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Information and trust as social aspects of credit

Costas Lapavitsas

Abstract

According to mainstream economic theory the contractual relationship between borrower and lender is characterized by asymmetry of information regarding the project to be financed. It is assumed that trust among credit participants is constructed individually as they collect and assess requisite information. In contrast, this paper argues that trust and information among credit participants have compelling social constituents that depend on economic function and social context. More specifically, the paper shows that financial institutions transform trust into a social and objective relationship. The capitalist credit system comprises a set of institutions that construct trust socially by using increasingly general information. Nonetheless, the foundation of credit-related trust is the ability to repay money. Hence the moral content of credit is thin, giving rise to fraud and deception.

Keywords: credit; trust; information; trade credit; banking credit; money market; central banking; credit system.

Information, trust and the credit system

Information is a pivotal concept in mainstream economic theory of finance. Theoretical analysis of credit is based on the assumption that lenders and borrowers are asymmetrically informed about projects to be financed. Consequently there emerges 'adverse selection' (systematic advance of funds to poor-quality projects) or 'moral hazard' (significant risk of fraud or cheating by the users of funds). In this framework, banks and other financial institutions are information specialists who could, for instance, monitor borrowers on

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behalf of the ultimate lenders (bank depositors), thereby reducing the risk of 'moral hazard' and 'adverse selection'.[1]

The theoretical stress on information fits well with the actual existence of internal bank mechanisms that systematically collect and process information. It also corresponds well with the impact of technology on banking in recent years. Rapid changes in information and telecommunications technology have allowed banks (especially in the USA) to increase private (retail) loans, to alter management of risk, to undertake off-balance-sheet activities (such as securitization of loans), and even to change internal labour relations, particularly between front-office and back-office staff.[2] Some economists have postulated that the business of contemporary banking is increasingly becoming that of information processing and risk management (Allen and Santomero 1999).

Nevertheless, a norm of debt repayment also exists in capitalist economies, drawing on trust among credit participants. The norm of repayment, moreover, seems to operate differently across the spectrum of credit transactions. The existence of the norm, for instance, is apparent in credit transactions among individuals that are already related through kinship, friendship, religion or otherwise. In this context, repayment is backed by social and familial sanctions, and the credit transaction often lacks a contractual form. The existence of the norm can also be detected among industrial and commercial enterprises, for instance, small and medium-sized firms among which credit could even be extended 'on a handshake'. At the same time, repayment among enterprises is conditioned by the pecuniary calculation of damage to reputation that might be caused by reneging on obligations. By the same token the contractual aspect of the credit transaction looms large among capitalist enterprises.

The norm of repayment takes a still different and far more attenuated form in credit transactions that involve financial institutions as well as industrial and commercial enterprises. Such transactions include pecuniary calculation of the costs and benefits of various actions by both borrower and lender, often in the form of interest forgone. The contractual specification of the relationship, moreover, typically provides for various eventualities in the form of covenants. Thus, repayment assumes a formal and legal aspect, which is most vividly apparent in credit transactions among financial institutions. In transactions among banks, pension funds, insurance companies and the like, repayment and trust are heavily fortified by detailed contracts that rely on judicial enforcement.

In this light, the neoclassical approach to information and credit is narrow and one-sided. The compulsion to repay and its gradations are hardly captured by the economic abstraction of the holder of money (lender) meeting the holder of project (borrower) in the presence of information asymmetry. Furthermore, the trust necessary for credit relationships appears to depend on the economic function of counter-parties as well as the social context within which they operate. Trust among financial institutions, for instance, has different underpinnings from trust among enterprises, and even more from

trust among friends and relatives. Analogously, both the norm of repayment and the trust required for the advance of credit vary substantially among credit transactions. The informational content of credit relations, moreover, is context-specific, as is immediately apparent when trade credit between upstream and downstream enterprises is compared to, say, mortgage lending. The context-specific aspect of information can hardly be captured by the bland generalization that the borrower knows more than the lender about the project to be financed. Equally important is the specific economic functioning of credit counter-parties, as well as other social aspects of credit-related information.[3]

This article shows that the trust underpinning credit transactions is a socially constructed relationship which is transformed through the operations of the credit system. To be more precise, it is shown that credit-related trust is transformed from a private and subjective into a social and objective relationship as a result of the practices of financial institutions. By the same token, the information necessary to sustain trust becomes increasingly broad and multifaceted, thereby social. In this light, the capitalist credit system is a set of institutional mechanisms that turn trust into a formal, objective, measurable, and therefore social, relationship.

To derive these results the paper draws on the distinction between trade credit (selling commodities against promises to buy) and banking credit (lending of money), which is fundamental to Marxist political economy of finance.[4] The results also draw on a view of the credit system as a pyramid-shaped, layered set of institutions, markets and assets, originally developed by the Uno current of Japanese Marxism.[5] Very briefly and schematically, in the bottom layer are found trade credit relations among capitalist enterprises; in the second layer there are banking credit relations, mostly involving the lending of money to enterprises; in the third layer there are money market relations, which involve the lending of money among financial institutions; finally, in the fourth layer there are central banking relations, typically involving credit made available to financial institutions operating in the money market. Trust – which is fundamental to all credit relations – becomes increasingly social and objective as the pyramid is traversed from bottom to top. Requisite information, meanwhile, becomes increasingly general, systematic and comprehensive, thus ranging across capitalist economy and society.

Nevertheless, the trust underpinning capitalist credit is ultimately based on the borrower's ability to repay money. For trust to exist the lender must acquire information about the borrower's ability to generate money profits or to secure alternative access to money. Indeed, as trust becomes increasingly social within the mechanisms of the credit system, borrowers are formally ranked according to their ability to generate money. Consequently the moral and ethical content of the lender-borrower relationship is thin, and developed capitalist credit constantly gives rise to fraud and deception. In the money market, for instance, the norm of repayment loses much of its force, and is replaced by pecuniary calculation of the pros and cons of repayment.

Contractual specification of obligations and the threat of recourse to the law are integral elements of capitalist credit, reflecting the way in which trust and information are socialized within the capitalist credit system.

The paper proceeds as follows. The next section briefly reviews recent developments in mainstream theory of finance, focusing on banking. The following four sections analyse the social content of, respectively, trade credit, banking credit, money market credit and central bank credit, paying particular attention to relations of trust and the requisite information to support them. The seventh section concludes.

Recent developments in information-theoretic analysis of finance

The view that banks are specialists in information acquisition and assessment has become canonical in mainstream neoclassical literature. Output during the last decade has consisted largely of theoretical refinements and empirical studies based on this fundamental view.[6] Considerable emphasis, for instance, is currently laid on the distinction between 'hard' and 'soft' information, and a link has been postulated with the distinction between 'transactions-based' and 'relationship' finance.[7] Broadly speaking, 'transactions-based' finance corresponds to lending that is based on numerically precise ('hard') information collected from publicly available documents (balance sheets, tax returns and so on). In contrast, 'relationship' finance denotes lending that is based on ('soft') information collected through regular and personal contact between lender and borrower. Large banks are supposed to be better at 'transactions-based' finance, while small banks at 'relationship' finance. Since smaller banks have been disappearing through mergers and acquisitions, particularly in the USA, there are possible problematic implications for borrowing by individuals and small enterprises.

Note that the 'hardest' form of 'transactions-based' lending occurs between large banks and private individuals who seek mortgages, credit cards and personal consumption loans, rather than between large banks and large corporations. To lend to individuals, banks typically deploy 'credit-scoring' techniques, i.e. they numerically weigh an individual's creditworthiness by using a limited set of variables relating mostly to the individual's income. Scores are then produced which allow (or preclude) the making of loans, without involving the personal judgement of the bank's loan officer (Mester 1997). In practice, therefore, banks render individual borrowers into units of a homogeneous distribution with well-defined parameters. These 'credit scoring' techniques are now spreading to loans made to small businesses, which are also treated as a homogeneous mass.

To sustain these quantitative techniques banks must have access to large and reliable databases about individuals and small businesses. 'Credit scoring' techniques further rely on careful selection of the variables deployed by each bank. This process is driven by experience and depends on the social and

economic characteristics of the borrowers as a group. Consequently the provision of appropriate information about borrowers on a mass scale has gradually become a separate field of activity for private enterprise since the early 1990s.

Moreover, to minimize the risk of individual or even systemic failure it is necessary for banks to undertake further quantitative analysis of loans. In particular, the risk attached to banks' balance sheets must be numerically estimated, typically by employing various techniques of 'value at risk' (Saunders and Allen 2002; Duffie and Singleton 2003). On a narrowly technical level, these techniques require substantial computing power and are associated with options pricing theory. It has become possible to use them widely and systematically only because computer costs declined significantly in recent years. The techniques inherently compare banks against each other, thus also equating banks to each other.

The neoclassical, information-theoretic approach to finance is, therefore, consistent with the growing importance of information within the financial sector. But the approach also has a very narrow compass, as is evident with regard to 'moral hazard'. The underlying assumption is that economic agents would typically defraud each other as soon as pecuniary incentive and opportunity arose. Borrowers would, for instance, conceal some of the returns of their activities, thus avoiding payment of interest and principal. In this light, appropriately monitored and enforced contracts are vital to financial transactions, also creating scope for the emergence of financial institutions.[8] Yet, casual observation reveals that there is also unspoken compulsion to repay debt, which rests on relations of trust between lender and borrower, and has moral and ethical undertones. As was mentioned in the previous section, a well-founded theory of credit ought to give insight into those broad constituents of trust between lender and borrower.

The importance of trust to capitalist credit is apparent from the very definition of the latter, which amounts to the advance of capital value against a promise to return the equivalent later, plus increment.[9] Credit stands in clear contrast to buying and selling commodities for money, which entail immediate *quid pro quo* since value in the form of commodities is balanced at once with value in the form of money. To be sure monetary exchange still requires trust. Exchange participants, for instance, must be confident that the transacted commodities have adequate use value, and that there will not be fraud, violence and theft. But for regular credit transactions trust of a different order is required since capital value is advanced against mere promises to repay it in the future.

As was already mentioned in the previous section, furthermore, trust is unlikely to have the same content in credit transactions between, say, two private individuals, two enterprises, an enterprise and a bank, or two banks, even if formal debt contracts exist in all instances. By the same token, the obligation to repay between two individuals is likely to differ qualitatively from that between two enterprises, which would also be different from that between

financial institutions and enterprises, or between financial institutions and individuals, or even between financial institutions themselves. The constituents and determinants of 'moral hazard' in financial transactions vary according to the financial institution and market involved.

Pressing the point a little further, the character of trust between financial counter-parties appears to depend on the practices and interactions of financial institutions. Trust is essential, for instance, between a depositor and a bank since, by construction, a bank is incapable of meeting all its deposit liabilities at once, and would go bankrupt on the occasion of a 'run'.[10] Such trust depends on how well the bank manages its loans, therefore on the trust that exists between the bank and its borrowers. Equivalently, the information required by the depositor to develop trust in the bank relates primarily to the bank's loan decisions. Hence the basis of the depositor's trust is indirectly provided by information collected by the bank about its own borrowers. On the other hand, trust between a bank and a borrowing enterprise depends on the prior existence of trust between the enterprise and its customers and suppliers. The bank must collect and assess evidence of this trust, if it is to generate trust between itself and the borrowing enterprise. Thus, whether seen from the standpoint of the depositor or of the borrower, trust between a bank and its counter-parties rests on information about a wide range of enterprises and individuals.

Among transacting banks, finally, the nature of trust appears to be still different. Inter-bank lending, for instance, has a more detached character compared to other forms of bank credit, such as business loans. Trust between lending and borrowing bank is heavily circumscribed by market practice and custom. This is not surprising in view of the fact that both parties are specialists in collecting and processing information about others. The field of information that each party utilizes necessarily extends across large numbers of other borrowers and depositors.

The social constituents of trust in credit transactions are considered in this light in the rest of the article, starting with trade credit. It is shown that trust and the information that sustains it acquire an increasingly social and objective character as the layers of the credit system are traversed. Nonetheless, credit-related trust has a thin moral dimension that favours fraud and deception, given that its object is the repayment of money. Mistrust is never far from the surface of capitalist credit.

The private and subjective character of trust in trade credit

Trade credit is a fundamental economic relation that emerges spontaneously among enterprises already connected through the social division of labour. Typically, suppliers advance output downstream, and receive promises to pay that take the form of specific financial securities – historically that of commercial bills. Trade credit entails an asymmetric economic relationship between enterprises. On the one hand, it brings benefits to debtors, since they

purchase inputs without using capital. For any given size of debtor's capital, therefore, the range and volume of productive activities can be expanded during any period of time, thereby raising profitability. Trade creditors, on the other hand, economize on the costs of storing finished output, and avoid the risks of sudden price fluctuations during the time taken to sell output. But creditors also part with capital against mere promises to pay, thus carrying the risk of delayed, or altogether cancelled, payment. Moreover, creditors lengthen the turnover time of their capital thus lowering its profitability.

Other things being equal, therefore, it is in the interests of individual enterprises to sell for cash while buying on credit. A seller with advantages in product quality, or in services attendant to the product after its sale, might be able to avoid offering credit to buyers. A seller with a dominant market share might similarly restrict the availability of trade credit. In short, the availability of trade credit in any given market is not homogeneous. The terms on which such credit is offered – length of time to repayment, increment over cash price, the place of repayment, and so on – are also heterogeneous.

The risks and disadvantages confronting the trade creditor make it necessary for a bond of trust to exist with the debtor. But the commercial trust necessary for this purpose is not similar to that between hierarchical superiors and inferiors – typically a broad and diffuse relation that pertains to several aspects of personal life, such as marriage, family, security and ideology. Rather, commercial trust is extended among formal equals and pivots on a single issue: repayment of money according to terms agreed. Its most important prerequisite is confidence that the debtor will make the appropriate payment at the due time. Thus, the following two determinants of commercial trust are particularly important.

The first is the debtor's potential for profit generation. This is partly a technical economic issue, since success in profit generation depends on labour skills, technologies and inputs used by the debtor. For industrial capitalists directly connected with each other in the social division of labour, information about the profit-making activities of trade counter-parties accrues through the physical interdependence of production processes as well as through regular buying and selling. When a firm uses the product of another as input in its own production process, the use value of the product conveys information directly about the other's quality of work, regularity of production and technological capacity. Moreover, when enterprises regularly engage in commercial transactions with each other, they automatically obtain information about each other's marketing skills and reliability. Thus, physical interdependence of production processes and regular commercial contacts generate a field of trust among industrial capitalists that makes trade credit possible.[11]

But success in profit generation depends on more than efficient deployment of resources. Relations between capital and labour within the enterprise must also be conducive to successful exploitation. The creditor must gauge the ability of the debtor to act as a capitalist employer, namely the debtor's ability to keep workers sufficiently compliant to ensure generation of profits. The

presence of, or potential for, capital-labour conflict in the activities of the debtor is always a prime concern of the creditor. For commercial creditors, regular contact through buying and selling offers a natural opportunity to assess debtors from this perspective.

The second determinant of trust among trade credit counter-parties is plain access to money. What matters to the creditor is actual payment of the sum agreed – how the borrower procures the money is ultimately unimportant. If the debtor had sufficient economic, social and political power to guarantee access to money, his or her economic activities would be immaterial to the creditor. Thus, the debtor could function inefficiently as capitalist without necessarily forfeiting the creditor's trust. Consequently creditors would normally collect information regarding debtors' ownership links with other enterprises, participation in formal and informal decision-making bodies, social and familial connections as well as access to political mechanisms, particularly the state.

From the lender's perspective, creditworthiness sustained by power relations is not necessarily worse than creditworthiness based on the quality of the borrower's investment project. Given a sufficiently powerful borrower, value could be advanced irrespective of past success in generating profits. Consequently, particular enterprises and individual capitalists might be able to obtain trade credit purely because of hierarchical power relations within the economic sphere and, more broadly, within the capitalist class. By the same token, close connections with the mechanisms of the state could secure access to trade credit.

In sum, the private and subjective trust requisite for commercial credit derives from economic and social factors that ensure the generation of profits and guarantee access to money. Precisely for this reason, commercial trust has a noxious and precarious character. The overriding concern of capitalists engaging in credit relations is to make more money. No higher aspirations and sentiments challenge the pre-eminence of profit making, and hence the threat of fraud, swindling and deceit is constantly present. If it were possible for the debtor to keep the creditor in the dark regarding problematic aspects of the investment project, the debtor would probably do so. Outright lies could also be told about the prospects of profitability or the social and political power available to the borrower. Since the foundation of commercial credit is ultimately the ability to repay money, the moral dimension of credit among capitalists is feeble. Hence the requirement among transacting capitalists for careful contractual specification of the terms of repayment that also relies on legal enforcement.

The character of trust in banking credit

The analytical link between the first (trade) and the second (banking) layer of the pyramid of credit touches upon the historical emergence of banking, a fraught issue that cannot be directly tackled here. It is sufficient to assume that

trade credit provides economic foundations for the systematic emergence of banking credit.[12] More specifically, it is assumed that at the core of advanced capitalist banking lie activities that relate to both trade credit and money-dealing. This approach offers two analytical advantages. First, it postulates a specific link between bank lending and money-dealing, the latter covering foreign exchange, account management, clearing, money transmission and safe-keeping of assets. Note that these operations sit uncomfortably with the standard neoclassical treatment of banks as intermediary lenders of money. Second, the approach fits well with banks' tendency to concentrate in commercial centres where trade credit transactions and instruments proliferate.

Thus, the approach adopted here stresses that banks are not plain financial intermediaries that gather spare funds and channel them to enterprises. Rather, banks engage in a host of financial and monetary activities, all of which matter for information collecting and processing. Banks, for instance, transmit money domestically and abroad, execute payments, manage accounts, offer safe-keeping facilities and engage regularly in foreign exchange transactions. These normal banking activities are not necessarily connected to the lending of money. They are, however, an integral part of information collection by banks since they offer direct insight into potential borrowers, something that is increasingly recognized by mainstream theory (Mester *et al*. 2005). Such activities provide a broader context within which trust can develop between banks and their depositors and borrowers.

This approach also rests on an analytical result derived earlier, namely that those who advance trade credit face slower turnover of capital as well as bearing the risk of debtor default or late payment. Other things being equal, creditors would benefit if their capital returned within the period of credit originally agreed (rather than at maturity). Consequently trade creditors have the following two options.

The first is to use the trade credit security as means of payment in input purchases. Possession of the underlying trade debt would then be transferred from one capitalist to another. For this to be possible, a field of trust must exist between the creditor enterprise and its suppliers such that the latter could be persuaded to accept a promise to pay made by an unrelated capitalist (further downstream). Moreover, after acceptance, the suppliers would immediately find themselves in a similar position to the original creditor, i.e. seeking to obtain return of their capital within the security's term of credit. Therefore, they would have to persuade their own suppliers to accept the security, despite these suppliers being even further removed from the original field of trust that sustained the security's emergence. Given that the enterprises involved are linked to each other through their production processes, successive holders of the security could act as conduits of trust by adding their private guarantees (endorsements) to it. But the security's acceptability would remain partial since it would rest on a series of private assurances given by individual enterprises. At every turn, potential holders would have to be persuaded anew of the validity of both the original promise to pay and of the subsequent guarantees.

The second is to sell the promise to pay that underlies the trade credit security to other capitalists who possess idle money that is available for investment. This is still a credit transaction, but qualitatively different from trade credit since it involves the advance of money (by the purchaser) with the aim of earning interest. Therefore, it is banking (monetary) credit. The seller essentially transfers trade receivables to the buyer against the advance of money capital. For this transaction to make sense, the interest cost must be outweighed by the benefits to the seller from the rapid return of capital in the form of ready money. On the other hand, since trade credit obligations could be sold to anyone who holds money, the purchaser must be able to assess their creditworthiness without the knowledge that derives from contact with the activities of the enterprise that originally generated them. Therefore, the difficulty of establishing trust in a trade security offered for sale is greater than in persuading an upstream capitalist to accept it as means of payment. The issue that must be tackled here is: who are the capitalists that might stand ready to engage in the business of transacting trade credit instruments? Put differently, who are the capitalists most likely to finance trade credit, and thus to facilitate its growth?

Marx's (1981 [1894]: chs 16, 19) distinction between merchant and industrial capitalists is very useful in this respect: the former specialize in activities of circulation, while the latter specialize in production.[13] Merchant capitalists, furthermore, comprise two groups: commercial and money-dealing capitalists. Commercial capitalists buy and sell commodities, thereby reducing the circulation time of industrial capital as well as lowering the costs of buying and selling for industrial capitalists. Consequently, they raise the profitability of industrial capital and earn the average rate of profit. Money-dealing capitalists, on the other hand, specialize exclusively in the monetary aspects of circulation, such as transferring, safe-keeping and changing money from one national denomination to another. Consequently, they reduce the circulation costs and turnover time of industrial capitalists, while earning the average rate of profit.

Money-dealing capitalists have clear competitive advantages in the business of financing trade credit. Their capital is kept largely in the money form, and parts of it are likely to lie idle and available for lending. Moreover, in the process of transmitting money abroad, of converting money from one denomination into another, and even of storing money, money-dealers constantly handle trade credit instruments and accounts of other capitalists. They inevitably acquire information about trade creditors regarding regularity of payments, probity with respect to commercial obligations, frequency of transactions and access to money of trade creditors, despite having no direct connection with the productive activities of trade credit country-pavties. Consequently, money-dealers are well placed to assess the creditworthiness of particular trade credit securities and other related obligations offered for sale. On these grounds, money-dealers are the capitalists most likely to become bankers, though this possibility is open to all capitalists who hold sums of temporarily idle money.

Fully to establish the nature of banking credit, however, it is necessary to consider more closely the form in which banks normally lend. If a bank restricted itself to making loans out of its own capital, the scope of its lending would be curtailed by the size of its capital. If, on the other hand, it could make loans by advancing its own promises to pay, it would immediately expand its operations and raise its profitability. Within our framework, this implies that the seller of a trade credit obligation would have to be persuaded to accept a bank's own promise to pay. The particular form taken by banks' promises to pay depends on the institutional and historical development of the credit system, but there are two fundamental types, namely banknotes and bank deposits. In broadly generic terms, therefore, banking credit consists of acquiring one kind of promise to pay (enterprise to enterprise or enterprise to bank) in exchange for another (bank to enterprise). In more standard banking terms, banks acquire assets (liabilities of industrial capitalists) by issuing their own liabilities.

For such a process to occur systematically, a bank's promise to pay must be superior to an enterprise's promise to pay in respect of, first, it's effect on the holder's turnover time and, second, the risks of default and delayed payment. The answer to the first problem is straightforward: banks typically issue promises to pay of shorter maturity than promises to pay made by industrial capitalists.[14] At the limit, bank liabilities are payable on sight and begin rapidly to acquire the aspect of ready money, thus becoming the true credit money of advanced capitalism.

The problem of risk for a bank's promise to pay, however, is far more complex, not least because banks tend indeed to issue liabilities of shorter term to maturity than their assets. The acceptability of promises to pay by both enterprises and banks ultimately depends on their respective ability to make payments according to terms agreed. For enterprises, as was already established, this depends on success in profit generation and general access to money. These can be ascertained by examining technology, plant, equipment, labour skills and management skills in exploiting labour, as well as by locating the broader social network of ownership and power within which the enterprise operates. For banks, however, the substance of the matter is quite different. Banks are neither engaged in production nor do they produce value and surplus value – they merely employ their capital in the business of making loans by transforming one type of promise to pay into another. Though they also rely on technology, labour skills and office space, their profitability does not derive directly from these factors, since no surplus value is produced in the banking business. Rather, a bank's profits and ability to honour its promises to pay depend overwhelmingly on the validity and prompt repayment of the bank's assets, i.e. on the validity of other capitalists' promises to pay. In short, trust in a bank's liabilities derives from the composition and quality of the assets on its balance sheet, which are mostly debts of others.

Establishing trust in a bank, therefore, is qualitatively different from establishing trust in an industrial enterprise. Two aspects of banking activity are important in this connection. The first is lowering the risk of default

through diversification of bank assets. By purchasing promises to pay issued by several unrelated industrial capitalists, banks can reduce the risk of default across their holdings. Banks can further reduce the risk of default by possessing substantial capital which could be used to write off bad assets. The second aspect is bank access to reserves. The maturity difference between long-term assets and short-term liabilities is a perilous problem for banks since their liabilities mature faster than their assets. It is trivially true that, if faced with extraordinary withdrawal demands, banks could go bankrupt. Thus, banks must possess a certain amount of liquid assets, including generally acceptable money, to satisfy recurrent and unusual withdrawal demands. On the other hand, holding liquid reserves brings to banks little or no profit. Banks, therefore, continually walk a tightrope, learning through experience to keep the minimum level of reserves that allows them to honour their promises to pay in the normal course of business.

It is immediately apparent, therefore, that the acceptability of a bank's promise to pay is determined by broader social factors than an enterprise's promise to pay. The soundness of a bank's liabilities rests on the quality of its assets, i.e. on the validity of various promises to pay made by industrial capitalists which the bank has chosen to acquire. By constructing a set of assets a bank brings together a variety of fields of trust across several industrial sectors which act as foundation for trust in the bank's own promises to pay. The particular and private varieties of trust among capitalists across a broad swathe of industry are subsumed under a bank's own promise to pay. The trust between a bank and a capitalist who accepts the bank's liabilities rests on broader and more strongly social foundations than trust between two industrial capitalists. By the same token, banks' promises to pay can be more generally acceptable than those of enterprises. Banking credit can therefore supersede trade credit. It is characteristic of advanced industrial capitalism that trade credit, while continuing to emerge spontaneously, is subsumed under banking credit.

The qualitative difference between banking and trade credit corresponds to an inherent asymmetry between banks and enterprises with respect to credit operations. Banks lack direct links with their customers through production and trade, but possess specialist skills in assessing commercial and other promises to pay across sectors and industries. These skills rely on collecting and evaluating information about a variety of enterprises as well as comparing enterprises against each other, thus establishing social standards of creditworthiness. In contrast industrial enterprises are at a disadvantage in assessing the creditworthiness of banks, since the business of the former is to produce and sell commodities. Furthermore, it would be prohibitively expensive for industrial capitalists to check the quality of a bank's assets, given that such assets comprise promises to pay by many enterprises in several different sectors. Consequently, industrial capitalists base their assessment of banks' creditworthiness on bank reserves and capital as well as on the diversification of bank assets.

The asymmetry between banks and industrial capital is reflected in the role of power in sustaining their respective creditworthiness. Power available to

industrial capitalists (economic, social and political) could guarantee access to money and therefore the prompt settlement of promises to pay. Consequently banks use their information-collecting mechanisms to become acquainted with property relations, political and social connections, even family and kinship relations among their customers. Banks become repositories of knowledge regarding the technical and social aspects of capitalist accumulation across several sectors of the economy. Banks must also project an image of power, if they are to persuade industrial capitalists to accept their promises to pay, in view of the difficulty of assessing the quality of bank operations. Industrial capitalists acquire confidence in a bank's liabilities partly as a result of property relations and partly due to the social and political connections of the bank. For a bank, extensive political contacts, family connections, the image of wealth and wide-ranging property interests are integral parts of its business.

In sum, banking transcends commercial credit and broadens the basis of trust among capitalists by giving to credit a more social character. Banks specialize in purchasing promises to pay made by capitalists across several enterprises and sectors. Therefore, banks provide a more general basis for trust in their own promises to pay. To undertake their operations, banks must acquire and develop skills in collecting and evaluating information about other capitalist enterprises. Consequently banks systematically accumulate knowledge about economic, social and political issues relevant to capitalist accumulation in particular areas (economic and geographical).

The social nature of trust in money market credit

Money market credit – the third layer of the credit pyramid – is typically advanced among banks and other financial institutions. 'Money market', in this context, is an envelope term for markets in short-term financial instruments, such as overnight loans, finance bills and commercial bills. These are wholesale markets created by financial institutions, and they form the backbone of the credit system. One fundamental reason for the emergence of the money market is the need of banks for reserves.[15] Since reserves are necessary to sustain liabilities, banks typically commit some of their own capital to building reserves. However, when the bulk of reserves comes out of the banks' own capital, banks are constrained in expanding their profit-generating assets. To overcome this problem, banks seek to obtain reserves by borrowing temporarily idle money from others, including enterprises and individual capitalists.

Assuming that banks engage in borrowing funds from others, it is apparent that their access to reserves would vary according to the particular area in which they operate (geographical and economic). Depending on an area's characteristics (composition of production, profitability of industrial capital and so on) some banks find it easier than others to obtain idle funds. The unevenness of bank access to reserves underpins the emergence of the money market: banks that have a shortage of reserves borrow from banks that have

surplus reserves. The form taken by such credit is variable; the borrowing bank, for instance, could sell some of its assets against promises to pay made by another bank; alternatively, it could issue its own promises to pay and exchange (sell) them for those of another bank. In generic terms, however, money market transactions are inter-bank borrowing and lending that emerges spontaneously as banks attempt to secure reserves.[16]

By the same token, the money market transforms funds available for lending across society into a homogeneous commodity, i.e. loanable money capital. Since the money market cuts across economic and geographical areas, it enables idle money funds to acquire a common and general character across society, and thereby to command interest. Consequently, in the money market, the rate of interest is established with precision and society-wide applicability. Given a money market, banks are able systematically to function as financial intermediaries across society, collecting idle funds, transforming them into loanable capital and channelling them toward capitalist accumulation.

Mainstream economic theory has long assumed that banks are financial intermediaries, though the activities of contemporary banks have cast considerable doubt on this assumption, as was mentioned in the introduction. For the approach adopted here, in contrast, banks are not financial intermediaries directly and immediately, or even by definition. Rather, the function of financial intermediation accrues to banks as they expand their balance sheets and develop their own ability to borrow. But banks continue to engage in a host of other activities (money-dealing and lending) that are, logically and in practice, prior to financial intermediation. In freely operating credit systems banks become proper financial intermediaries as a market for borrowed funds develops, which includes other banks but also enterprises.

The importance of this point can also be seen in terms of the monitoring and supervisory functions of banks over their borrowers, which mainstream economic theory stresses as the defining aspect of banking within financial intermediation. It is an even more remarkable aspect of banking, however that capitalists and others deposit money with banks on the basis of mere promises to pay by the latter. After all, the lending activities of banks involve mostly the transformation of one promise to pay (by an enterprise) into another (by a bank). In contrast, depositing idle money with a bank represents an outright transfer of money against a mere promise to pay by the bank. For capitalists and others to take this bold step it is imperative to have sufficient trust in the bank. The basis for such trust is provided by the general acceptability of a bank's promises to pay which, as was already established, depends on the quality of other capitalists' assets purchased by the bank. Thus, a bank is able to attract idle funds (borrow) because there is a foundation of trust in its liabilities created through its general operations.

The money market is pivotal to the further evolution of trust within the credit system. Loanable money capital is traded in the money market largely among specialists, typically in large sums and for short periods of time. The asymmetry that characterizes credit relations between banks and industrial

capitalists is eliminated in the money market since participants typically are specialists in banking credit. The acceptability of promises to pay issued by banks that participate in the money market is assessed by other banks or by specialist financial institutions. Money market banks continually compare, contrast and evaluate each other's promises to pay, empirically establishing general standards of acceptability. Nonetheless, a bank's promise to pay is ultimately based on its assets, i.e. on the private promises to pay that the bank has chosen to acquire and hold. Consequently in the money market private promises to pay by particular capitalists – subsumed under a single bank's promise to pay – are assessed as a homogeneous mass. They are compared to the assets of other banks, resulting in a degree of acceptability accorded to each bank's promise to pay and potentially valid for society as a whole.

In the money market, the creditworthiness of banks is subjected to meticulous and detached assessment that has society-wide determinants. At the same time, transacting parties are typically removed from production and circulation of commodities, while money is both the means and the object of transactions. In establishing a relationship between money market counterparties, therefore, all other considerations are subordinated to the imperative of money-making. Economic and non-economic aspects of a bank's activities are assessed from the point of view of securing repayment of money advanced.

Money market credit, despite its social character, is in every instance a promise to pay by a particular bank, and hence retains a private aspect. The private aspect of money market credit is often measured and expressed as a single index (rating) attached to participants. In short, in the money market, creditworthiness is established as a social property of capital in the objective and 'thing-like' form of an index. The pivotal role of the money market also makes it possible for the practices and methods of credit rating to spread across the credit system, applying to individual enterprises, persons and even countries. The deeper foundations of the practice of 'credit scoring' lie in this aspect of the credit system. Economic position, social standing, access to power, even national characteristics and traits of particular borrowers are subsumed under an index the sole purpose of which is to indicate probability of repayment. Analogously, the ethical, moral, religious, customary and hierarchical dimensions of borrowing and lending are reduced to a numerical figure that suffices as foundation of trust.

Central bank credit

The central bank is the apex of the pyramid of the credit system and emerges spontaneously out of bank interactions in the money market.[17] Banks operating in the money market achieve cost reductions by concentrating reserves at one central point, thus reducing the sum total of reserves. From this perspective, the central bank is a money market bank that attracts reserves from all others, i.e. it is the bank of banks.

For the central bank to hold the centralized reserve of the banking system, its own promises to pay must have adequate acceptability among banks and others. Trust in the central bank's promises to pay derives in the first instance from the quality of its assets. Fundamental to this trust is the central bank's own reserve, i.e. the ultimate reserve for the credit system as a whole. But of similar importance is the quality of other assets held by the central bank, including promises to pay made by money market banks. It is necessary for the central bank, therefore, systematically to assess other banks' operations, often on a daily basis, estimating the acceptability of their promises to pay. Gathering and evaluating information, something which all banks practise, reaches its pinnacle with the central bank, partly because its activities are directed towards other banks.

Since the central bank tends to deal primarily with money market banks, the information that it collects and analyses extends across the economy. Moreover, by constantly evaluating and acquiring promises to pay by money market banks, the central bank further homogenizes credit. Its own promises to pay, therefore, represent the most social form (and highest grade) of credit in the capitalist economy. For this reason, central bank promises to pay (banknotes and deposits) function as the dominant means of payment in the money market and become the credit money *par excellence* across the economy. The paying function of central bank liabilities is also important in the clearing process. Promises to pay that are exchanged among banks require settlement at maturity, and hence cause transfers of bank reserves. If such promises were cancelled out through clearing, banks would make fewer transfers while keeping smaller reserves, other things being equal.[18] The dominant money of the clearing process in advanced capitalism typically comprises central bank promises to pay.

The money-like aspect of the central bank's liabilities puts it apart from other banks. Money market banks are strongly disposed to accept the central bank's promises to pay as long as they are broadly accepted as means of payment. But, by the same token, these promises to pay can function as money because money market banks are prepared to accept them. The central bank thus performs a delicate balancing act: its credit is the best available in the capitalist economy, allowing its liabilities to function as the money of settlement and trade, but other banks are disposed to accept these liabilities on the assumption that they will continue to function as money.

The social character of the central bank's credit is fully established, however, only after two further developments: first, the central bank becomes the bank of the state and, second, it emerges as the guardian of a country's reserve of international means of payment.[19] As the bank of the state, the central bank manages the state's accounts and debts, and makes direct loans to the state. These activities have immediate implications for the central bank's credit. Central bank assets include the state's promises to pay (bonds and bills) which derive their validity from the state's ability to tax. By holding the state's promises to pay the central bank can normally improve the quality of its assets and the acceptability of its liabilities. The state can further strengthen the

acceptability of the central bank's promises to pay by declaring them legal tender, i.e. obligatory in discharge of private debts. The state thus places its own authority and power behind central bank promises to pay, turning their use into a stable social norm. Consequently, the credit of the central bank reflects directly the state's political power as well as its power to tax. Finally, a central bank's promises to pay could be used in international operations, becoming accepted by other nations as means of payment and component of their international reserves. The credit advanced by a central bank would then transcend its national character and assume a global aspect. Central bank credit would, in this instance, reflect the comparative strength of nations in the world arena.

Central bank credit has a social character that affords to the central bank enormous economic and social power. Given that the central bank systematically collects information about the credit system and the economy, it is able to monitor the credit system for moral hazard and fraud.[20] The central bank's unique position within the credit system allows it to impose sanctions on banks, sustained by a battery of professional and legal regulations. By regularly supplying its credit to the money market, moreover, the central bank can influence the terms on which banks lend to each other, altering the rate of interest across the economy. Its liabilities can also rescue financial institutions from bankruptcy and prevent or ameliorate financial crises. Finally, the central bank could, if it wished, intervene in the allocation of credit by banks across industry, thus affecting the performance of particular sectors and even the distribution of income.

But the central bank remains at bottom a bank. Its first and overriding concern is to protect the interests of financial institutions and their most powerful customers. The bias inherent in central bank interventions emerges starkly at times of crisis, as the broader interests of society are subordinated to the needs and demands of the credit system. Even then, deciding which financial institutions will receive credit – as well as how much, under what terms and for how long – also depends on broader considerations. Political power, social connections, wealth, property links, even family relations, influence the deployment of central bank credit in times of crisis.

Conclusion

Contemporary neoclassical theory of finance lays great emphasis on information processing by lenders, especially financial institutions. This emphasis is consistent with the impact of information technologies on finance during the last three decades. However, information processing and building of trust among credit counter-parties also have social constituents which mainstream economic theory tends to overlook.

Drawing on Marxist political economy, this article has shown that relations of trust are essential among counter-parties, since credit entails the advance of

value against mere promises to pay. For trust to be sustained, however, it is necessary for the lender to have information regarding the borrower's economic activities and social position. In this respect credit is qualitatively different from the plain buying and selling of commodities, which regularly occur among complete strangers.

Trust necessary for credit transactions could develop spontaneously among counter-parties, typically through commodity transactions that provide information about those involved. This is characteristic of trade credit advanced among capitalist enterprises within the same sector. Trust could also be built through the purposeful acquisition of information about the borrower's command over resources and access to money, as well as personal, political and social relations. This is typical of banking credit advanced by financial institutions to individuals and capitalist enterprises, as well as to other financial institutions.

It was further shown that relations of trust – and the information necessary to sustain them – are transformed through the operations of the credit system. In trade credit, trust is a private and subjective relationship among enterprises that rests on mutual knowledge accumulated through buying and selling. In banking credit, on the other hand, trust is a social and objective relationship between financial institutions and individuals or enterprises, and even more so among financial institutions themselves. To weigh the creditworthiness of counter-parties in banking credit it is necessary to undertake detached assessment of information about their economic activities and social relations. This is apparent in the money market, where trust among participating banks, including the central bank, has strongly social determinants. Institutions participating in the money market homogenize trust by systematically comparing the promises to pay that are made by capitalist enterprises across the economy. Consequently, financial institutions have to collect and analyse information about the economy as a whole, and thus transcend the particularity of narrower forms of credit. Broad relations of property, power, hierarchy and influence are subsumed under credit ratings that are created through the activities of credit institutions.

The trust that underpins capitalist credit has strongly social constituents but ultimately pivots on the ability of the borrower to repay debt. Consequently its moral and ethical content is thin, leaving scope for fraud and deception. As trust becomes increasingly objective and social, moreover, the moral force present in credit transactions becomes weaker. The more social that trust becomes, the more heavily it relies on contractual specification of credit agreements and enforcement by law.

Notes

1 The core of this literature was established in the 1980s and 1990s. Key papers include Leland and Pyle (1977), Bryant (1980), Diamond and Dybvig (1983), Diamond

(1984), Boyd and Prescott (1986). The survey by Bhattacharya and Thakor (1993) remains informative.

2 See, very selectively, Boyd and Gertler (1994), Berger *et al*. (1995), Edwards and Mishkin (1995) and Hunter *et al*. (2001).

3 Empirical work in economic sociology has already shown that regular advance and repayment of loans draws on a range of social contacts between lenders and borrowers (Uzzi 1999).

4 For instance, Hilferding (1981 [1910]: ch. 5) and de Brunhoff (1976 [1973]: 77–98).

5 See Itoh (1988) and Lapavitsas (2003).

6 Indicatively, Berger and Mester (1997, 2003), Diamond and Rajan (2001) and Kashyap *et al*. (2002).

7 See, Berger and Udell (1995, 2002), Petersen and Rajan (1995), Boot (2000), Boot and Thakor (2000) and Berger *et al*. (2005).

8 See Townsend (1979). Influential papers in this vein include Gale and Hellwig (1985), Hart and Holmstrom (1987) and Innes (1990).

9 Finance is broader not least because it includes equity (share issuing), which rests on property relations and differs qualitatively from credit; see Itoh and Lapavitsas (1999: chs 4, 5).

10 Deposit insurance does not eliminate the risk of bankruptcy; rather, it strengthens trust in banks.

11 Mainstream economics is aware of the peculiar features of information gathering in trade credit transactions. See, for instance, Brennan *et al*. (1988), Biais and Gollier (1997) and Jain (2001).

12 Schumpeter (1954: 729–30) calls this approach to banking credit the 'Commercial-Bill Theory of Banking' and associates it with the Banking School, while breezily dismissing it.

13 For a clear presentation of Marx's distinctions, see Fine (1985–6).

14 This is the well-known issue of maturity transformation effected by banks, whereby their liabilities typically have much shorter term to maturity than their assets. It has long been discussed in the literature: for instance, Sayers (1967 [1938]: ch. 2) and Goodhart (1989: 104–13).

15 The state is of critical importance in the money market, since short-term state bills provide the basis of liquidity. However, primary economic reasons for the market's emergence are to be found in the actions of banks. The financial activities of the state are entirely beyond the scope of this article.

16 For further discussion of the money market, see Itoh and Lapavitsas (1999: ch. 4).

17 For further discussion of this point, see Lapavitsas (1997).

18 The complex links between clearing and central baking are discussed in Timberlake (1984) but from a perspective that sees central banks as 'unnatural' in a capitalist economy.

19 Evidently these developments occur for reasons that are not simply economic but depend on domestic political considerations as well as international relations.

20 Goodhart (1985) argues that this function of central banks is the reason for their existence.

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