The Capitalization of Almost Everything

The Future of Finance and Capitalism

Andrew Leyshon and Nigel Thrift

> Far more important to the world's economies than the stock markets are wage and salary incomes and other non-financial sources of livelihood such as the economic value of our homes and apartments. That is where the bulk of our wealth is found. (Schiller, 2003: 9)

> Fancy investing in a security whose payoff depends on how much beer is sold in British pubs? How about a bond to be paid by collections of overdue parking fines in New York City? If you'd prefer, you can purchase the rights to a slice of the revenues from old Italian films, or the amounts raised by selling executive suites in Denver's new stadium, or the royalties earned by pop stars such as David Bowie and Rod Stewart. There is barely a cash flow anywhere, it seems, that cannot be reassembled into a bond-like security that the most conservative of investors might buy. (*The Economist*, 1998)

IT HAS become a standard refrain in radical work on the international financial system to reflect on, and usually bemoan, three of its characteristics: its scale and complexity; its speed; and its function as a medium for untrammelled speculation (see, for example, Lipuma and Lee, 2004). In turn, in this account, scale and complexity and speed and speculation are generally considered to have dire consequences. They act as a barrier to intervention because of their opacity and the likelihood of unintended consequences. They smother smaller concerns which cannot raise sufficient capital. They cancel out the promises made to weaker investors. They blot out faith in the future. Combined, they make economic life riskier and more perilous (Schiller, 2003), not least by expanding 'a domain of delusion and chicanery' (Blackburn, 2006: 66).

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But just because this account has become orthodoxy it does not mean that it is necessarily correct, at least not in its entirety. We do not deny that 'the search for ever more exotic ways of beating the market' (Glyn, 2006: 72) through complex financial innovations is in all probability introducing higher levels of systemic risk into the financial system, a danger that has also been commented on by regulatory bodies such as the Bank for International Settlements and even some market participants (Augar, 2001, 2006; Bookstaber, 2007). However, in the same way that it is debatable whether international financial institutions are really the swashbuckling organizations they would often like to believe themselves to be, rather than merely large and often rather conventional bureaucracies hemmed in by the dictates of compliance (Clark and Thrift, 2005), or that traders are important players in the world's financial markets rather than subsidiary functionaries in a war of equations (MacKenzie, 2006), or that speculators are necessarily greedy and vacant tools rather than arbitrageurs with the double vision of a faith in arbitrage and a scepticism about its possibilities (Miyazaki, 2006), so it is at least worth considering whether financial capitalism could actually survive without the financial equivalent of everyday life, the bread-and-butter of income flows from real assets: those flows of income that allow all manner of things to proceed on their way. For, just as Enron was finally forced down to earth by its lack of real assets to back up the calls on its liabilities, so financial companies have to keep a tether to assets, however far removed, even as they are involved in speculation. The financial system, like all capitalist entities, must be able to constantly reproduce itself to survive and that means that it must continuously prospect for new asset seams that can be turned into collateral, a process which itself provides examples of novel strategies of capitalization, as agents turn to all kinds of activity for sustenance and replenishment.

In this article, we will therefore argue that the bedrock of financial capitalism is not the spectacular system of speculation but something more mundane; that is, financial capitalism is dependent on the constant searching out, or the construction of, new asset streams, usually through a process of aggregation, which then – and only then – allows speculation to take place. Further, after a period in which speculation was mistakenly considered the be all and end all of finance (see Bryan and Rafferty, 2005), these kinds of financial bases are becoming increasingly important: they are to the contemporary financial system what gold was to its precursors, a source of value from which financial innovation can proceed. In other words, we are in a period in which the process of securitization, which has driven so much of international finance since the 1980s, is engaged in a fresh round of tracing value to its source – or rather sources – since what we can see now is an impulse to identify almost anything that might provide a stable source of income, on which more speculation might be built, being brought into play. We argue that this necessarily circuitous link between stable income sources and financial speculation has too often been overlooked in the rush to focus on the spectacular performances of speculative capital.

But there is a difference from previous rounds of financial innovation. The process by which these financial bases are identified requires not just a willingness but also an ability, even a skill, to countenance increasingly unorthodox means of indexation such that it is now possible to use just about anything as a platform for more speculative financial activity – up to and including the kitchen sink, as we shall see – just so long as it represents a stable and continuing income stream. To that extent, we can describe this tendency as a round of financial innovation that is just as important, and even perhaps as potent, as other recent developments, like hedge funds, which have received much more in the way of attention in the literature. Moreover, the financial bases upon which speculation is built have to be secure; this much has been starkly illustrated by the fall-out from the sub-prime mortgage crisis which developed in the US from late 2006 onwards, because the failure of these quotidian asset bases to produce income can have serious implications for the financial architecture built upon them.

This article is therefore meant to act both as a corrective to current work on the international financial system which, in our opinion, too often over-emphasizes speculation, and as an extension, also attempts to correct this imbalance. At the same time, we also want to show the ways in which the system of capitalization has important spatial consequences which are a part of its functioning. Accordingly, the remainder of the article is in three parts. In the next section, we point to the importance of asset streams and their capitalization and how this process works to underpin the international financial system. In the following section, we consider three examples of this process at work in the UK. In the final section, we consider what this might mean for general analyses of financial capitalism, with particular reference to the possibilities its offers to alternative constructions of finance within local currency systems.

The Capitalization of Income Streams

At its most basic, finance consists of the mobilization of capital with which to invest. Capital can be obtained from a variety of sources, such as banks, private placement, leases, government-assisted financing, industrial development bonds, venture capital firms, letters of credit, commercial paper and futures. It does not have to be owned by the principal; indeed, capital is usually borrowed in some form. But there needs to be some kind of collateral and that usually turns out to be in the form of fixed assets that will yield a predictable income stream. Finding a predictable income stream which allows borrowing to take place, thus expanding the pool of capital that the principal has available, and the consequent scale of the profits that can be made is, therefore, a vital first step. Contrary to some literature, reputable financial institutions will not normally advance capital without some evidence of collateral or other evidence that the borrower can repay the debt. Similarly, no financial institution would become involved in the issuance of bonds or similar instruments for raising capital without some proof of a corresponding stream of income.

Thus, to be able to raise capital it is important to search out assets that will yield income that can both act as collateral and as sources of profit in their own right. This is the bottom line, literally and metaphorically (Sayer, 2002). There is, in other words, a value chain in finance which operates on that well-known financial dictum 'borrow on safe assets, invest in riskier ones', a value chain with its own attendant geography made up of the aggregation of assets at one end and the spoils of speculation shared out in a few cities of the world at the other. Yet nearly all of the attention in academia has tended to be placed on the speculative end of this chain, thus bypassing one of the abiding financial stories of the last 20 years or so which has been the search for, and the corresponding expansion of, what counts as a reliable income-yielding asset. And it is this search for spaces that can yield new dividends that we want to highlight in this article.

In the 1980s and 1990s, the financial system was reshaped by the rise of 'securitization' which, when all is said and done, is an exercise in the bundling-up of assets so that they will yield clear and defined income streams. Securitization has become a signature of the financial system during the past 20 years or so for at least three compelling reasons. First, it was often cheaper for large, blue-chip borrowers to raise capital directly from the capital markets through the securitization of their assets rather than borrowing from banks. Moreover, by securitizing their future income streams, borrowers were able to effectively realize these streams 'early' while also externalizing at least some of the risk that this future income might never be realized (*The Economist*, 1998). Second, the demand for investments from large institutional investors such as pension funds meant that there was a ready market for bonds based on securitized assets because investors were then able to diversify their portfolios. Third, and finally, by facilitating securitization banks were able to serve the borrowing needs of their clients while at the same time circumnavigating international banking regulations, such as capital adequacy requirements, that would otherwise limit the amount of money banks could advance through their own balance sheets in the form of loans (Leyshon and Thrift, 1997).

If a key motif of the financial system in the 1980s and 1990s was securitization, in the 2000s attention seems to have switched to 'hedge funds', the organizations that attempt to both invest in more creative ways and to offset risk against the background of a securitized financial system using various forms of financial instruments (often with disastrous consequences). But, at much the same time, attention has also focused on the asset classes that investment vehicles like hedge funds have worked hard at unlocking and securitizing. This attention to new asset classes was prompted especially by flat yield curves and continuing abundant liquidity, which were both outcomes of the relatively benign macroeconomic conditions, characterized by low interest rate spreads and low inflation, that prevailed across large parts of the world from the mid 1990s onwards. The search for more yield focuses attention on asset prices. Currently, this search for investment yield is one of the key drivers of the contemporary international financial system

(along with the United States' current account deficit). Yet this search for yield from new or renovated asset classes has received almost no sustained attention from academics other than economists, a situation which is in need of redress.

Whereas the assets produced through securitization were once backed by projected future incomes and revenues from large corporations and governments, now financial companies are chasing new, more closely defined asset classes, and especially classes like 'infrastructure': highways, streets, roads and bridges; mass transit; airports and airways; water supply and water resources; wastewater management; solid-waste treatment and disposal; electrical power generation and transmission; telecommunications; and hazardous waste management – and the combined systems that these elements comprise. This particular asset class is now perceived as much more exciting and valuable than was once thought to be the case, not least because it yields predictable and secure income streams over long time periods and because the supply of most infrastructure tends to depend upon a quasi-monopolistic relationship with its customers. Yet, complicating this new gold rush is the fact that, even after the waves of privatization of the 1980s and 1990s, large amounts of infrastructure still have a close relationship with the state, whether that is in the form of contracts or regulation.

To summarize, it is as important to attend to the base of the international financial system as to its superstructure of dealing and speculation. This article is intended to begin to set the balance right by focusing on new developments in identifying novel income streams that can be bundled up and used as collateral. Subsequently, we will show how new business models and large combines have been able to be built up on the back of this collateral, using a combination of new forms of expertise, fuelled by computing power and software, by constructing new income streams from within existing portfolios, by expanding the range of existing portfolios or by identifying entirely new income streams. In every case, the trick has proved to be the identification of a particular geography of revenues which were previously considered trivial or off-limits and their incorporation into the financial system by grossing up. These new financial 'regionalizations' are both cause and effect of new rounds of speculation since without them speculation must reach a limit and fail.

As we have already pointed out, it is only recently that innovation in the process of searching out new income streams has become a feature of the literature outside economics at all. For example, much more attention has been given to institutions that advance capital in some form or another and the innovations that they have been able to make. Thus, the initial concern with the securitization of financial markets was more about the development of large secondary markets based on the trading of claims on such assets, and then the proliferation of derivative markets such as futures (Cumming, 1987). Again, massive amounts of attention have been devoted to venture capital firms which, in most countries, are actually relatively small concerns. For example, the entire venture capital industry, which is

the object of almost obsessive academic attention, is dwarfed by the consumer credit industry which, thanks to the growth of credit rating over the past 20 years or so, has become an engine for the production of assets with income streams which are sold on to the highest bidder.[1]

It is for this reason that – in the consideration of these developments at least – we are more sympathetic to the theoretical literature that has emerged around the issue of so called 'financialization' than we are to that which has emerged around social studies of finance. Although both these approaches have much in common – they are broadly based within a cultural economy perspective, and are concerned with gaining a purchase on the role and effect of money and finance within the economy – they focus on rather different analytical objects. Thus, the financialization literature has chiefly attended to the growing power of money and finance within economic life broadly defined, which is seen to have agency at a range of scales, from generating instability within the economic system as a whole (Dore, 2000), through the pressure exerted on corporations in capital markets (Froud et al., 2006; Pike, 2006; Sinclair, 2005), to the equity effects of the financial system on individuals and households (Eturk et al., 2005; Langley, 2006; Martin, 2002). The political and cultural consequences of financialization include, according to Eturk et al., the emergence of a 'society of permanent restructuring where assets and ownership are endlessly churned' which has, in turn, produced an increasingly divided 'economy and polity defined by the relations between an instrumental elite which actively value skims through changing strategies for value capture and extraction, and the fuddled masses who passively value surf and hope for the best as they buy and sell houses, annuities' (2007: 6) and other forms of financial asset.

Thus, the financialization literature is concerned with the ways in which the financial system cuts across a broad swathe of political, economic and cultural life, and focuses upon distributive outcomes. The social study of finance has similar concerns, but for the most part has chosen to take as its object of study the complexities of life within the dealing rooms and trading floors of the world of high finance (for example, see Beunza and Stark, 2005; Knorr Cetina and Bruegger, 2004; MacKenzie, 2006; Zaloom, 2006). These studies have produced very important insights into the performative and contextual qualities of financial markets, and in doing so have made great strides in opening up the 'black box' of global finance, but in their struggle to draw attention to, and comb through, the fine detail of complex and complicated market practices, the analytical lens of such studies too frequently continue to breathe the rarefied air of professional financial markets. The ways in which high finance connects to other financial markets, and especially retail financial markets, remain too often only hinted at.[2]

Producing Financial Assets: Three Examples

In this section of the article, we will turn to examples of the process of hypercapitalization in action. The examples are, in some senses, surprising, in

that they show that a stable income stream can be gleaned from the most unexpected places – quite literally. At the same time, they provide an insight into the constant search for new opportunities for expansion. There are many other examples that could have been used. For example, in the United States and now in the UK, universities have been issuing bonds based on student income streams of various kinds (for example, rental income from halls of residence) or on a share of the putative intellectual property from research income. Again, in the United States, a new 'disaster capitalism' (Klein, 2005, 2006, 2007) complex has been created by a combination of government outsourcing and new state imperatives aimed at combating natural disasters like hurricanes, tsunamis, earthquakes and the like, not just in the United States but around the world. In effect, the federal state has produced contracts that deliver income streams with sufficient predictability that it has been possible for firms like the Shaw Group, Bechtel and Blackwater to raise fresh tranches of capital that would never have been possible before.[3] Finally, the current corporate vogue for 'shared services' can be seen as representing a means of reconfiguring corporate organization so as to produce new income streams out of volumes of work that did not exist before as a single stream, rather than simply outsourcing (*Financial Times*, 2006). Crucial to this development is computer software that allows a single operating system to be constructed. Developments like these are more than just privatization or reorganization; they represent the exploitation of a new income stream from which capital can be raised.

The three examples that follow provide different instances of the same process of hyper-capitalization. Thus, the first example shows how a new income stream can be aggregated from existing obligations which were never before considered to be capable of coalescence. The second example considers how public goods can be privatized and then sold on into a secondary market – with possibly dire consequences. The final example illustrates how an income stream was aggregated from debts conventionally considered too risky to act as a stable source of income, and which moved the frontier of activity and speculation outwards. In each case, value arises from the identification of a regionalization of value that would heretofore have been considered of little worth, but the availability of software and systems make these new aggregations sufficiently visible to be operated on. However, as the third case reveals, the dangers of misidentifying low-risk incomes are significant, with non-trivial consequences for the financial system as a whole. Whether it is the micro-geography of leasehold properties, the regional provider geography of public facilities, or the national geographies of the poor and those at risk, what is being sought out are spaces that can be constructed as assets for international finance.

Rents as Assets

The first example arises from the most humble of sources – ground rent.[4] In the 1970s, two Iranian-born brothers, Robert and Vincent Tchenguiz, began their climb to become two of Britain's main property magnates. Now

both multi-millionaires, with by some accounts a combined fortune of £400 million (Armitstead, 2005), their interests are based in treating buildings exactly like financial instruments. Although they started out as landlords, renting flats to students and tourists, by the late 1980s the brothers were already major players in commercial property, acting as financial technicians. Thus, their company, Rotch, set up in 1982, seldom built or developed property. Rather, it bought buildings that were guaranteed sources of income because they were occupied by blue-chip tenants that were unlikely to vacate their premises. Rotch used techniques that made valuations from statistical models that included service charges and price appreciation. The rental income covered the interest payments, leaving a bit over for profit (Walsh, 2003). The brothers then squeezed extra money out of the assets via securitization; that is, they generated bonds based on the rental payments received from their tenants. The Tchenguiz brothers were able to raise huge sums from banks – often 100 percent of the price – by appealing to a guaranteed income stream. Thus, at any one time, a large amount of the 'business' would be debt: indeed, in 2005 Vincent Tchenguiz reckoned that three-quarters of their business was debt – but the debt was working hard for them to produce additional returns.

The story is more interesting than this though. For the brothers have been creative in thinking of other property-related income streams they can leverage. In 2003, the brothers separated their business interests and set up individual companies to pursue their individual business interests, while remaining as co-chairmen of Rotch, which is currently worth some £4 billion (Goodman, 2005). The brothers have subsequently diversified into different industrial sectors as varied as residential building, estate agency, property management, general financial services and environmental technologies using different income streams and co-partners. One of the backbones of the success of Consensus, Vincent Tchenguiz's business group, has been an estate management company, Owners Provident, which has been able to aggregate ground rents from all over the UK, thus producing a fixed and very reliable stream of income (there is a very low default on payment of ground rents). In other words, the rent on the freehold of over 200,000 residential units and 2000 commercial sites is being used to raise capital, and, in particular, using banks such as UBS and HBOS, to back a bond worth £300 million over 65 years. The capital raised is being used to move into a number of new fields like human resources, spread-betting, telecommunications, environmental technologies (Davey, 2006) and a fund that will aggregate offsets from defence and other contracts[5] so that they can be put to work: another new income stream. 'We are like a hedge fund. We go long on assets – that is usually property – and short on debt' (Vincent Tchenguiz, cited in Armitstead, 2005).

What is interesting here is identifying the touchstone of value in this story. What actually is the source of profit? That turns out to be something quite simple: it is the *system* for aggregating ground rents into a mass. Ground rents need an automated system of collection and management

which is efficient and low cost. And just such a system was able to be put together: a mundane system that would reliably bill and collect. And this system is transferable to other asset classes. Thus, subsequently, as Vincent Tchenguiz has diversified into all manner of businesses, many of them have had the same computer model of aggregation at heart.

The Private Finance Initiative

The second example is from what would appear to be a much more staid world. This is the so-called Private Finance Initiative (PFI), one of a number of Public Private Partnerships (PPP) originally set up by the British Conservative government in 1992. Radically expanded under the post-1997 Labour government, PFI involves the private sector in the operation of public services, as signalled by the setting up of an industry body, the PPP Forum in 2001, an organization currently consisting of 109 organizations (Pollock, 2005). PFI is the most frequently used of these initiatives and the best known. The key difference between PFI and conventional ways of providing public services is that the public body does not own the asset because money is raised on the government's behalf, rather than being directly funded from taxation. The public body makes an annual payment to the private company, which provides the design, building and associated services for a set period of time (usually 30 years), rather like a mortgage. Thus, responsibility for the debt (including the interest and the shareholders' profits) rests with the public body, which must pay back the debt out of its annual budget. The political objective of the scheme was to update and improve the stock of facilities within the public sector, but to avoid having to fund such developments from general taxation (Clark, 1999).

A typical PFI project will be owned by a company set up especially to run the scheme. These companies are usually a consortium, including a building firm, a bank and a facilities management company, brought together to build a school or a hospital or a road or a government facility. While PFI projects can be structured in different ways, there are usually four key elements: design, finance, build and operate. PFIs have proved controversial because there are considerable misgivings over their real costs (for example, the private sector is unable raise funds for investment as cheaply as the government can).

That said, at this point in time, there are very large numbers of PFI projects in operation or nearing completion, and with more to come. But what is adding to the PFI controversy is that these projects are now becoming part of a thriving secondary market based on the guaranteed stream of income they make possible through their aggregation. They have already become the subject of specialized companies like Innisfree – established in 1996, which bills itself as 'the largest investor in hospitals and healthcare after the NHS' – SMIF (the Secondary Market Infrastructure Fund) – effectively established in 2003, with funds invested of over $400 million – and a number of other companies that are subsidiaries of large financial institutions, like HSBC for example. In effect, these companies

use the PFIs as elements of investment vehicles by buying up the interests of the original constructors – firms such as WS Atkins, Alfred McAlpine, John Laing, Jarvis and the like – and producing primary and secondary investment funds. Primary funds produce returns to investors from the early stage risks associated with bidding and developing the projects through to their operating stage, while the secondary funds produce returns to investors principally by way of the cash generated by the PFI projects during the remainder of their concession lives.

Not surprisingly, PFIs are highly attractive to large institutional investors because they enable large sums of money to be invested in assets over relatively long periods, which is essential to the management of liabilities over time (Clark, 1999). In particular, they have become very attractive to overseas institutional investors in North America, Europe and the Far East. The problem, of course, is that it is not at all clear that the British government ever envisaged a secondary market growing up in PFIs and the likely effects that might then arise. The National Audit Office (2005) has already expressed some concern about these effects. In particular, there is a real danger that these assets will be 'sweated' to deliver the income streams that investors expect and demand. It is clear that some PFIs are now being run in a way that is likely to be counter to the public interest as a result of their effective securitization, with stories of charges being increased, maintenance and repair being skimped on, and management strength being trimmed back (Pollock, 2005).

The Securitization of the Retail Financial System

The third and final example that we want to consider in this article is the transformation of the consumer credit market into an arena for the production of tradeable financial assets based on regular payments. Of course, the retail financial system has always been about the production of financial assets, although in the past these assets – such as loans and mortgages – were significant because they showed up on the company's balance sheet and were matched by liabilities in the form of savings and deposits. However, following the lead given in international financial markets, increasingly these retail assets have been drawn on not for the income that can be made on the 'spread' or difference between interest rates offered on deposits and loans, but as the raw materials for bonds and other securities that can be constructed from the regular income payments that such assets can generate. A new industry has emerged alongside the retail financial system which serves to sort and grade individual financial assets using credit-scoring software and systems which then bundle these individual assets together into income streams with different levels of risk. Thus, the purpose of making loans, mortgages and offering credit cards is, increasingly, the generation of tradeable financial assets based on the cycle of monthly repayments.

This development has had a profound impact on the way financial services organizations operate and market themselves. The organization

which best symbolized this shift was Northern Rock, a former building society based in the North East of England. After converting to a bank, Northern Rock began marketing itself as a 'mortgage bank', the primary mission of which was to make mortgage loans so that they could be securitized and sold off to generate additional income to fund further loan-making activity. In this way the bank could overcome the restrictions of a relatively small branch network and limited access to retail deposits and instead borrowed money in the short-term inter bank market to make up the bulk of the funds it advanced as mortgage loans. By 2007, about three-quarters of the money it advanced was raised through the money markets rather than through its branches. The availability of relatively cheap money in such markets brought significant cost efficiencies to the bank, and by 2007 it was responsible for almost 20 percent of the market for new UK mortgages. The change in the business model of the bank, from marketing for depositors to fund its mortgages, to marketing for investors to buy its securities, was symbolized by Northern Rock's sponsorship of the English Premier League football club, Newcastle United, which advertises the bank's logo on the chest of the team's strip. This sponsorship was designed not to link the organization to the area in which both it and the football team are based, but rather to raise the profile of the bank's brand in Asia – where Premier League football is keenly followed – because the financial markets of that region are where it sold a large proportion of its securitized mortgage bonds, which are based on the monthly repayments of UK home-owners.

The securitization of mortgages is, of course, not altogether new. It was pioneered in the US through organizations such as the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Fannie Mae was created by the federal government as long ago as 1938 to increase the flow of mortgage money, mainly to help those on low incomes to purchase a house, by creating a secondary market. Fannie Mae was authorized to buy Federal Housing Administration-insured mortgages, and then sell them on. This helped to replenish the supply of lendable money and so broadened home ownership in the US. In so doing, these organizations grew to an extraordinary size – in 2001 it was estimated that between them Fannie Mae and Freddie Mac accounted for 14 percent of all credit risk in the non-financial sector of the US economy (*The Economist*, 2002) – while paving the way for the securitization of other retail financial assets.

Traditionally, securitization has been applied to what might be described as 'middle-class' financial assets, such as loans and mortgages, which have tended to be aimed at more affluent customers (Dymski and Veitch, 1996). However, more recently, financial institutions have been exploring other market segments in the search for the raw materials that might produce financial assets, using the enormous databases constructed by specialist credit-rating companies such as Experian and Equifax which make new classes of risk and new geographies apparent. One example is the extraordinary growth of credit card debt. Originally a product aimed at

the more affluent, this debt product has now penetrated into much lower-income groups. This debt is also securitized and, because of the higher interest rates that credit card debts incur, can be used to produce higher yielding – although more risky – assets than loans or mortgages (Higgins and Mason, 2004).

The drive to produce financial assets from a broader range of the population than hitherto also lies behind the growth of what is known as sub-prime lending; that is, developing debt products for lower-income groups that were formerly thought to be too risky to lend to. Emboldened by the collection of more and more data on financial subjects and the development of new credit-scoring algorithms that allow differential aggregation, and attracted by the extraordinarily high rates of interest charged by door-to-door money lenders in low-income communities (see Leyshon et al., 2004, 2006), mainstream financial institutions have developed high-interest debt products for low-income customers (Burton et al., 2004), including mortgage finance, producing financial assets from places that were previously thought to be beyond the reach of the formal financial system, especially the inner cities and public sector housing estates.

As in the case of ground rent, what made the mining of these new seams of financial value apparently possible is the development of computer software that enables individuals to be assessed, sorted and aggregated along dimensions of risk and reward. The application of such techniques meant that borrowers who were once considered so risky that they did not constitute viable assets for the retail financial system to be able to record on a banking balance sheet were now transformed into high-risk but high-reward income streams that, through the process of securitization, were attractive for investors looking to develop a balanced portfolio.

One indication of how effective retail financial services firms have been in searching out new markets in hitherto untapped spaces through the use of new credit-rating technologies are rising levels of indebtedness among individuals and households with low incomes. Research undertaken by the the UK's Consumer Credit Counselling Service into the indebtedness of its clients revealed that low-income families are actually more highly leveraged than those with higher incomes. Those earning less than £10,000 a year had average debts of £20,316, a figure that was on average more than three times their annual income (*The Economist*, 2006a). Such customers have in the past found it difficult to access credit, and, while some of this debt is provided through traditional sources such as door-to-door money-lenders, the rising levels of borrowings indicate that new providers such as credit card companies and sub-prime lenders are successfully making inroads into these markets.

However, it is clear that the continued growth of this form of financing depends crucially on stable macroeconomic conditions, where interest rates remain historically low. As interest rates began to rise in response to inflationary pressure from the mid-2000s onwards, some of the advantages of sub-prime lending were eroded as the difference between short- and

long-term interest rates – the yield curve – was flattened, which has made obtaining money from the markets to fund such loans more expensive while at the same time increasing the costs of such even further for borrowers, as interest rates on such products were raised to compensate. Moreover, evidence began to emerge of numerous cases of mis-selling within the sub-prime mortgage market by fee-driven mortgage brokers (Doran, 2007). As a result, from 2006 onwards, a rash of problems began to emerge in such markets, from defaults by borrowers, through the failure of sub-prime lenders, particularly in the US sub-prime mortgage markets, to crises in the structured credit market for securitized assets, which had serious implications for some investment banks and hedge funds (*The Economist*, 2006, 2007; Mackintosh, 2007). As the crisis deepened in the summer of 2007, uncertainty as to the distribution of bad debt among financial institutions caused liquidity in the inter bank market to disappear. This had serious implications for several financial institutions, not least Northern Rock; unable to raise the funds it needed to fulfil its business model, the bank was forced to ask for emergency financial support from the Bank of England, prompting an unprecedented bank run as depositors panicked and removed an estimated £2 billion in just a matter of days. As a result, Northern Rock's brand was irrevocably damaged, although at the time of writing it is too early to determine whether its business model has been equally tarnished.

Discussion

It is often forgotten in discussions of financial capitalism that it is not all smoke and mirrors. There has to be something there to begin with. What we are seeing currently are attempts to make more 'something' there by producing new asset geographies. Although a great deal of attention is paid to innovation in financial markets of various kinds, what is often overlooked is that asset structures can also be the subject of innovation, both in how they are treated and what can be counted as an asset. This article has tried to set the record straight by showing that asset classes, too, have a record of innovation and it is one that is as or more inventive than the more conventional forms of financial engineering, based as it is on aggregating existing assets in novel ways or on identifying entirely new asset classes which become possible because computing power and software now allows them to be meaningfully aggregated. In either case, these assets then become a means of investment and speculation that have hitherto been unacknowledged and unreckoned.

But there is more to say than that. Most particularly, we want to point to three major consequences of forging new means of asset creation by aggregating hitherto unsuspecting geographies. The first consequence can be regarded as positive. It is possible to expand the base of financial capital in such a way that speculation is not continuously feeding on just a few asset classes, so that risk is continuously being spread (Schiller, 2003). The second consequence is negative. As we have seen, the benefits of the discovery of new assets or classes of assets are mainly reaped by financial

intermediaries, especially those with access to computing power and software which can remake assets so that they are tradeable. For example, in the case of PFI, long-range investments in public goods become subordinated to international financial imperatives. The third consequence is also negative: hidden layers of debt are being piled upon what are often mundane forms of income, and these hidden layers of debt rely upon the unproblematic unfolding of quotidian economic life. In this respect, a large amount of financial activity is predicated upon what might be described the 'ordinary economy' (Lee, 2006). But, as Lee points out, this 'ordinary' economy is in fact very complex, 'full of . . . contradictions, ethical dilemmas and multiple values' (2006: 414), strongly contextual and geographically uneven, so that economic rhythms and oscillations can vary markedly from place to place. In addition, the ability of lenders to create new tranches of assets out of this economy has helped to fuel the expansion of debt with the corollaries of marked increases in debt to income ratios, and a related increase in the size of loans taken out as multiples of income. Not surprisingly, the price of assets purchased through debt has spiralled as a result. For example, the UK government's National Housing and Planning Advice Unit reported that while in 1996 the cheapest 25 percent of houses cost on average four times the average earnings of the poorest 25 percent of the population, by 2006 these houses cost seven times their earnings; at current trends the Unit forecast that even the cheapest housing would be ten times the earnings of the poorest by 2025 (Seager, 2007). Equally predictably, there has been a marked increase in the number of people with impaired credit ratings, and steep rises in the volume of court actions taken over debt, mortgage arrears and personal bankruptcy (Munro et al., 2005).

Nevertheless, there are, we would argue, possibilities in the developments that we have outlined that might lead to progressive outcomes. One way forward is to explore the potential of harnessing the power of the global financial system to facilitate alternative and local currency systems. There have, of course, been numerous attempts to build alternative forms of finance, from micro-lending to local currency systems (North, 2006), which might tackle some of the yawning inequalities occasioned by financial systems and which might hold good on promises in the way that international finance signally fails to do in too many instances. But what is interesting is that so many of these attempts have foundered on a general lack of coherent and reliable income streams that can be projected into the future and can therefore provide the necessary faith that they will endure. We believe that the recent developments we have described hold lessons for alternative modes of finance. In particular, they suggest that alternative modes of finance can strengthen their position by means of three strategies.

First, they must identify assets with long-term streams of income that, through securitization, can be converted into a lump sum which can then be used to deepen and widen alternative economies. Of course, to do so means that participants in local currency systems must come to an

accommodation with the wider financial system. For some this will be difficult ethically, given that many of those active in such movements are motivated by an attempt to participate in an economic system which they see as in opposition to the oppression of global capitalism (Lee et al., 2004). However, it is possible to make such accommodations in the interest of wider development aims, as in the case of the trust funds established in economically weak but resource-rich territories, such as those in the Pacific and North America that, through long-term investments of windfall incomes, have delivered steady supplements to incomes over many years (see Pretes, 1988, 2006).

Second, to make such income streams viable they must ensure that they enrol a wider section of the population than has hitherto been willing to commit to such projects to ensure that such income streams can be leveraged in ways that have traction in capital markets. One of the major problems with alternative economic strategies has been their failure to move beyond a relatively small core of committed adherents (Leyshon and Lee, 2003), in part because they have not been able to impart sufficient faith in their efficacy as financial vehicles. Though there are people who, no doubt for good reason, want to opt out of the formal financial system, the fact is that many more people want to be included in it but simply do not have the assets to declare a hand.

Third, they need to find common software packages that will aggregate assets to such a degree that they are valuable. Of course, it is always possible to opt for a pristine purity, by reaching out only to a small number of people of a similar persuasion. But if alternative economic systems are to be successful, they have to scale up, and to reach less well off people (the two being connected). It may be that they can take a leaf out of the kinds of developments we have marked out in this article. In turn, they will be faced with the kinds of ideological dilemmas that come from encounters with the international financial system but that, as they say, is politics. Moreover, other alternative economic movements have been able to achieve at least some success by moving in this direction, as the examples of microfinance and the pursuit of legal title for the poor both demonstrate. In both cases, significantly, these movements are often billed as promoting the unlocking of capital and, in a certain sense, in their search for new sources of income, they mirror what is going on currently in the international financial system. Indeed, Citicorp, one of the world's largest global banks, is working with large microfinance firms in Mexico to securitize their loan portfolios and sell them on to investors. In so doing, they immediately replenish the funds available to microfinance firms, which can then be recycled into new loans. However, such strategies are, of course, not without problems. Microfinance has become locked into formal financial circuits in such a way that it has been criticized for becoming too similar to ordinary (and ruinous) moneylending, while the unlocking of legal title has proved less of a panacea than originally thought (*The Economist*, 2006). Still, in the absence of alternatives, such methods of marshalling new income streams

have proved far more efficacious than most others in working to improve the financial circumstances of the poor, and in relating what are often thought of as mutually exclusive geographies.

Notes

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1. This is not, of course, to diminish the effect of bundling and unbundling of assets by venture capital firms. A good example close to home is provided by the buy-out in 2005 of the *Times Educational Supplement* and the *Times Higher Education Supplement*, as well as a number of other titles, from Times Supplements by a group of four venture capitalists (Exponent Private Equity), to form a company now trading as TSL Ltd. In turn, these assets are being sweated in a variety of ways.

2. It follows that a social studies of finance analysis of the kinds of hyper-capitalization that we outline in the next section would be most instructive and welcome, not least because it would necessarily combine a close attention to the practice and performativity of financial markets with the implicit distributional and equity concerns of the financialization literature.

3. It is also significant that these very companies have been prominent beneficiaries of the contracts issued by the US government in its efforts to 'rebuild' Iraq after the distinctly unnatural disaster which followed the 2003 invasion (Klein, 2007).

4. The fee that is paid, usually annually, for the use of land when title to a property is held as a leasehold estate rather than as a freehold estate.

5. Many defence and other contracts come with an offset clause, typically amounting to 7 percent of the value. This might insist that a certain proportion of a contract is spent in the contracting country. It might insist that environmental damage is offset by remedial work, by investing in environmental technologies, and so on. Until recently, this offset clause was not always fulfilled with the result that hefty penalties were applied. It is therefore better to found funds that will soak this money up and also make speculative gains on top of it.

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Andrew Leyshon is Professor of Economic Georgraphy at the University of Nottingham. (andrew.leyshon@nottingham.ac.uk)

Nigel Thrift is Vice-Chancellor of the University of Warwick. (nigel.thrift@warwick.ac.uk)