart of the CDO creation process while the third was not. In contrast to the SIVs that sold most of the CDOs that they created to other investors, those conduits that had bought or created CDOs continued to hold onto all of them, because their main function was to maximise profits from the maturity mismatch between their assets (the mortgage- and non-mortgage-backed securities that they bought from the SPEs) and their liabilities (short-term commercial paper that they issued in the money markets) (Lysandrou 2011: 242). The historical trend in the evolution of structured CDOs, the global values for which were insignificant before 2002 but have expanded 18 times from \$17.5 billion in 2002 to \$307.7 billion in 2006 (Table 2), confirms that shadow banking has expanded on the basis of demand for securitisation-related income, entities and products.

Fourth and finally, the consensus view in the emergent economic and financial literature, and certainly in the policy debate on the origins of shadow banking, suggests that shadow banking is an outcome of regulatory arbitrage in the international finance (Thiemann 2014). In this framework, shadow banking operations offer ‘alternative, unregulated means to traditional banking functions’ (McIntire 2014: 6). In their seminal study, Pozsar et al. (2010) specify several types of regulatory arbitrage: capital, tax and liquidity arbitrage, all of which play a major role in shaping shadow banking structures. A related argument shared by academics, practitioners and the regulators concerns the complexity embedded in financial innovation through shadow banking. Awrey (2012) finds that embracing complexity (so-called *shrouding*), in addition to accelerating the pace of financial innovation, has been an important factor in the growth of the shadow banking system. As he argues,

many financial intermediaries have harnessed technology and financial theory in order to develop and move an increasingly large proportion of their activities into new and relatively opaque

TABLE 2. CDO issuance by collateral, \$US millions

Year	High-yield bonds	High-yield loans	Investment grade bonds	Mixed collateral	Other	Other swaps	Structured finance	Total
2000	11,320.5	22,714.5	29,891.9	2090.1	932.4		1038.3	67,987.7
2001	13,433.8	27,368.2	31,959.2	2194.2	27,045		793.9	78,453.8
2002	2401.1	30,387.9	21,452.7	1915.3	9418.1		17,499.2	83,074.3
2003	10,090.5	22,583.8	11,770.1	21.6	6947.2	110.4	35,106.2	86,629.8
2004	8019.1	32,192.2	11,605.7	1094.8	14,872.9	6774.5	83,261.5	157,820.7
2005	1413.0	69,441.2	3877.8	893.3	15,811.0	2256.8	157,572.2	251,265.3
2006	940.9	171,905.9	24,864.5	20.0	14,446.7	761.7	307,704.9	520,644.6
2007	2150.8	138,826.6	78,571.1		1721.9	1146.7	259,183.6	481,600.7
2008		27,489.4	15,955.2				18,442.2	61,886.8
2009		2032.7	1972.1				331.2	4336.0
2010		1807.4	4806.3		321.2		1731.0	8665.9
2011		20,001.7	1028.4		8126.0		1975.2	31,131.3
2012		44,062.3	62.2				20,246.3	64,370.8
2013	0.0	26,362.0	0.0	0.0	0.0	0.0	63,910.9	90,272.9

Source: SIFMA.

institutions, instruments and markets. In parallel, they have also lobbied against reform which would seek to achieve a more level-playing information field. (Awrey 2012: 36–7)

500 However while accounting for the importance of the institutional context of the
developments in the financial industry, regulatory arbitrage explanations tell
only a partial story of the rise of shadow banking. The major limitations of regu-
latory arbitrage explanations stem from one fundamentally flawed assumption
505 these theories make about modern finance. Spatially, these analyses conceive of
the financial system as a neatly demarcated realm of regulatory niches, with
boundaries drawn between regulated and un-regulated companies and activities,
between various national systems of financial regulation and taxation, and
between protected (e.g. depository banks) and unregulated (e.g. hedge funds)
510 financial institutions (Singer 2007, Pagliari and Young 2014). In such readings,
financialisation, or the globalisation of financial markets and services, is argued
to have evolved in the context of regulatory ‘race to the bottom’ (e.g. breaking
the traditional credit intermediation process into legally independent structures
that deal with each other). Shadow banking is seen as most recent manifestation
515 of this process, having become a channel for propagating systemic risk since fail-
ures can lead to ‘important contagion and spill over effects’ (Garcia 2011: 5).

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Yet while traditional banks were involved in the creation of securities and thus
supplied the raw material (mortgages and other types of loans) for the production
of ABSs, it was not the traditional banking sector but the shadow banking sector,
principally through its three main entities (SPEs, SIV and conduits), that securi-
520 tised and re-securitised these loans. Overlooking the role of these entities and cru-
cially, their connection to ‘visible’ banks, in shaping cotemporary credit networks,
leads to problematic political, regulatory and academic assessments.

From the regulatory point of view, not paying attention to entities, such as SIVs,
CDOs or ABCP conduits simply because these entities do not gather customer
525 deposits, prior to 2007, was a mistake: these entities would prove crucial to econ-
omic and financial stability. It is true that banks provided the ‘front door’ for any
CDO structure; banks were also the lead underwriters for CDO issuance. In 2006,
banks purchased 59 per cent of insurance through credit derivatives (hedge funds
purchased 28 per cent, and other entities including pension funds and asset funds
530 comprised the rest of the participants in credit derivatives). But it is the compo-
sition of financial structures held by the different entities, and not aggregate pos-
itions that would predetermine the casualties of the crisis. According to the IMF,
banks held about 31 per cent of riskier tranches of CDOs, asset managers held 22
per cent, insurance companies 19 per cent, pension funds 18 per cent and hedge
535 funds held 10 per cent. As the IMF noted at the time,

while banks and insurance companies hold a larger share of the
overall CDO market than do leveraged investors such as hedge
funds, the share of such instruments in their overall portfolio
540 remains small... It is likely that [hedge funds] holdings are rela-
tively concentrated in the riskier ‘equity’ tranches of these securi-
ties, and that they comprise a much larger share of hedge fund

portfolios than they do of overall securities markets . . . In fact, one recent market estimate is that about 50 percent of hedge funds' structured credit holdings are in the riskiest equity tranches. (Lipsky 2007).

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It is also important to emphasise that while banks have engaged in securitisation process for decades, the shadow banking system has expanded during a specific time frame (2004–7), which is key to understanding its structural role in the economy. As Table 2 illustrates, in 2002, there was less than a quarter of a trillion of structured finance CDOs issued. Yet by 2006, four years later, the global stock of CDOs had grown 12-fold, to more than \$3 trillion. Crucially, the timeline of the evolution of these products coincides with the sharp rise in the Fed rate in 2004, when the yield on traditional bonds (US Treasuries) became low and unattractive. Investors started to look for alternative investment vehicles (Goda and Lysandrou 2013). Responding to this demand for yield, the shadow banking system provided it, and thriving on this demand, grew to the scale that was larger than the size of the official banking system in the case of the USA (Pozsar et al. 2010).

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Regulatory arbitrage theories are unable to account for the escalation of the creation of synthetic CDOs and the related products post-2004. It is also difficult to see how regulatory arbitrage – an inherent and perennial feature of private finance (Singer 2007, Helleiner and Pagliari 2011) – can explain why and by what means on the eve of the crisis in the USA, the shadow banking system surpassed the size of the regulated banking by some \$8 trillion. Over-stressing the role of discreet entities such as 'banks', rather than the shadow banking system, is therefore problematic because it is overlooking the interconnections between banks (as suppliers of raw material for securitisation) and shadow banking vehicles that stored or extracted value from securitisation structures. These connections enable the financial strategies used by a single institution and thus affect its de facto size. Not recognising that the range and diversity of functions may lead to erroneous evaluations of the size and hence, the systemic importance of the institution. For instance, when valued as a hedge fund, BlackRock appears to have \$30 billion in assets under management (AUM) (the *Hedge Fund Journal* 2012).⁵ When valued as a complex asset management firm (which is what it is), in which hedge fund represents only a portion of the fund strategies being used, however, the picture becomes rather different. As of 31 March 2014, BlackRock's AUM totalled US\$4.401 trillion across equity, fixed income, cash management, alternative investment, real estate and advisory strategies. Being a complex organisation, BlackRock offers risk management, strategic advisory and enterprise investment system services to a broad base of clients with portfolios totalling approximately US\$12 trillion.⁶

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Therefore, it is difficult to overestimate the importance of the shadow banking system for the strategies of individual financial institutions, and for the financial stability generally. Yet the emergent mainstream view on the origins of shadow banking, focusing on banks and other financial institutions as discreet entities, tends to underplay the role of the interconnections and products generated through the shadow banking system, and thus is of limited help when diagnoses of the nature of the crisis are concerned. On the one hand, the focus on 'banks'

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as the major institutions behind the crisis credit tends to occlude the role played by hedge funds in channelling the demand for debt-based financial innovations and shadow banking, particularly post-2004 (2011). On the other hand, the narrow focus on hedge funds and other asset managers as the key non-bank financial entities tends to underestimate the role of complex financial organisation in enabling different financial strategies of one institution, as well as the role of credit capacities generated by SIVs and conduit industries that had been fuelled by short-term debt bought by money-market funds. As two prominent commentators observed at the time, ‘in reality all types of these entities were intertwined in the infrastructure of financial innovation: retail investors, schools, hospitals and pension funds have placed billions of dollars in such funds, yet none of this system comes under bank regulations’ (Tett and Davies 2007).

This analysis implies that vast infrastructure of financial innovation through shadow banking has evolved into a peculiar financial and legal space which does not sit well with orthodox notions of a financial market. The complex structures involving securitised assets, special purpose vehicles, conduits and highly bespoke investor products did not constitute an open market. Many of them were created simply as conduits for value, not as mass-market securities. Their presumed liquidity lay in the anticipation that these complex structures would enable the extraction of value from the underlying debt, not from the convertibility of newly created AAA securities into cash or another asset as would be the case of an asset traded in the market (cf. Crockett 2008). Mehrling explains that ‘the underlying securitisation tranches were designed to be held, not traded, and in general they were held, not traded, and here is the source of a persistent challenge for the market-based credit system’. The shadow banks in turn were holding (and funding) only the very highest rated tranches created by a larger securitisation process that packaged loans and then sliced and diced the package into securities with specifically tailored risk characteristics. Riskier tranches were held indeed, were designed to be held by pension funds, insurance companies and hedge funds (Mehrling 2011: 126). Overall, the entities and products of shadow banking were simply far too complex to serve as instruments of speculation or market trade. Instead, they were structured as bespoke vehicles of debt which, given their in-built complexity and the heterogeneity of underlying assets, were extremely difficult to trade and discern. In fact, no two CDOs are alike: ‘each one is a unique, customised product that can be sold at a privately negotiated price but not so easily marketed on any standardised price terms’ (Goda and Lysandrou 2013: 12).

How best to understand the political-economic function of this large and opaque system?

4. Financial innovation and post-Keynesian institutionalism

The burgeoning academic literature, popular culture and social media remind us that mainstream economic and financial theory is inept at understanding contemporary banking and finance. But the crisis also has revealed the limitations of critical and heterodox approaches to finance and credit. The meltdown of 2007–9 was a complex phenomenon, itself a product of increasing complexity of finance (Datz

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2013). It was caused by overextended credit, created and channelled through the shadow banking system. It has been a major crisis of debt in its many forms: consumer indebtedness, Ponzi investment structures, leverage built into bank portfolios and complex opaque financial products. The meltdown also occurred against unprecedented polarisation of wealth and deepening socio-economic inequality (Lysandrou 2011, Picketty 2014). Perhaps unsurprisingly, no single theory in either mainstream or heterodox economics provides us with the ready tools to address these complex issues comprehensively and dynamically.

The problem lies with the way that post-war economic and political-economic theory understands the role of debt. Economic theory, preoccupied with the question of growth, inevitably sees debt as a burden inherited from the past and a factor constraining growth. Analysing the role of finance in society and economy, it thus stumbles upon the unresolvable dilemmas of savings vs. investment as factors of economic growth. Most economic models, whether mainstream or heterodox, are based upon the false dichotomy between credit and debt, a presumption further supported by accounting practices. Conceptual debates about wealth in turn, if and when they do take place, often reiterate the false distinction between financial and 'real' economy. In fact there appears to be no single theoretical framework that would somehow help reconcile the analytical categories of debt, credit, finance, wealth and ownership in a single theory of financialised capitalism.

In this regard, the crisis of the shadow banking system may well serve as a constructive turn in political economy. The lessons drawn about the role of securitisation in the economy (and perhaps most persuasively, the regulatory calls for a revival of securitisation in the credit-starved economy post-2009) indicate that debt has long become not only a factor of growth, but an important institution of financial capitalism. The emergent literature on shadow banking and its complex network in turn suggests that the valuation, nature of ownership and the timing of securitisation are key factors of stability and functionality of finance, as well as wider economic participation.

What is then the ultimate function of this opaque yet essential financial-legal space today? An important conceptual step towards answering this question lies in the recognition that today, financial system is as much a 'credit' system as it is a debt system. This characteristic of modern finance is often traced to the developments that have taken place from 1971 onwards. It is thought that when key financial activities were removed from state controls, the financial system transformed itself from a service industry that connects savers and borrowers in space and time (if indeed it was that ever) to an industry of mining, trading and multiplying risk (cf. Kurtzman 1993, Guttman 1995). However, placed in a longer historical context, the breakdown of the Bretton Woods arrangements in 1971 only amplified and accelerated the much longer historical trend beautifully captured by John Commons some hundred years ago, when he analysed the legal foundations of a capitalism in which 'mere expectations of money are converted into money itself' (Commons 2002 (1934): 393).

Mainstream economic theory, founded in neoclassical economics, is unable to engage with the realities of such a system. Its major paradigm, or the *economics view* as Mehrling calls it, resolutely looks through the veil of money to see how prospects for the present generation depend on investment in real capital goods

that were made by generations past' (2011: 4). It is true that, as Drucker observed in 1959, 'economic activity has always been about the commitment of present resources to future expectations, and for the past three centuries this has been done in contemplation of change' (Drucker 1959: 240). But in mid-twentieth century, in the wake of the Bretton Woods collapse, a new type of economic activity and a mode of capitalism – based on what Commons understood as modern capital – became globalised.

Hyman Minsky called it money-manager capitalism (Minsky 1993, Wray 2009), a system defined by the divorce of ownership of capital from the management of capital. In this new system of ownership, management and distribution of financial capital and wealth, the mere expectation of a change, can be converted into a financial security (Shiller 2004, Wigan 2009). In this type of capitalism, it is financial derivatives that serve as a de facto anchor to fundamental activities in the real economy, not the other way around (Bryan and Rafferty 2005). Scholars today refer to this era as the age of financialised capitalism (Hudson 2010), defining financialisation either as a macro-historical trend in the evolution of capitalism, or as a series of socio-cultural shifts within finance and driven by finance (Montgomerie 2008).

But the major problem with financialisation theory is that despite its nuanced insight into the dynamics led by financial change, financialisation remains a largely descriptive tool employed to explain developments that occur outside the financial system. Fundamentally, financialisation theories tend to be based on the false distinction between finance and the real economy. Yet as Davidson reminds us, in an economy operating under uncertainty, production is financed not by tapping savings from previous production, but by incurring debt (1978: 61). Today, the central role of shadow banking in modern finance as revealed by the global crisis only reaffirmed the observation made by John Commons a while ago: in its modern meaning, capital is divorced from the obsolete meaning of savings because modern capital comprises intangible property (the present value of future sales) and incorporeal property (the present value of expected payments of debt) (Commons 1934: 456, cited in Atkinson and Whalen 2011: 55).

The post-crisis theoretical discussion in political economy has seen a revival of post-Keynesian thought which is rooted in the assumption 'that economic decisions are made by human beings facing an uncertain and unpredictable economic future, while they are moving away from a fixed and irreversible past' (Davidson 1991: 58–9, cited in Atkinson and Whalen 2011). More recently, the focus on uncertainty and expectations, historically central to post-Keynesian thought, has been advanced by the insights from old institutional economics championed by Commons, Veblen, Berle and others. The emergent synthesis, described by Atkinson and Whalen (2011) as post-Keynesian Institutionalism, is built around the concept of *Futurity*, pioneered by Commons in the 1930s and understood as the very essence of modern capitalism, where 'Futurity embodies itself objectively in a present "economic quantity", Credit, which is the equivalent of debt' (2002 [1934]: 398).

It is instructive in this regard that in his monumental history of political economy, Commons noted that 'political economy [is] not a science of individual

liberty, but a science of the creation, negotiability, release, and scarcity of debt' (2002 [1934]: 390). The lessons we draw about the shadow banking system in the light of the recent crisis suggest that in the age of modern capital, the old distinctions between credit and debt are of limited use: both credit and debt are essential 'economic quantities' in the terminology of MacLeod and Commons. Credit offers a valorised access to the future; while debt is a valorised commitment to a future. As Mehrling puts it, 'the seductive allure of present credit and the crushing burden of future debt are two faces of the same creature' (2011: 11). Both these quantities, and their special characteristics, can be converted into financial assets or 'investables', and it is the shadow banking system that plays a vital role in this financial alchemy. In this regard, shadow banking can be understood as

a system of unregulated off-bank balance sheet credit intermediation and maturity and liquidity transformation activities conducted by bank owned or sponsored entities in the capital and money market domains for the primary purpose of expanding the rate of production of yield bearing debt securities required by the global investor community. (Lysandrou and Nesvetailova 2014: 4).

Shadow banking, therefore, is not merely an outcome of regulatory arbitrage by banks and other financial institutions. It is the infrastructure for mining, enhancing and shifting debt and its related products into the future, and plays, therefore, a vital role in the operation of the contemporary credit system.

To engage with the political economy of such a system, Mehrling suggests, one needs to develop a *finance view* that would focus on the present valuations of capital assets, seeing them as dependent entirely on imagined future cash flows projected back into the present (2011: 4). In the finance view approach, shadow banking is an organic part of the financial capitalism of futurity. Two key features of the instruments used in the shadow banking system illustrate this role. First, the legal techniques and financial instruments of shadow banking are created and deployed with the aim of extracting a cash flow from an underlying asset. Inevitably in the securitisation realm, this asset tends to be an instrument of debt. Second, the legal components of securitisation are founded on principle of true sale – alienating the ownership of the resultant financial claim from the ownership of the underlying assets or entity. The financial innovation and what Kennedy (2011) calls 'creative lawyering' through shadow banking are capable of generating a web of assets which are money-like instruments and thus perform important funding functions (Gerding 2011: 6–7). Three observations, all originating in the tradition of financial Keynesianism (Minsky 2008 (1970)) and old institutional economics, follow on from this.

First, the financial system founded on debt and dependent on shadow banking is ridden with a classic conflict based on the paradoxes of aggregation (Lavoie 2009). In classic Ponzi schemes, timing is key: pyramids actually tend to work for those investors who manage to get out in time, yet the community of investors never get their money back. Turner (2012b: 27) argues that any financial system that performs credit intermediation and maturity transformation – whether within banks or via shadow banks and market-based credit contracts – is capable of

generating a set of claims whose combination of apparent risk, return and liquidity is in aggregate unsustainable or even impossible. During the crisis apparently liquid claims became illiquid; apparently low risk claims became high risk and lost value; and the system's ability to generate new claims which met investors' expectations shrank. And part of the (unfortunate but necessary) policy response to the crisis has been a large-scale socialisation of the credit intermediation and maturity transformation function (Turner 2012b: 28).

Second, Ponzi schemes are inevitably, debt schemes. Securitised debt is at the very heart of the shadow banking system (McIntire 2014), which mobilises and amplifies it in several ways. Employed in a system of economic and financial transactions, shadow banking instruments helped to increase leverage in financial markets in three ways: by providing new instruments for borrowing, by increasing economic leverage, and by creating embedded leverage. For instance, credit derivatives free up capital that the seller can deploy elsewhere, including by underwriting additional credit derivatives. Shadow banking instruments can also increase what Gerding calls embedded leverage. The layering of securitisation upon securitisation or the hedging and re-hedging of investments with credit derivatives means that the leverage of individual investments can be multiplied many times over. One shadow banking instrument (e.g. a repo) can allow a firm to make a leveraged bet in another already leveraged instrument (e.g. a subordinated ABS or a credit default swap) (Gerding 2011: 21–2). In fact, the principle of collateral re-hypothecation (a practice of pledging securities for a loan when the same securities have already been pledged for another loan) is a modern version of a Ponzi pyramid. The brokerage firm essentially passes along the collateral in order to obtain a loan to finance the customer's account. In the City of London, where there are no haircuts on the re-use of pledged collateral, 'mathematically, the cumulative collateral creation can be infinite' (Singh 2011).

Third and related, the dependence of the economy and the 'official' financial system on its shadow parts has important implications for the way we understand (and hence attempt to govern) economic activity in the age of financial futurity. Even up to today, most debates about banking and its role in the crisis eventually boil down to the discussion about the structure of incentives in the financial sector. Inevitably, this line of reasoning tends to point to disparities between 'real' and 'financial' economy. The processes of shadow banking, however, demonstrate that if ever such a distinction did make sense, it is not applicable in the age of financialisation based on the separation of negotiability of risk-based assets, and alienation of ownership by means of financial innovation (and not assignability of ownership, as implied in mainstream economic and financial theory) that is central to securitisation in finance and to contemporary techniques of value extraction.

In his seminal study of *Institutional Economics*, Commons drew on the work of Henry MacLeod, the first legal economist, who once observed:

if I were asked . . . what discovery has most deeply affected the fortunes of the human race, it might probably be said with truth – *The discovery that a Debt is a Saleable Commodity* . . . When Daniel Webster said that Credit has done more a thousand times to

enrich nations than all the mines of all the world, he meant the discovery that a Debt is a saleable Commodity or Chattel: and that it may be used like Money: and produce all the effect of Money. (Macleod 1856: 200, cited in Commons 2003: 397; emphasis and punctuation in the original).

The discovery that debt, especially low-quality debt, may not only be sold, but deferred into the future and divorced from the underlying risks, and thus become a vehicle for value extraction today, may well be seen as one of the most important political-economic discoveries of late twentieth century.

5. Conclusion

This article has analysed the role of the shadow banking system in the financial crisis of 2007–9. It is now commonly agreed that the global financial meltdown was centred on the process of financial innovation and more specifically, the practice of securitisation. In this, the crisis of 2007–9 was distinct from earlier outbreaks of financial instability and stock market crashes. Although the credit boom of 2002–7 provided the macroeconomic background to speculation in various asset classes, including real estate and commodities, and while exuberance of traders shifting obscure financial products between financial institutions was certainly an important part of the financial era of 2002–7 (Cameron et al. 2011), the instruments and entities that brought down the banks and parts of the financial system were never part of an organised platform of financial exchange; they were not actively traded on the market, and their liquidity stemmed from the anticipated ability to allow the extraction of value, not from their liquidation or sale in a marketplace.

Instead, the complex and highly bespoke vehicles of debt-based value at the centre of the securitisation process were created on the margins of the financial institutions as a means for dealing with risk embedded in the loans the financial institutions originated. It is these instruments and entities that played a central role in facilitating financial innovation that has been the process at the heart of the crisis. The resultant network of entities, products and operations involved in this process of financial innovation is now known as the shadow banking system. Although most current figures tend to be underestimations, recent data suggest that shadow banking accounts for up to a third of world's financial system.

Emergent consensus in academic and policy literature sees shadow banking to be the outcome of regulatory arbitrage in the banking sector, enabled by national tax, accounting and bank rules. In this article, I have critically engaged with the regulatory arbitrage approaches to shadow banking, finding them insightful, yet limited when expanding the complexity, scope and diversity of shadow banking entities. Drawing on current scholarship in heterodox political economy, and on early writings of institutional political economy, I have shown that shadow banking in fact is the financial industry's institutionalised response to investors' search for yield and investables. The complex web of shadow banking operations, entities and products provides the institutional infrastructure of financial capitalism oriented towards the future and play a key role in the economic cycle

(Palan 2013). Embedded in the legal framework provided by shadow banking, securitisation overcomes the present constraints on capital and returns by employing debt in the value extraction process in new, transformed and enhanced forms. Some 100 years ago that Commons understood it as a socio-economic and legal system based on the principle of futurity, where:

[all activities have their present values] not on account of what has happened in the past, nor even on account of what is happening at the present point of time, but on account of what I and others hope, expect or fear will happen in the future. The extent to which this human ability of forecasting has its influence on present behaviour and values may be given the name, futurity. (1925: 2).

Today, through the facilities offered by the shadow banking system, the financial system has been able to harvest the future for a select group of cash-rich clients. The system erupted when assets generated by harvesting the financial future were unable to get a price in the present. In this way, the crisis of 2007–9 needs to be understood not as a financial market crash nor a mere banking crisis, but as the first system-wide crisis of financial future that has become overcrowded.

Acknowledgements

The author is grateful to Photis Lysandrou, Duncan Wigan and two anonymous referees for their feedback on earlier versions of this article.

Notes

1. SIVs can either be affiliated with a single banking institution or obtain support from multiple institutions. Adrian and Ashcraft (2012a) report that since 2008, SIVs have stopped operating.
2. Commercial paper collateralised by a specific pool of financial assets. The bankruptcy remoteness of all of these entities implies that the collateral backing the ABCP is exempt from the potential bankruptcy of the institution that provides the backup lines of credit and liquidity (Adrian and Ashcraft 2012b).
3. Bloomberg reported that BNP Paribas joined Bear Stearns and Union Investment Management GmbH in stopping fund redemptions. On the same day, Dutch investment bank NIBC Holding NV announced that it lost at least 137 million euros on US subprime investments in 2007. On 29 August 2007, BNP Paribas would reopen the funds; one only of them, BNP Paribas Eonia, would formally close as the result of the crisis.
4. According to Investopedia, a CDO is

a structured financial product that pools together cash flow-generating assets and repackages this asset pool into discrete tranches that can be sold to investors. A collateralized debt obligation (CDO) is so-called because the pooled assets – such as mortgages, bonds and loans – are essentially debt obligations that serve as collateral for the CDO. The tranches in a CDO vary substantially in their risk profile. The senior tranches are relatively safer because they have first priority on the collateral in the event of default. As a result, the senior tranches of a CDO generally have a higher credit rating and offer lower coupon rates than the junior tranches, which offer higher coupon rates to compensate for their higher default risk.

As many as five entities are involved in the creation of a CDO: (1) securities firms, who approve the selection of collateral, structure the notes into tranches and sell them to investors; (2) CDO managers, who select the collateral and often manage the CDO portfolios; (3) rating agencies, who assess the CDOs and assign them

credit ratings; (4) financial guarantors (underwriters), who promise to reimburse investors for any losses on the CDO tranches in exchange for premium payments; and (5) investors such as pension funds and hedge funds.

Source: <http://www.investopedia.com/terms/c/cdo.asp>.

5. www.thehedgefundjournal.com/sites/default/files/hfj-us50-2012.pdf (accessed 21 July 2014).

6. <http://www.blackrockinvestments.com.au/AboutUs/Overview/index.htm> (accessed 21 July 2014).

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