Financialization and the Consumer Credit Boom

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Abstract

Viewed in retrospect, the concept of 'financialization' highlights the massive growth

in the issue and trading of ownership claims on all manner of instruments. It has also

opened the way for research linking these changes in the financial markets to

disciplinary transformations in corporate management and governance. There are,

however, future prospects for financialization research once the concept is re-worked

from a cultural political economy perspective and changes in the financial markets are

linked to the consumer credit boom in Anglo-American economies. Grounded in the

calculative creation and management of default risk by lenders, markets for asset-

backed securities and credit derivatives have emerged that trade claims on the future

repayments of borrowers on car loans, credit cards and so on. Disciplinary

transformations also arise in everyday financial self-government. Thrift and prudence

are no longer paramount in extending individual freedom and security, but are

displaced by the responsible and entrepreneurial meeting, management and

manipulation of outstanding obligations.

Keywords:

financialization; consumer credit: default risk: asset-backed

securitization; financial self-government

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Introduction: frontiers of financialization

engaging with the growing literature framed by the concept of 'financialization' are left in little doubt that, in Anglo-American economies at least, the present conjuncture is one in which finance has come to dominate the 'real' economy. Nonetheless, it is also apparent that one of the principal features of Anglo-American economies in recent decades – the boom in consumer borrowing – has remained largely neglected in this literature. With the exception of Montgomerie (2006), it would seem that, in retrospect, the boundaries for financialization research have been artificially and prematurely drawn around the nexus of the financial and productive economies. In this paper, I want to begin to push back the frontiers of financialization research to show that the concept of financialization can inform illuminating analyses of the consumer credit boom. While policy-makers, academics and commentators typically focus on the quantitative growth in outstanding obligations arising from consumer borrowing, typically expressed as a percentage of gross domestic product or average household wealth (e.g. Aizcorbe et al. 2003; Bank of England 2006; Clayton 2000; Hickman 2007), the concept of financialization provides a means of interrogating the qualitative transformations that make the boom possible.

At the same time, however, I also want to argue that extending the frontiers of financialization research is not simply a matter of applying the concept to new empirical terrain. Rather, a re-worked conceptualization of financialization is required. As Erturk et al. (2007) suggest in broad terms, financialization research needs to embrace a move from political economy to cultural political economy if it is

to round-out its undoubted potential. At present, and reading across the financialization literature, the concept can be said to refer to two broad sets of tendencies in Anglo-American economies. First, financialization denotes the tendency toward the growth in the speculative issue and trading of all manner of financial market instruments and ownership claims (Amin 1996; Blackburn 2006; Boyer 2000; Brenner 2002; Duménil and Lévy 2004; Epstein and Jayadev 2005; Froud et al. 2001, 2002; Henwood 2003; Krippner 2005). Second, financialization refers to the tendency for financial disciplines to come to dominate in corporate management and governance, the shaping and performance of corporate management subjects and strategies in the name of delivering 'shareholder value' (Aglietta and Breton 2001; Aglietta and Rebérioux 2005; Cutler and Waine 2001; Froud et al. 2006; Lazonick and O'Sullivan 2000; Roberts et al. 2006; Stockhammer 2004). What is needed, I would contend, is a cultural political economy that considers how, precisely, these tendencies to financialization materialize. Scientific and calculative representations of finance are key in the constitution of modern financial power (de Goede 2005), and thus in the materialization of contemporary tendencies to financialization. But, financial power and financialization tendencies are far from assured or complete. They are constantly assembled and re-assembled in more-or-less discrete economic actor-networks (MacKenzie 2006), and are embodied through processes of identification that extend through the centers of 'high finance' and the corporate boardroom to the workplace, shopping mall and home (Langley, in press).

In pushing back the frontiers of financialization research both empirically and conceptually, the paper develops below across two sections. Taking as its starting point the tendency for the growth in the issue and trading of all manner of financial

market instruments, the first section re-thinks this tendency from a cultural political economy perspective and analyses its place in the consumer credit boom. Attention is drawn to the creation and trading of financial instruments through the scientific and calculative prism of 'risk', and the specific 'default risk' management techniques of lenders in the course of the consumer credit boom. While it is widely recognized that default risk management is assembled through the calculations of credit reporting and scoring (Leyshon and Thrift 1999; Marron 2007), a re-worked concept of financialization encourages a focus on the techniques of asset-backed securitization and credit derivatives that turn on the issue and trading of default risk-related instruments in the capital markets. Buoyed by the confidence and scientific legitimacy of an apparent newly-found calculative capacity to break down and communicate uncertainties of future repayments as default risks, and intersecting with apparently liquid markets for the purchase and trading of those risks, consumer lending has exploded.

The second section of paper addresses the tendency for financial disciplines to dominate Anglo-American economies. It re-conceptualises this tendency from a cultural political economy perspective, and considers its presence in the consumer credit boom. Drawing on financialization writers' embryonic interest in the disciplining of household and individual saving (Erturk et al. 2007; Froud et al. 2002; Martin 2002), and on work that outlines the assembly of 'investor subjects' with reference to the Foucauldian-inspired category of 'governmentality' (Aitken 2007; Knights 1997; Langley 2006b, 2007), I suggest that the making of financial subjects and financial self-disciplines more broadly plays on freedom and security as central features of (neo)liberal governmentality. In the consumer credit boom, then, prudence

and thrift are displaced by new moral and calculative self-disciplines of responsibly and entrepreneurially meeting, managing and manipulating ever-increasing outstanding obligations. I illustrate this self-disciplinary tendency of financialization by exploring the assembly of the responsible and entrepreneurial borrowers of contemporary credit card networks, a subject position commonly known as 'the revolver'. I conclude the paper by highlighting the volatilities and uncertainties that are currently present in financialized consumer credit networks.

Consumer credit networks and default risk

Perhaps the principal contribution of financialization research to-date has been to stress that, in contemporary Anglo-American economies at least, there is a tendency toward the growth in the speculative issue and trading of all manner of financial market instruments and ownership claims. A notable feature of this tendency, as Aglietta and Rebérioux (2005: 142-3) highlight, is a shift from the 'logic of risk intermediation' to the 'logic of risk decomposition' and 'risk transfer'. This shift, of course, is often known by financial market practitioners and economists as the process of 'disintermediation', or as the move from an 'originate-and-hold' to an 'originate-and-distribute' model of banking. But, as cultural political economists of finance argue more broadly, the scientific and calculative discourses of 'risk' and 'disintermediation' are in themselves constitutive in the materialization and performance of transformations in finance (de Goede 2004; French and Leyshon 2004; MacKenzie 2006; Tickell 2000). Much of the growth in speculative financial accumulation, most obviously through the derivatives markets (LiPuma and Lee 2004), can be attributed to attempts to calculate, price, diversify and trade future

economic and financial uncertainties as 'risks'. It follows that, in exploring financialization and the consumer credit boom, we should pay particular attention to the specific 'default risk' management techniques of lenders that have increasingly come to turn on the issue and trading of default-risk related instruments in the capital markets.

The importance of the capital markets to Anglo-American consumer borrowing is widely recognized, both in the popular media and by policy-makers. The Economist (2003, 2005) magazine's recent surveys of the world economy stress, for example, the extent to which world economic growth has come to rest on the spending and borrowing habits of US governments and consumers. The US borrowing boom - and, by implication, given Britain's growing current account deficit, the Anglo-American boom – has and continues to made possible by capital inflows from Germany, oilexporting states, and especially Japan, China and the rest of Asia. The International Monetary Fund (2004) warns, meanwhile, that a rupture in the pattern of capital flows into the US poses the single greatest threat to what they call 'global financial stability'. While the financial markets loom large in popular accounts of the Anglo-American consumer borrowing boom, then, markets are understood in largely quantitative and material terms as providing the sums of global capital that fund the boom. Qualitative transformations in consumer credit networks, and the forging of close relationships with the networks of the capital markets, do not feature in these analyses. Yet, transformations in consumer credit networks, gathering pace over the last three decades or so, have made it possible for the capital markets to nourish extended consumer borrowing.

A key feature in the contemporary transformations of consumer credit networks is how so-called 'default risk' is now managed by lenders. Whether or not individuals and households will meet the outstanding obligations arising from their borrowing is always uncertain. The category of 'default risk' constructs, names, measures and licenses a range of calculative techniques for the management of these uncertainties. The rise of one set of calculative devices of default risk – credit reporting and scoring – has been subjected to particular scrutiny by social scientists of finance. As Leyshon and Thrift (1999) suggest, the uncertainties of repayment in networks of mortgage and consumer borrowing were managed during the post-war years through largely relational and 'face-to-face' practices. In contrast, credit reporting and scoring have come to literally re-reckon the uncertainties of repayment 'at-a-distance' over the last couple of decades (Guseva and Rona-Tas 2001; Marron 2007). The statistical and predictive calculation of default risks through credit reporting and scoring has thus constituted the boom in consumer borrowing as rational, scientific and controlled. This is especially the case as lenders have come to embrace would-be borrowers that were previously excluded and deemed too 'risky', as credit scoring provides the foundations for so-called 'risk-based pricing' (Burton et al. 2004; Dymski 2005). In risk-based pricing, both the future and the past meet in the stratified risk calculations and pricing decisions that are made in the present by lenders. Probabilities for default for different categories of borrower are determined on the basis of inference from statistics on past credit records. Graduated rates of interest become payable by borrowers according to how they are categorized by lenders in terms of default risk.

Although credit reporting and scoring have become increasingly significant in transformed consumer credit networks, they are only part of the re-reckoning and

reconfiguration of the uncertainties of repayment as default risks. The boom in consumer borrowing has also been marked by the explosive growth in the issue and trading of financial market instruments associated with the default risks of consumer borrowers. Put differently, the materialization of boom in consumer borrowing is also a story of the financialization of consumer credit networks. During the post-war period, banks tended to manage default risks arising from their mortgage and consumer loans through one of the principal calculative tools of accountancy, the balance sheet. It is the balance sheet that names and determines loans are 'assets' that have to be matched by savings and other forms of capital as 'liabilities'. A lender would issue a loan, collect and monitor payments, and, in effect, hold the 'asset' on their balance sheet until the interest and principal was paid. Non-bank lenders, meanwhile, undertook practices of factoring transactions which, while enabling them to sell on their receivables, did not create a liquid secondary market (Partnoy 2004: 76). Contemporary calculative tools of default risk target the management of the asset side of the balance sheet. Assets are broken down into 'elementary risk factors' and 'become an object of stochastic evaluation' (Aglietta and Rebérioux 2005: 142). As Aglietta and Rebérioux continue, the consequence of this risk decomposition is risk transfer, that is, it becomes 'possible to spread risks over the broadest population of financial investors' (p. 143). The operation of tools of default risk transfer in booming consumer credit networks, especially asset-backed securitization but also the use of credit derivatives, turns, then, on the issue and trading of default risk-related instruments in apparently liquid capital markets.

Asset-backed securitization (ABS) is the practice of 'bundling' or 'pooling' together a stream of future repayments arising from everyday borrowing to provide the basis for

the issue of, and payment of interest and principal on, securities (typically fixed-rate bonds). In short, financial assets are commodified and liquidified in a particular way. Thus, the process of ABS involves the transfer of a pool of relatively homogeneous assets from the lender ('originator' or 'issuer') to a special purchase vehicle (SPV). The SPV, which typically has trust status under law, finances the transfer of these assets through the issue of tradable securities. The trust status of the SPV makes the securities attractive to investors, as 'even if the bank filed for bankruptcy protection, the trust's assets would be secure' (Partnoy 2004: 77). The payment of interest and principal on the securities is directly dependent on the cash flows (which themselves are repayments by borrowers) arising from the underlying pooled assets.

The first significant growth in ABS practices took place in the US in the late 1970s and 1980s, with the residential mortgages of S&Ls and thrifts providing the underlying assets bundled together – so-called 'mortgage-backed securities' (MBS) (Carruthers and Stinchcombe 1999; Langley 2006a; Pryke and Whitehead 1994). From the mid-to-late 1980s, ABS on both sides of the Atlantic moved beyond mortgages to increasingly embrace a wide range of repayment obligations for which it is possible to forecast future cash flows – e.g. car loans (certificates for automobile receivables, the 'CARs market'), credit card receivables (certificates for amortizing revolving debts, the 'CARDs market'), student loans, and even phone bills. According to Securities Industry and Financial Markets Association (2006) figures, the value of outstanding bonds in the US CARs market increased from \$59.5 billion to \$234.5 billion between 1995 and 2003, with the value of the CARDs market increasing from \$153.1 billion to \$401.9 billion over the same period. So-called 'centralized lenders' or 'non-banks' who depend on the wholesale markets to raise capital are amongst the

largest originators of non-mortgage ABS programmes in the US, including General Motors Acceptance Corporation (GMAC) for CARs, and MBNA, GE Capital and Capital One for CARDs.

Securitization is written into the performances of lending through the accounting calculations of the balance sheet. ABS is a particular form of 'off-balance sheet' accounting, whereby assets are isolated, repackaged and sold on the capital markets, and liabilities are thus reduced.). The common practice by banks of separating out their credit card businesses from the rest of their operations (and thus from their liabilities in the form of personal savings) is also only possible due to off-balance sheet accounting. More broadly, the movement of assets off-balance sheet enables credit card issuers and consumer lenders of all kinds to generate new assets whilst holding only a relatively small capital base (whether in the form of personal savings, capital market borrowing, or share capital). Recently, for example, the so-called 'customer funding gap' of the major UK banks – that is, 'the amount of customer lending not financed through customer deposits' – grew from 0 percent to 11 percent between 2001 and 2005 as lending expanded significantly (Bank of England 2006: 28).

Off-balance sheet accounting is also closely related to the self-regulatory in-house risk assessment models that are now employed by lenders (de Goede 2004; Power 2005). Both off-balance sheet accounting and risk assessment models target efficiency gains in relation to capital. In a similar vein, off-balance sheet accounting also simultaneously makes it possible to 'avoid tax leakage' (Ashman and Black 2002: 63), and may well be closely related to the accounting tools of tax avoidance. The

movement of assets off-balance sheet to an SPV, the associated issue of ABS, and the resulting pattern of cash flows, are all potentially subject to taxation (Harrower 2002). Taxes on the transfer of assets can be subject to capital gains tax, for example, while the issue of securities may require stamp duty to be paid and payments may necessitate withholding tax. The SPVs to which assets are transferred from an originators balance sheet are, therefore, in many instances registered in jurisdictions such as the Cayman Islands for US-based originators, and Jersey, Luxembourg and Dublin for UK-based originators. Each jurisdiction provides the networks of Anglo-American consumer lending with regulatory spaces that shelter ABS programmes from taxation.

The calculative judgements of the principal bond rating agencies — most notably Standard & Poors Ratings Group, Moody's Investor Services, and Fitch Investors' Service — are also significant in figuring ABS. According to Partnoy (2004: 77), investors initially 'rushed to buy' ABS because 'the trusts typically received very high credit ratings'. The authority of the rating agencies is derived from their apparently expert deployment of the seemingly objective tools of credit rating. Their ostensible vigilance and continuous monitoring appears necessary to the generation of their principal product in relation to each bond issued: 'a letter symbol reflecting a relative ranking on a scale from most to least creditworthy' (Sinclair 1994: 138-9). Once rated, a set of bonds issued in the CARDs market, for example, thus become relatively transparent financial instruments for investors. They are comparable, at a glance and in terms of risk, both with MBS, corporate and sovereign bonds on the one hand, and with other bonds in the CARDs market on the other. To follow the example through, the credit scores of the cardholders whose repayments are bundled together to provide

the basis for the bond issue form an important point of reference for the rating given to the bonds. As Guseva and Rona-Tas (2001: 632) put it, 'The calculation of the risk of a security on the secondary market rests on the primary calculation of the risk of the card debt portfolio'.

The calculations of the bond rating process also underpin the practices of so-called 'structured finance' which have come increasingly to the fore in ABS programmes. Indeed, the terms 'securitization' and 'structured finance' have come to be used somewhat interchangeably. Here the bonds issued through the process of ABS take the form of collateralized bond obligations (CBOs), or collateralized debt obligations (CDOs) more broadly. CBOs/CDOs are 'structured', whereby the 'senior tranche' of bonds is differentiated from the 'first loss' tranche and the various 'mezzanine layers' in between. The senior tranche is highly rated as a relatively low-risk and lowyielding set of CDOs, while the potential for default is born disproportionately by holders of the first loss tranche of CDOs which, accordingly, receive a low credit rating as relatively high-risk and (potentially) high-yielding bonds. According to Bank of England (2006) figures, the global value of CDOs now stands at \$1 trillion, roughly the equivalent of the funds currently under management by hedge funds. In this regard, it is important to note that the growth of liquid markets in CBOs/CDOs has not been solely related to ABS and consumer credit networks. Indeed, for Partnoy (2004: 77-8), 'CBOs are one of the threads that run through the past fifteen years of financial markets, ranging from Michael Milken to First Boston to Enron and WorldCom'. Nevertheless, figures from the Securities Industry and Financial Markets Association (2006) on the value of ABS outstanding in the US, subdivided by instrument, give a strong indication of the growing use of CBOs/CDOs in consumer

credit networks. The value of outstanding CBOs/CDOs in the US increased from a mere \$1.2 billion in 1995 to \$296.9 billion by the third quarter of 2006. CBOs/CDOs only accounted for 0.4 percent of all outstanding ABS in 1995, but are now equivalent to 14.7 percent of the total. The slight falls since 2003 in the value of outstanding CARs and CARDs ABS that are registered in these figure would also seem to reflect the growing prominence of CBOs/CDOs.

The development of structured finance is regarded by practitioners as the tailoring of ABS programmes to the different 'appetites for risk' held by potential investors. While the interest paid to all investors who hold ABS is, in effect, their reward for taking on and bearing default risk, the limited but more-or-less certain returns from highly-rated ABS, for example, may not be attractive to certain investors. Investors in ABS calculate, strategize and justify the purchase, holding and trading of such default risk-related instruments through the assumptions and models of asset management. As I have argued elsewhere (Langley 2004), asset management is crucial in the constitution of the networks of the contemporary capital markets. For pension funds and other institutional investors seeking to further diversify their portfolio into lower-risk instruments, then, AAA-rated ABS may well be regarded as providing an alternative to equally highly-rated sovereign and corporate bonds. Similarly, within an CBO/CDO issue, the lower-risk senior tranche typically appeals to pension funds and insurers, while the higher-risk tranches are attractive to mutual funds, investment banks, structured investment vehicles and hedge funds.

While for the most part, then, it is ABS that has been constituted through the isolation and breaking down of the assets of mortgage and consumer credit providers through the calculative prism of 'default risk', the active management of assets understood as a portfolio of risks has more recently stimulated derivatives practices. Rather than repackaging assets and moving them off-balance sheet by selling them on to investors, credit derivatives contracts are used by lenders to manage the default risks that are associated with their assets. In short, it is not assets that are commodified and liquidified, but the default risks calculated for those assets that are commodified and liquidified. The principal contracts take the form of credit default swaps (CDS), and also so-called 'synthetic CDOs' which create tranches of CDS.

The most common credit derivative, CDS have been around for a decade or so, and continue to be central to the rapidly accelerating growth of credit derivatives. The total value of outstanding credit derivatives in 1996 was \$180 billion, growing to \$893 billion by 2000, \$5,021 billion by 2004, and \$20,207 billion by 2006 (Barrett and Ewan 2006). Much of the growth in issuance of CDS has been related to banks' lending to their corporate customers and, according to Partnoy (2004: 374-6), is the principal reason why the major US corporate bankruptcies of the first years of the new millennium (Enron, Global Crossing, Kmart, WorldCom) did not also bring down their bankers. But a CDS contract operates much the same for corporate and everyday borrowers. In consumer credit networks, buyers of CDS contracts, derived from a specific set of 'reference assets' (e.g. personal loans) on their balance sheet, 'sell on' only the default risks that have been calculated for those assets and not the assets themselves. In return for receiving a regular premium for the ownership of default risk, sellers of CDS are liable to provide contingent funds to the lender should specified 'credit events' (defaults) occur in relation to the reference assets. The standardization of probability calculations for defaults on different groups of reference assets, such as car loans, ensures that CDS can be traded between sellers in secondary markets (Aglietta and Rebérioux 2005: 163). Banks and insurance companies tend to be the principal buyers and sellers of CDS. Roughly one-third of banks' volume of credit derivative activity is related to their loan book which includes lending to everyday borrowers, and two-thirds is related to trading (Barrett and Ewan 2006).

Credit card networks and financial self-discipline

From a cultural political economy perspective, then, the concept of financialization highlights that the consumer credit boom is embedded in transformations in networks of lending, and in the reconfiguration and trading of 'default risks' in particular. The concept of financialization – as it refers to the tendency for financial disciplines to come to dominate in corporate management and governance – can also be re-worked from this perspective in order to stress a further feature of the consumer credit boom. To date, financialization writers have shown an embryonic interest in how disciplinary pressures are felt not only by corporate managers, but by households and individuals (Erturk et al. 2007; Froud et al. 2002; Martin 2002). In Randy Martin's (2002: 3) terms, for example, there is currently an 'invitation to live by finance', where finance 'presents itself ... as a means for the acquisition of the self ... a proposal for how to get ahead'. The embodiment of financial disciplines has, however, been explored in the financialization literature exclusively in terms of saving and investment performances.

Cultural political economists of finance who draw on the Foucault-inspired category of 'governmentality' have similarly focused their attention on the assembly of 'investor subjects' (Aitken 2007; Knights 1997; Langley 2006b, 2007). Although it becomes clear that the making of financial subjects and financial self-disciplines plays on freedom and security as central features of (neo)liberal governmentality, the embodiment of booming consumer borrowing is not considered. Within the governmentality literature, the financial government of the self by the self is associated primarily with insurance as a technology of risk (e.g. O'Malley 2004). For example, David Knights (1997: 224) describes 'financial self-discipline' in liberal societies as 'a form of discipline grounded on a social ethic which has economic rationality, planning and foresight, prudence, and social and moral responsibility among its cardinal virtues'. But, this rather one-dimensional characterization of financial self-discipline in terms of prudence seems to give the impression that 'selfdiscipline' is somehow intimately bound-up with thrifty self-denial. I want to suggest, then, that financial self-disciplines of saving and insurance, and more recently investment (Langley 2006b; 2007), co-exist in the contemporary neo-liberal period with the self-disciplines of responsibly and entrepreneurially meeting, managing and manipulating the obligations that arise from extended consumer borrowing.

In credit card networks, the self-disciplined subject of responsible and entrepreneurial borrowing is assembled, specifically, as what we will call 'the revolver'. The calculative technologies of revolving credit call up revolvers who both extend their credit card borrowing, and tend not to meet their outstanding obligations in full at the end of each month. Indeed, in the terms of lenders in consumer credit networks, the revolver has a prudent and thrifty other, the so-called 'deadbeat' who settles their bill

at the end of each month. Roughly two-thirds of Americans regularly make use of revolving credit facilities and, in effect, begin to perform the subject position of the revolver (cf. Ritzer 1995: 34). The remaining one-third are clearly not all deadbeats, as a large number in US (and also UK) society are deemed too risky by lenders and remain excluded from consumer credit networks. The outstanding obligations of US revolvers average out at around \$13,000 each (Moss 2004). Given that it is these revolving balances that are the key to profitability for card issuers, recent innovations such as cash-back reward cards are an explicit attempt to concentrate those balances on a single card. The 'average' American in 1999 had eleven credit cards, up from seven in 1989 (Clayton 2000: 90).

Representations of the revolver clearly play on the relationship between money and freedom noted by Simmel (1990) and others, such that consumer credit appears as 'a source of freedom from the bondage of the need to earn and save before purchase becomes possible' (Shaoul 1997: 81). It follows that the holder of a large number of credit cards with sizeable revolving credit limits on each feels particularly liberated. They hold the freedom to choose to purchase today and payback tomorrow. Thus while the revolver is differentiated by lenders in relational terms against the deadbeat, the most important other in the assembly of the revolver remains a subject for whom the inability to access consumer credit results in a serious curtailment of freedom.

The technologies of credit reporting and scoring that are at work in credit card networks ensure that a successful revolver is a responsible borrower. Revolvers must necessarily make at least minimum repayments on their outstanding obligations at the end of each month. Such regular payment of obligations, in the context of fluctuating

patterns of income and expenditure, comes to be normalized. Without such normalization, the new techniques of default risk management by lenders that were discussed in the previous section would simply not be possible. For the revolver, meanwhile, making regular payments is likely to result in the further extension of a line of credit, and a good repayment history may well mean that a borrower is targeted by additional credit card issuers. At the same time, card-holders are made aware that deviation and the failure to meet at least minimum repayments will be punished. Such deviation is represented as irrational, as the credit ratings of so-called 'delinquents' are downgraded and their access to credit dries up. Delinquents can no longer experience the consumptive freedom and security that comes through revolving credit, and are consigned to the realm of pawn shops and pay-check lending that Rob Aitken (2006) terms 'fringe finance'.

The financial self-discipline of the revolver has, furthermore, come to turn not only on making and planning repayments, but on the entrepreneurial and calculative management and manipulation of outstanding obligations. Four examples are especially illustrative. First, and perhaps most simply, revolving credit assembles a responsible borrower who is able to extend the time horizons across which they will meet their outstanding obligations. For some this may mean that, despite increased borrowing, the overall ratio of monthly payments to income will remain largely unchanged. In the UK, for example, the average duration that cardholders take to clear their outstanding balances increased from three months in 1997, to five months in 2002 (House of Commons Treasury Committee 2003: 45).

Second, perhaps the signature performance of the revolver during the last decade or so has been the transfer of an outstanding balance from one credit card to another. The motivation here is to take advantage of reduced introductory-offer interest rates ('teaser rates') in order to, in effect, reduce outstanding obligations. The personal finance sections of major newspapers, as well as the countless money advice websites, provide tables listing the best available current offers that, for example, provide 0 percent interest payable on balance transfers for a twelve month period. Nearly 4.5 million cardholders in the UK have, for example, taken advantage of teaser rates and transferred their revolving balances to another card (Meyer 2005). The frustrations of the credit card industry with those who regularly and routinely transfer their outstanding balances from one card to another and so on, leading them to label such individuals 'rate tarts', has furthermore only served to reinforce such practices. The 'rate tart' who searches on-line for the best deal on a balance transfer is, as in the traditional colloquial sense of the term 'tart', a promiscuous women of unsound virtue who is to be condemned. However, given the more ambiguous meaning of 'tart' in contemporary parlance and its general association by the young with a hedonistic lifestyle, the implication is also that those represented as a 'rate tart' may be gaining some considerable pleasure and enjoyment at the expense of a less promiscuous other. Some leading credit card issuers in the UK, such as Barclays, Egg, and MBNA, moved in mid-2005 to curtail these pleasures by imposing charges of around 2 percent on balance transfers. In a period of historically low interest rates, however, large numbers of issuers continue to make it possible for savvy and canny revolvers to regularly move their balance from one card to another at no cost.

Third, and related to the second, simultaneous performances of borrowing across overlapping credit card, bank loan and mortgage networks call up revolvers who entrepreneurially substitute credit card obligations for alternative repayments at lower rates of interest. This so-called 'debt consolidation' has come to concentrate on mortgage refinancing and equity withdrawal, especially in the period of low interest rates and rising house prices from the latter half of the 1990s in the UK, and between 2000 and 2004 in the US. By way of illustration, mortgage equity withdrawal in the UK increased from -£1.4 billion in the fourth quarter of 1995 to £13.5 billion by the first quarter of 2003 (Anderson 2004: 49). The rates of interest payable on mortgages as secured debt are, of course, lower than those that prevail for unsecured credit card debt. In the US, the rate of increase for total unsecured consumer borrowing has slowed somewhat since 2001. But the first years of the new millennium were also marked by a sharp increase in outstanding mortgage obligations. While partly related to roaring house prices and the changing subjectivities of residential property ownership that I have discussed elsewhere (Langley 2006a), there are also strong indications that, in the words of the Joint Economic Committee (2004: 2) of the US Senate, 'many households have re-financed their homes in part to pay off higher interest debt'. According to a Freddie Mac (2005) brochure, a staggering \$500 billion worth of home equity was released through re-mortgaging in the US from 2002 to 2005. And it appears that roughly one-quarter of those who have refinanced their mortgages in recent times in the US have increased their obligations in order to pay off consumer debts (Aizcorbe et al. 2003: 25-6; Moss 2004). For Alan Greenspan (2004), then, there is little doubt that this debt consolidation is a rational move: 'the surge in mortgage refinancings likely improved rather than worsened the financial condition of the average homeowner'.

Fourth, a further illustrative example of revolvers managing their outstanding obligations is the summoning up of subjects who seek to improve their credit score. The central principle here is that a good credit report is a passport to credit and, significantly, to being offered lower rates of interest on that credit. Lender's riskbased pricing techniques come to be represented as an opportunity for the savvy revolver. In the US, the Federal Trade Commission (2006) has recently amended the Fair Credit Reporting Act in order to create greater transparency with regard to an individual's credit reports and score. But, a credit scores is not simply something to be discovered by individual. It is also the focus for self-disciplinary entrepreneurialism. For example, on both sides of the Atlantic, as the main credit agencies such as Equifax, Experian, and Fair Isaac Corporation offer individuals the opportunity to purchase access to their credit histories/scores, they also provide tips and guidelines on how to improve a credit score. For example, Equifax encourages individuals to 'level the playing field' with potential lenders by purchasing what they call 'Score Power', an individualized package of report and tools for management that feature the 'Interactive Score Simulator' to show how certain actions may change a credit score.¹ Such simulators are also being used by credit counselling agencies as an educational tool (Bayot 2003). Similarly, for those borrowers who find that their credit report/score is an obstacle to securing access to credit at reasonable rates of interest, the burgeoning array of 'personal finance' literature now available in book stores also includes publications such as Rose's (1997) The DIY Credit Repair Manual. Websites have even emerged for companies that offer to improve individual's credit scores by

¹https://www.econsumer.equifax.com/consumer/sitepage.ehtml?forward=cps_detail&pageMod=prodMod

'piggybacking' them on the credit cards of those who have good scores – that is, their names are added to the credit card account for a fee.

Concluding remarks: volatilities and uncertainties

This paper has argued that a re-worked concept of financialization holds considerable insights for our understanding of the Anglo-American consumer credit boom. Through asset-backed securitization and the use of credit derivatives, markets have emerged for the issue and trading of claims on risks associated with the future repayments of consumer borrowers. Lenders can thus support a greater and growing scale of borrowing in consumer credit networks than would otherwise be the case. Disciplinary transformations also arise in financial self-government. Here thrift and prudence are no longer paramount in extending individual freedom and security, but are displaced by new financial self-disciplines of responsibly and entrepreneurially meeting, managing and manipulating the outstanding obligations that arise from extended borrowing. The qualitative transformations in consumer credit networks that are revealed through the concept of financialization are, however, far from unproblematic. As I argue elsewhere in relation to the recent crisis of US sub-prime mortgage networks in particular, the reconfiguration of default risk and the assembly of responsible and entrepreneurial borrowers introduces new volatilities and uncertainties into everyday borrowing networks (Langley, in press). If the prospects that the concept of financialization holds for illuminating analyses of the consumer credit boom are to be fully realized, further research is certainly required into these volatilities and uncertainties.

The spreading of risk through ABS and credit derivatives is viewed in highlyfavourable terms by orthodox financial economists and policy-makers who emphasize the efficiencies of disintermediated finance. For the Bank of England (2006: 21), for instance, 'Financial engineering of this type does not alter the financial sector's aggregate credit exposure to the non-financial sector. It does, however, alter the distribution of risk within the financial sector by concentrating it in some securities and reducing it in others. This can improve systemic stability if risk is held by those with the greatest capacity to absorb losses'. But, as the Bank also notes on the same page, 'investors in these securities are vulnerable to macroeconomic risks that affect many of the underlying ABS at the same time'. ABS investors can thus fall victim to what Aglietta and Breton (2001: 437) describe as 'an ever-present tension' in seemingly liquid markets, or what Keynes (1961) famously termed the 'liquidity illusion'. In our terms, there is always the chance of mass sell-offs, a collapse in prices, and a flight from asset-backed securities to other relatively liquid instruments because future collective or 'macroeconomic' uncertainties over borrowers repayments cannot be completely or perfectly calculated as risks. The techniques of ABS and structured finance are, therefore, 'pro-cyclical' and increase the possibilities of a 'credit crunch' (Chancellor 2005). They encourage a proliferation in the scale and scope of lending in 'the good times', over and above that which would take place if loans remained on lenders books, and they result in a sharper tightening of lending in 'the bad times' as uncertainties emerge.

The contradictions of financialized and transformed consumer credit networks are also experienced, lived and negotiated by borrowers. The performance of the subject position of the responsible and entrepreneurial borrower is necessarily partial and incomplete, and is especially problematic for those on low incomes. Representations of borrowers as disconnected figures that are disembedded from all other social relations cannot be maintained. For example, the flexible, downsized, mobile and contracted-out worker who necessarily encounters uncertainties over employment contracts, hours, pay and conditions is very poorly placed to perform the financial self-disciplines of the responsible borrower. The meeting and management of repayments is reliant upon relatively predictable wages that, for those on low incomes who are most 'flexible' in their work, cannot be guaranteed. Low-income individuals and households are also unlikely to be savers or owner-occupiers, such that entrepreneurial borrowing practices (e.g. debt consolidation) are not possible. Already confronted by rising living costs and knife-edge labour market flexibility, exclusion from the growth of the asset-based wealth leaves many low-income households with little choice but to extend their borrowing once again. Furthermore, even those borrowers who are also mortgagors and financial market investors undoubtedly struggle to meet their growing obligations during periods in which interest rates rise and asset prices fall. Shifting labour market fortunes, increases in interest rates, and a sharp fall in asset prices all threaten to wipe out the prospects of freedom and security that are apparently on offer from responsible and entrepreneurial borrowing.

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