Financial Systems and Capital Markets: an alternative view

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FINANCIAL SYSTEMS AND CAPITAL MARKETS: AN ALTERNATIVE VIEW

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. Introduction

In recent years there has been a remarkable surge of interest in the structure and operation of the financial system of market economies, reflecting the concurrent growth and internationalisation of finance. The role and operations of capital markets, both in theory and practice and especially with reference to economic development, have been important topics of analysis in this connection. Theoretical interest in finance has been so pronounced that contributions have started to be elicited even from Anglo-Saxon radical political economy, a current of economic thought that has made few significant advances in this respect. However, the relative weakness of Anglo-Saxon political economy in the field of finance should not be interpreted as a weakness of the broader tradition of radical political economy. The main purpose of this essay is to provide an analytical summary of several theoretical results regarding the operation of financial systems and capital markets, by drawing, above all, on the seminal work of Marx himself.

Section II presents an overview of the recent mainstream literature on the interaction of financial systems with economic activity. Section III turns to the operation of capital markets paying particular attention to their role in the course of economic development. Section IV considers the issue of the structure and functioning of the financial system of a capitalist economy from the standpoint of Marxist political economy. Section V argues that the key difference between mainstream and Marxist analyses of capital markets lies in their respective views regarding the equalisation (or not) of the rate of profit and the rate of interest. The same section draws related conclusions on the issue of capital-market-induced economic instability in a capitalist economy.

I. The financial system and economic activity

The attitude of mainstream economics towards the financial system is, on the whole, ambiguous. On the one hand, the neoclassical tradition largely accepts the classical dichotomy dividing the economy into the real and the financial sector. The latter, comprising mostly the monetary and banking systems, is treated as a veil that simply obscures the operations of the real economy. At the same time, the Keynesian tradition rejects the classical dichotomy and attributes a critically important role to money in the operations of a capital-

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ist economy. On the other hand, both neoclassical and Keynesian currents are broadly supportive of the presumed beneficial role of the financial system, including even its most controversial component, the stock market. However, things are again more complex than appears at first sight, since the Keynesian current, which rejects the classical dichotomy, has traditionally played down the actual importance of the financial system for the overall performance of the economy. Keynes' mistrust of finance is well-known, as is the relative neglect of monetary policy in the years of Keynesian ascendancy. Robinson's (1952, 6) view of the financial system as a mere follower of enterprise activity is quite typical. For the Keynesian current, though money does matter, policy intervention (direct and indirect) is more effective if it concentrates on production rather than financial circulation.

More specifically, the framework of general equilibrium analysis, as foralised by Arrow and Debreu, leaves no room for a financial sector, let alone one with significant impact on the growth process of the real economy. Given the assumptions of perfect information and no transaction costs, there is no need for a financial system that expends resources even, for the purposes of monitoring enterprises, managing risk and facilitating transactions. Thus, mainstream theory is confronted by two separate but related problems: first, to find a role for the financial system within a capitalist economy, and second, to demonstrate that this role can is best performed under competitive conditions, in other words that there are no problems of market failure necessitating state intervention in finance.

The first attempt to tackle these issues in recent years was made by Gurley and Shaw (1955, 1960). Using Keynesian behavioural assumptions -deriving from the post-war neoclassical synthesis- they suggested that an important relation exists between the development of the financial system (mostly banks but also other financial institutions) and real economic development, though their work also contained some ambiguity regarding the direction of causation between the two. A systematic attempt to tackle the issue of causation was made by Goldsmith (1969), who used empirical evidence from a number of countries and claimed that at a certain stage of economic growth the financial sector grows faster than the economy as a whole. That phenomenon has been called financial deepening. Much current research focuses on establishing empirically the beneficial impact of financial development on growth. Even more strongly, current research often aims at demonstrating that financial development drives economic growth.

In subsequent years, the influential (and independently produced) work of MacKinnon (1973) and Shaw (1973) resulted in the McKinnon-Shaw thesis on financial liberalisation. This thesis claims, first, that there is a positive relation between savings and the real interest rate, second, a negative relation between investment and the real interest rate, and third, a positive relation between investment and growth rate. Given financial repression, that is the administrative fixing of interest rates below their market-clearing level, banks cannot allocate credit according to the expected productivity of investment projects, thereby favouring projects of low return, hence low quality. In developing countries, whose financial institutions are undeveloped and poorly functioning, credit allocation is further distorted by extra-economic factors (such as quality of collateral, political pressures, the 'name' of borrowers, and corruption). Thus, financial repression leads to inefficient non price rationing of loanable funds, which distorts the functioning of the economy in two re

ated ways: first, low interest rates favour current consumption against savings, and second, oans are directed toward inefficient low-return projects. The policy prescription of the MacKinon-Shaw school is to remove the savings constraint by abolishing the institutionally et interest rate ceiling. The quantity and the quality of investment would thus increase, benefiting the growth rate of output. Thus, for MacKinnon-Shaw, the answers to the theoetical problems regarding the treatment of finance by mainstream theory are connected: inancial development generates economic growth, provided that the market operations of he financial system are unrestricted.

Recently, Levine (1997) has proposed a functional approach which maintains that the inancial sector not only encourages real economic growth but also –contrary to the Gurey-Shaw and MacKinnon-Shaw– that it also is a real sector creating value added. Moreover, Levine attempts to extend the Arrow-Debreu framework by introducing transaction and information costs that provide a foundation for the existence of the financial system. The system's functions include, first, trading, hedging, diversifying and pooling of risk, second, allocating capital, third, monitoring enterprise management, fourth, mobilising savngs, and fifth, facilitating the trading of goods, services and financial contracts. This approach is not restricted to a particular financial instrument (for example, money) or institution (for example, banks) but extends to the whole of the financial system. Furthermore, by introducing information and transaction costs, the functional approach attempts to attribute a significant role to institutions, an aspect usually missing from mainstream analysis. According to the functional approach, the financial system affects economic growth through the following two channels. First, by altering the savings rate or by reallocating savings among several capital-producing technologies, the financial system influences capital accumulation. Second, by directing resources appropriately, the financial system can influence the rate of technological innovation.

Levine's perspective is not restricted to banks –as is the case for McKinnon-Shaw– but focuses also upon other financial institutions and, particularly, stock markets. A further merit of the functional approach is that it recognises, even if partially, that non-market relations have a role to play in the analysis of finance. The discussion of institutions has been largely absent from much of the post-war mainstream work on finance, though it has been a very important component of the analysis of finance advanced by the tradition of political economy. In other respects, however, Levine's approach is in the same mould as the bulk of the theoretical work on finance that originated with Gurley-Shaw. It is, for instance, characterised by the belief that financial development leads to growth, also accepting the view that the unrestricted operation of the financial system is necessary for the benefits on growth to materialise. Equally significantly, both the McKinnon-Shaw school and the functional approach accept Barro's neoclassical growth model, and vigorously support the recent efflorescence of financial growth models incorporating both endogenous growth and endogenous financial institutions. In Barro-type models, various methods, such as externalities, are used to introduce endogenous growth, but the precise cause of endogenous growth does not affect the role of finance.[1] The functional approach varies from the more

[1] Arestis and Demetriades (1997) have pointed out important methodological limitations of Barro-type cross-country regressions. First, cross-country regressions are based on extremely simplistic assumptions

standard models of this type only to the extent that it attributes a stronger role to the financial system in generating growth. However, the recent endogenous finance models are generally supportive of the rapid development of stock markets, unlike those deriving from the more traditional versions of McKinnon-Shaw, which tend to favour slower evolutionary growth for capital markets, Fry (1995).

It is also important to note that the financial liberalisation thesis has come under sustained attack, even from within mainstream economics. An influential argument in this respect has been put forth by Stiglitz (1994) claiming that financial markets are prone to market failure due to information imperfections. An essential function of financial markets is to collect, process, and convey information in order to allocate funds and monitor their use. Yet, information is asymmetrically available and costly to acquire, resulting in externalities and market failures. Hence, government intervention in finance – mild financial repression - can improve capital allocation. Nevertheless, despite its critical view of financial liberalisation, Stiglitz's approach still considers financial development to lead economic growth.

The nature of information availability has a bearing on the recent debate regarding the relationship between the two main forms of financial intermediation namely, banks and stock markets. On the one hand, Levine and Zervos (1995) suggest that bank and stock markets complement each other, and both positively affect growth. This has been disputed both theoretically and empirically. On the other, Allen & Gale (1995) argue that, for a variety of reasons, including information asymmetries, banks have important advantages over stock markets in supporting growth. By providing almost instant liquidity to investors, stock exchanges subvert long-term commitment to enterprise. Banks, on the other hand, can sustain close relations with industry and better cope with asymmetric information, transaction and agency costs.

In sum, despite considerable differences among its various currents, contemporary mainstream theory on finance stresses two related points: first, that financial development causes economic growth, and second, that financial systems tend to perform better under unrestricted market conditions. By discussing the structure of capitalist financial systems from the standpoint of Marxist political economy, section IV of this essay shows finance and capitalist accumulation interact in both directions rather than the former causing the latter. Moreover, financial liberalisation, often extending to the free operation of stock markets, is not necessarily conducive to growth within the confines of the capitalist economy. Alternative policies, stressing the bank-industry nexus and the regulation of the financial system, can be better suited to this task.

III. Capital markets and economic development

The traditional McKinnon-Shaw analysis of the financial system avoided discussing stock markets, despite often acknowledging their importance. An important recent for-

and fail adequately to grasp the peculiarities of individual countries, such as the institutional structure of the financial system, and the policy regime. Second, causality cannot be satisfactorily established on the basis of cross-country regressions.

malisation was provided by Cho (1986) arguing that, in order to improve the efficiency of resource allocation, credit markets should be supplemented by equity markets. The reason is that equity finance is supposed to be free of the problems of adverse selection and moral hazard that characterise banks. Therefore, the development and liberalisation of the activities of stock market were deemed necessary for successful financial liberalisation. The analysis of Levine and Zervos (1995, 1996) introduces stock markets immediately, treating them as essential for long-run growth.

Stock markets are supposed to effect growth through two channels: first, the pricing process, and second, the take-over mechanism. A properly functioning stock market affects positively the savings rate and the quality and quantity of investment, in a manner similar to that mentioned above for the equilibrium interest rate. Moreover, and unlike the rate of interest, the take-over mechanism of stock markets ensures the profitable utilisation of past investments. For King and Levine, (1993), stock markets also affect directly technological innovation and entrepreneurship via four channels: first, by creating liquidity, second, by diversifying risk, third, by creating incentives for investors to acquire information about firms, fourth, by creating the possibility of loss of corporate control. All these arguments are highly debatable on both theoretical and empirical terms, as their proponents themselves realise, Demirguc-Kunt & Levine (1996a).

Myers & Majluf (1984), based on the work of Stiglitz, have shown that Cho's (1986) model can result in inefficient allocation of funds because of information asymmetries between corporate management and investors regarding project returns. In these circumstances rational managers prefer retained earnings to debt and only as a last resort approach the equity market. Thus, firms under asymmetric information can be equity-rationed. If they are also credit-rationed and have insufficient retained profits to finance profitable projects, sub-optimal investment might result. Stiglitz (1985) has also disputed, again on the grounds of asymmetric information, the efficacy of the take-over mechanism. Moreover, Stiglitz (1985, 1994) has also argued that because stock markets quickly reveal information through price changes, they create a free-rider problem: they reduce incentives for investors to expend resources for obtaining information since they can acquire this information by simply observing prices.

Porter (1992) has further claimed that both the pricing process and the takeover mechanism of stock markets in practice operate imperfectly. Stock-market prices are subject to whims and therefore not necessarily reflecting economic fundamentals. Similarly, empirical evidence suggests that take-overs may not take place according to performance but rather according to size: the take-over of a large unprofitable enterprise may be more advantageous that that of a small efficient one. More generally, stock markets lead to short-termism and lack of long-run commitment to production. They also generate perverse incentives, rewarding managers for financial engineering rather that successful growth.

Singh (1997) has advanced an even broader critique of stock exchanges, based on his rejection of the financial liberalisation thesis. His critique is not confined to internal aspects of mainstream theory but captures a broader economic perspective. Singh claims that both the pricing and the take-over mechanisms operate imperfectly resulting in short-termism and lower rates of long-term investment. The provision of instant liquidity by

stock markets removes long-term commitment to the firm. Anglo-Saxon economies, which favour financial systems based on through stock markets, are competitively disadvantaged in this respect relative to Japan and Germany, where the bank-industry nexus predominates. All these arguments apply even more strongly to developing countries, which lack an appropriate regulatory framework ensuring efficient information-gathering. Moreover, young listed firms do not have long enough and credible enough records in order to be accurately assessed. These weaknesses lead to a noisy stock market environment with arbitrary pricing and considerable volatility that undermines efficient investment allocation. Likewise, the interaction between stock and currency markets in the wake of unfavourable economic shocks may exacerbate macro-economic instability and reduce long-term growth. Finally, stock market development might undermine the existing bank-industry nexus that have been proved quite successful in promoting growth. For Singh, financial liberalisation and the rapid development of stock markets are unlikely to produce faster long-term economic growth.

In section V of this essay it is shown that capital markets are necessary and integral parts of the capitalist financial system but also sources of instability. On the one hand, they provide long-term capital on an equity basis, thus allowing for large-scale investment. On the other hand, they also create instability since their very function encourages the anticipation of the future and promotes speculation within a capitalist economy. Instability might even be worse in developing countries that do not possess institutional mechanisms for information processing. Much of the ambiguity in mainstream theory derives from its approach to the rate of interest, which typically assumes that the rate of interest is one of the main instruments in influencing investment and capital accumulation and, in equilibrium, equals the rate of profit. This assumption is vigorously disputed by Marxist political economy, a fact that has significant implications for the analysis of stock markets and financial systems more broadly.

IV. The financial system of a capitalist economy: a marxist perspective

Credit denotes the belief and expectation that payment will be effected at some later point in time for good supplied now, or that lent money will be returned. In a capitalist economy, highly sophisticated mechanisms of credit (a credit system) are invariably constructed. Money, particularly in its functions as means of hoarding and means of payment, serves as one of the foundations for the credit system. The principal forms and functions of the capitalist credit system emerge spontaneously in the process of facilitating commodity transactions among capitals, and they involve the utilisation of idle money capital (that is, money hoards) generated in the turnover of capital. Finance, on the other hand, denotes the several ways of providing either money capital or simply money funds to a person or firm. Credit naturally constitutes a fundamental component of finance. However, finance is broader than credit; it further relates to the mobilisation through the capital market of idle money in the form of joint-stock capital, rather than simply as lending and borrowing. The complex structure of credit system and capital market taken together can be thought of as the financial system of a capitalist economy.

The representative form of the capitalist credit system

The core foundation for the capitalist credit system is provided by the generation of idle money capital in the course of the turnover of the total social capital. As the latter is traversed, idle money necessarily emerges in the form of depreciation funds for fixed capital, reserves for the expansion of accumulation, reserves guarding against price fluctuations, and reserves that help maintain the continuity of production in the face of the constant alternation between production and circulation.[2] Idle funds become interest-bearing (loanable) capital through the mediation of the credit system, and are subsequently utilised by all the capitals that participate in the generation and realisation of surplus-value. Idle money generated out of the saving of social groups unrelated to the circuit of the total social capital also becomes internal to the motion of the total social capital. Such saving is absorbed by the credit system, directed to real accumulation through lending, and recreated as loanable capital when loans are repaid.

The structured separate interests between capitalists who mediate the motion of loanable capital, capitalists who receive significant interest revenues, and capitalists who directly participate in real accumulation, can be systematically analysed on the above analytical premises. The array of social groups that receive significant money revenues in the form of interest is complex and changes with the development of capitalism. In late capitalism, income in the form of interest is received by industrial and commercial firms, individual savers among the middle and even the working class, and substantial numbers of relatively modest money owners who derive most of their income from money savings ('rentiers').

For the initial theorisation of the capitalist credit system it is essential to assume that commercial credit is regularly advanced among competing capitalist firms and that the main activity of banks is to advance short-term loans to meet the needs of accumulation for circulating capital. These assumptions correspond with the empirical reality of the English credit system during the era of liberalism. Modern banks, however, also engage in the advance of loans in order to effect long-term investment for fixed capital. The typical countries of such banking practices are Germany and Japan, where capitalism developed later than in England.[3] The specific character of this aspect of modern banking can be naturally

[2] For a full analysis of this see Itoh & Lapavitsas (1998, ch 3). In Marx's own work, suggestions of the approach proposed here are frequently encountered (eg, 1885, 165, 353-359), but one can also find the view that loanable capital is a special type of capital possessed by the 'monied' section of the capitalist class (1894, ch 21, 22, 23, 24). Itoh and Lapavitsas reject this approach on the grounds that it posits loanable capital in an ideally abstract manner (namely, the 'monied' capitalist possesses the money capital whereas the 'functioning' capitalist possesses the accumulation project) and tends to identify the payment of interest with one social stratum. The approach adopted here treats loanable capital as a form of capital generated by, and possessed by, both industrial and commercial forms of capital. Hence, the latter also earn interest.

[3] The leading area of capitalist accumulation in the era of the emergence of German and Japanese capitalism was chiefly heavy industries with huge fixed capitals which were normally beyond the means of individual capitalists. So-called direct finance through the capital market (the issuing of shares) was not a plausible option in these countries due to the insufficient number of private capital investors. Consequently, long-term industrial projects, which were potentially highly profitable, required industrial financing by banks. Banks could gather small amounts of idle money from large numbers of people, as well as take advantage of the profitable opportunities present in the process of 'catching up' with the more advanced capitalist countries. However, in making loans for long term fixed capital investment, German and Japanese banks became more closely linked with the fate of industrial firms. They went beyond 'sound banking', and often had to behave as senior partners or eq

incorporated into our analytical framework, in a manner suggested in the next section. As long as the capitalist credit system remains a spontaneously emerging social mechanism which mobilises idle money capital, the analysis of the representative capitalist credit system suggested here continues to offer many valid insights into the apparently altered credit practices of contemporary capitalism.[4]

Commercial credit

Marx (1894, 610) defined commercial credit as,

> [the] credit that capitalists involved in the reproduction process give one another. This forms the basis of the credit system. Its representative is the bill of exchange, a promissory note with a fixed date of payment, i.e. "a document of deferred payment".

Commercial credit facilitates commodity transactions among industrial and commercial capitals by deferring payment. In its representative state, commercial credit gives rise to financial instruments such as promissory notes and bills of exchange. In the later stages of capitalism, commercial credit remains widely employed among firms, but frequently takes the form of book credits. The basis of commercial credit is provided by the function of money as means of payment, as the latter is found in simple pre-capitalist commodity circulation (as is the corresponding relationship of creditor and debtor).

Historically, bills of exchange have also been used for the mere transmission of money to distant places (Kindleberger, 1984, pp 39-41). The combination of money transmission with the deferral of payments provided a broad basis for the proliferation of credit relations in the capitalist economy. As industrial capitalism took root, commercial credit, from a form of economic intercourse found primarily among merchants engaging in foreign trade, became a set of economic relations integral to the domestic economy. By utilising the idle money capitals generated in the turnover of industrial capital, commercial credit allowed more efficient commodity selling and buying among capitals. The typical instruments of commercial credit in its representative are commercial bills in the form of either promissory notes or bills of exchange.

A promissory note is a promise to make a return payment of a certain amount of money after a specified period of time, rather than a promise to return the commodity transacted. Though it is issued and received in relation to a commodity transaction, a promissory note represents debt of a certain monetary value with a specified time to maturity. Assuming that no further credit is forthcoming, the issuer has to prepare a definite sum of money as means of payment in order to settle the note when it falls due. It is, however, open to the holder to endorse the note and use in payment for other commodities, signifying also the existence of joint liability at the due date as far as the last person who gives commercial credit is con-

uity-holders. The revival of contemporary Anglo-Saxon literature in this area can perhaps be traced to Gerschenkron (1962).

[4] Marx also began to theorise the credit system by relying on the general features of English capitalism in the mid-19th century to provide an empirical basis for his abstractions. In this regard we can make the most of his original insights and contributions to the fundamental theory of the credit system, despite the fact that Marx (1894, Pt 5) left a large part of his theoretical work on credit in a very unfinished and disorganised form.

cerned. Joint liability enhances the acceptability of the endorsed promissory note, especially when the initial drawer (or the endorsers) is known to the likely receiver of the note. In this way, and without requiring the intervention of sophisticated financial institutions or the state, promissory notes function as credit money and enable the purchase and sale of commodities among a series of capitalists. However, promissory notes are different from cash since a return payment must necessarily be made at the due date, a payment for which there is joint liability. Consequently, their acceptability critically depends on the creditworthiness of the capitalists who have drawn or endorsed them.

Bills of exchange represent a more general form of commercial credit. Under the external pressure of competition, capitalists usually have to match the commercial credit they advance in selling their output with that they receive in purchasing inputs. To achieve this, they can draw bills of exchange that command the buyers of their output to pay the sellers of their inputs a certain amount of money on a due date after a certain period. The bill is accepted by the buyer of output and passed on to the seller of inputs in exchange for the latter's commodities. Final payment is expected from the buyer of the output, but the drawer is also a surety, jointly liable for the bill. Since a bill of exchange bears at least two names jointly responsible for payment, it is normally more acceptable than a promissory note bearing a single name. Bills can subsequently be endorsed and circulate in exchange for commodities, thus also forming a type of credit money. Since this elementary credit money is issued and received among industrial and commercial capitalists according to their own will and necessity, it makes transactions among capitalists more elastic and relatively independent of the existing amount of money or loanable money capital.

The main function of commercial credit is to enable capitalists co-operatively (and individually) to economise on capital in circulation by sparing them the use of cash in transactions. Commercial credit, thereby, facilitates the increase of capital directly engaged in production and the further generation of surplus-value. In principle, capitalists who advance commercial credit also benefit since they economise on the costs of circulation (such as storage of finished output) and on the money reserve needed to guard against price fluctuations. Moreover, they may be able to use the issued bill to purchase necessary commodity inputs from other capitalists. By this token, when transactions are repeatedly completed through the use of commercial credit, capitalists can spare a part of the idle money capital that they have to hold in order to ensure continuity in the process of production. The economised money capital can be converted into capital directly engaged in production.

Moreover, commercial credit is a vital element in the equalisation of the rate of profit. Consider, for instance, branches of industry that are earning above-average profits due to raised output prices caused by a relative shortage of supply. By relying more heavily on commercial credit, these branches of industry can increase their purchases of means of production faster than other branches. This contributes to the faster relative growth of their output, leading to a lowering of their rates of profit toward the average. Branches of industry in the opposite position reduce their credit-financed purchases of means of production, and increase the sale of their output through the advance of their own commercial credit. In this complex manner, commercial credit usually contributes to the readjustment of the anarchical imbalance between industrial spheres, and serves to equalise the rate of profit.

There are, however, severe limitations to the role played by commercial credit relative

to real accumulation, which originate in its very nature. Firstly, commercial credit is largely confined to the exchange relations of capitalists whose production processes are intrinsically linked, despite the fact that commercial capitalists could potentially interject themselves among the industrial capitalists. It is not likely that commercial credit could result in the emergence of credit relations among capitalists in unrelated production processes, for instance between car-making and cloth-weaving. Secondly, beyond a certain length of the chain, the sum of money due and the terms of payment of a bill are likely to become unsuitable for further transactions. Thirdly, even with the joint liability of several endorsers, the bill's acceptability is still not general enough: some capitalists might not willingly receive the endorsed bill in exchange for their commodities.

Consequently, the chain of commercial credit formed through a bill of exchange cannot extend without limit, and always leaves a plain debtor and a plain creditor at, respectively, the beginning and the end. A corollary of these limitations is that the ability of commercial credit to economise on capital in circulation, and to contribute to the raising and the equalisation of the rate of profit, is also restricted. Banking credit is a more advanced component of the capitalist credit system, which places credit on a more general social foundation and overcomes the limitations of commercial credit.

Banking credit

Banking credit appears typically on the foundation of commercial credit, and forms a capitalist social mechanism that, on a scale broader than that of commercial credit, mediates the utilisation of idle money capital among capitalists. Bank activities give rise to relations of credit and debit between the banks on one side and several industrial and commercial capitals on the other. Within the framework adopted here, bank liabilities are typically formed through the receipt of money deposits or the issuing of private banknotes. At first sight, the issuing of banknotes appears more actively to sustain the advance of banking credit, compared to the passive receipt of deposits. However, despite appearances, both forms of bank liability operate in a fundamentally similar manner. A bank can make a credit advance to a customer (and so acquire assets on its own balance sheet) either by creating a deposit in the customer's favour or by directly issuing banknotes to the customer. In their representative form, banknotes are a bank's promissory notes; they are written promises to pay on sight a quantity of commodity money. Banknotes are a higher grade of credit money, and have a broader circulation than private credit money based on commercial credit. The limitations of fixed nominal value and of a definite time to maturity, which characterise commercial bills, are dissolved when credit money takes the form of banknotes.

In the most fundamental form of banking credit, capitalists obtain private banknotes by discounting their commercial bills. By doing so, they can usually accelerate the turnover of their capital, thereby increasing their profits, other things equal. In the course of bill discounting, banks simultaneously acquire assets in the form of bills and create liabilities in the form of issued banknotes. Capitalists who sell bills to banks might spend less than the full amount of the proceeds in the first instance, placing the balance as deposits with the banks. From the standpoint of the bank, however, issued banknotes in the hands of the public and deposits received are similar liabilities.

To support both types of liabilities, especially to be able to meet demands for the immediate payment of liabilities, a bank must possess certain reserves of cash. In the early days of a bank's business its own capital contributes a significant part of the reserves. As a bank matures, however, its reserves are increasingly formed by funds accruing from deposits received and from payments in settlement of discounted commercial bills. When a bank's own banknotes are returned to it in settlement of bills, the bank's liabilities and assets are correspondingly reduced; the ratio of the bank's reserves to its liabilities rises as a result, making it easier for the bank to advance fresh credit. The effect is similar to that of either the pure inflow of deposits or the simple settlement of bills, both of which directly increase the banks cash reserves.

Since the acquisition of reserves through the inflow of deposits enables a bank more easily to extend credit, banks actively seek to absorb the idle money capitals of industrial and commercial capitalists in the form of deposits. Banks often request of industrial and commercial capitalists that they place the temporarily unnecessary part of their bill discounts with the banks as deposits. Industrial and commercial capitalists, on the other hand, benefit by holding bank deposits, as they can economise on the costs of storing, paying and receiving money, as well as on the costs of settling credit transactions. If a bank can reliably expect to receive plentiful deposits, it need not issue banknotes to pursue its operations. Since, other things equal, a larger inflow of deposits implies a greater facility of lending and more interest earned, banks may themselves pay interest to depositors to encourage the inflow. Insofar as they pay interest on deposits banks behave as a type of commercial capital the business of which is to purchase cheaply the use of money as a commodity in order to sell it dearer. This is also the elemental way in which financial intermediation emerges.

In a capitalist economy banks are, in principle, profit-making enterprises similar to private industrial and commercial capitals. A bank's own capital is typically used, first, to makes a part of the bank's reserves, second, partially to meets the costs of money storage and transmission, organising and running financial intermediation, and settling credit transactions. Bank capital is also used to meet the costs of office buildings, business equipment, dealing with credit inquiries, collecting payments of matured bills, storing money, bills and other certificates, as well as meeting the salaries and wages of bank personnel. These costs are pure costs of circulation (Marx, 1885, pp 207-14); from the point of view of society as a whole, they are necessary costs of social reproduction and they are replenished out of the total surplus-value produced per period.[5]

Rational grounds for the deduction of bank costs from surplus-value arise because the activities of bank capital result in economies in the amount of capital in circulation, and in the costs of circulation, for industrial and commercial capitals. Bank capital increases the efficiency of production of surplus-value as a whole, creating room for the systematic replenishment of its own costs out of surplus-value. Without a systematic beneficial effect on their profit rate, it is unlikely that industrial and commercial capitalists would systematically employ the services of banks. A part of the additional profits generated for industrial and commercial capitals by employing the services of banks accrues to the banks themselves as interest. The interest obtained by banks per period is distributed in three ways; one part is paid out to depositors as deposit interest; another part replenishes the bank capital invested and consumed during the period; a third part forms the profit of the total bank capital invested.

Theoretically, there can be no technically definite standard (no necessary amount) for the size of bank capital employed in a specialised area of bank activities, or in the banking business as a whole. With a given bank capital invested in reserves and covering the costs of banking, the amount of money capital that can be collected and lent can vary greatly. It is incorrect to expect to find a technologically determined relationship between the amount of bank capital and the level of bank activity. In this respect, there is no analogy at all with the relation between the level of productive activity and the amount of capital in an industrial sphere.[6]

Excessive investment in bank capital manifests itself gradually (and as the capitalist business cycle is repeated), in the form of a rate of banking profit generally lower than the average rate of profit. As a result, the growth of bank capital through the reinvestment of bank profits becomes slower than the social average; a part of bank capital converts into industrial or commercial capital, contributing to the elevation of bank profit in the direction of the average. In the opposite case, the growth of bank capital is accelerated, and parts of industrial and commercial capital move into the banking business. Under generally competitive conditions, the rate of bank profit is subject to the law of the equalisation of the rate of profit, pivoting on the general rate determined by the technical conditions of reproduction of industrial capital.

The money market

Banking is a sphere of private business open to capital investment in a manner similar to manufacture and commerce. Individual banks in possession of limited capital tend to concentrate their activities in servicing the needs of particular branches of commerce and industry within given geographical areas.[7] As a result, the mediation by individual banks of the movement of the demand and supply of loanable capital has a particular character deriving from the nature of the business activities in the territory served by each bank.

As far as an individual bank is concerned, the fluctuations of the demand and supply of loanable capital are reflected in the ratio of its reserves to its total liabilities, ie in the bank's reserve ratio. For reasons similar to those applying to the determination of the size of bank capital, no clear technical conditions exist which allow for the theoretical determination of

[5] Marx (1885, ch 6) discussed 'The Costs of Circulation' in three sections; 'Pure Circulation Costs', 'Costs of Storage', and 'Transport Costs'. In the first section, after (a) Buying and Selling Time, (b) Book-keeping, Marx considered (c) Money as a pure cost of circulation. In analysing (c), Marx argued that the value of gold (and silver) money is a pure cost of circulation. This argument should be broadened to include the costs of handling credit relations. The historical development of capitalism in the twentieth century has led to increasingly spare use of gold and silver as money; the costs to banks of handling credit money and credit relations in general, on the other hand, have gradually increased.

[6] In this regard, Panico's (1987) attempt, in the Sraffian tradition, to determine the general rate of interest from the material technical conditions of production is misguided. No objective material features of capitalist production are reflected in the rate of interest, other than the balance of demand and supply of loanable capital. Analogously, there are no technical grounds for the determination of the size of bank capital relative to its activities.

[7] A tendency clearly exemplified by the so-called 'single banking' system in Britain in the mid-nineteenth century under which most banks did not have branches.

he reserve ratio of banks. The reserve ratio naturally exhibits considerable elasticity. Nev-rtheless, in order to be able to meet demands for cash and make payments, banks are bliged empirically to ascertain a necessary minimum reserve ratio. Banks with relatively lentiful loanable capital, reflected in plentiful reserves, can more easily assent to loan re-uests from other banks. If, on the other hand, their reserves are insufficient, banks find it ifficult to expand their lending business.

Banks that cannot satisfy the demand of their customers for loans due to the in-sufficiency of their reserves themselves tend to request loans from other banks. The latter can rediscount bills of exchange endorsed by banks, or simply discount other bankers' bills. This is the typical form of appearance of credit among banks, the operations of which are concentrated in the money market. The money market is basically a rediscount market for banks, which also functions as an efficient mechanism for the daily settlement of matured commercial and bankers' bills. Money markets tend to have a clearly defined geographical location, usually part of an urban commercial centre.

In the money market, the peculiarities of individual banks in discounting bills of ex-change, reflecting the territorial specialisation of each bank and the degree of creditwor-thiness of each bill, tend to disappear. Through trading in the money market, the credit-worthiness of bills -both endorsed and issued by banks- becomes homogeneous. Individual banks with access to the money market are able to expand and run their credit business more elastically. At the same time, the balance between the demand and supply of loan-able capital is concentrated in a single market, rid of local particularities. In the money market, loanable money capital becomes a homogeneous commodity transacted at the same price, that is the market rate of interest, according to the law of one price. A general rate of interest emerges clearly. The money market rate of interest serves as a general stan-dard for the pricing of the individual and local credit advances of banks (Marx, 1894, 488).

Despite representing a degree of social centralisation of the processes of credit, the money market remains a mechanism for the partial accommodation of the credit requi-rements of banks. The relatively independent advance of individual banking credit to capi-talist businesses continues to exist and flourish alongside the money market. Elementary commercial credit (and the credit relations represented by the spontaneous emergence of commercial bills) continues to emerge unceasingly across capitalist exchange.

Seen as a whole, the capitalist credit system forms a pyramid-like structure comprising (from the top downwards), the money market, individual banking credit, and spontaneous-ly emerging inter-firm commercial credit. The pyramid itself rests upon the process of capi-talist accumulation undertaken by industrial and commercial capitals. Within the pyramid-like structure of the credit system, commercial credit and individual banking credit fluctu-ate relatively independently of the demand and supply of loanable capital in the money market. The money market rate of interest, though it serves as a standard for the rates of interest in commercial and banking credit, is broadly regulated by the conditions of ad-vance of the latter.

The central bank

Considered in its fundamental nature -above all, independently of the role of the state in the capitalist economy- the central bank is a bank of banks which operates especially in

the money market. Generally speaking, banks with regular and easy access to the money market need not issue their own banknotes in order to extend their business flexibly. In-stead, such banks can rely on the receipt of deposits and the regular repayment of debt from capitalists whose trade is concentrated at the commercial centre. Money market banks are also well placed to receive money funds from more remote banks in order to facilitate debt settlement; furthermore, they can easily seek to borrow funds in the money market in order to supplement their cash reserves.

Money market banks can increase their efficiency and flexibility, in both handling credit transactions and settling payments among themselves, by depositing a part of their reserves with a single bank and then using its banknotes for payments. The economies and elasticities arising from this practice are analogous to those that emerge when individual industrial and commercial capitals hold their reserves with a local bank. A central bank emerges as a pri-vate bank with a definite and limited capital size; it fulfils the function of holding the central reserve of the banking system; it can also fail or be replaced by another bank. The pyramid of the capitalist credit system is complete when the central bank emerges at its apex.

The banknotes issued by the central bank are typically used as means of settlement among the banks in the money market but also in the commercial transactions of the commercial centre; they are 'the coin of wholesale trade' (Marx, 1894, 529). Naturally, the circulation of central bank notes gradually spreads to commercial and credit transactions between and within local areas closely related to the commercial centre in which the cen-tral bank is based. Nevertheless, as long as the central bank remains a private bank with limited capital and circumscribed business activities, central bank notes cannot become a country's generally circulating money. For the bank of banks, issuing and handling banknotes of small face value is not as profitable as similar operations with large notes un-dertaken among banks.

The social functions of banking credit

The social functions of banking credit are similar to those of commercial credit, but significantly expanded. Banking credit economises on idle money capital held across indus-tries, thereby promoting the expansion of production and raising the general rate of profit. At the same time, banking credit serves to equalise the rate of profit among industries in a manner analogous to commercial credit. Industries whose products sell at a higher rate of profit due to a shortage of supply, make comparatively heavier use of banking credit in or-der to expand their purchases of means of production; eventually, the shortage of supply is reduced and profits fall in the direction of the average. Industries with lower than average rate of profit due to excess supply, on the other hand, tend to limit their use of banking credit with opposite results. Banking credit facilitates the reallocation of labour and othe resources, making possible the readjustment of market disequilibria and tending to equal-ise the sectoral rates of profit. In this regard, both banking and commercial credit are mechanisms of the competitive capitalist economy for the realisation of the law of value effecting the constant reallocation of labour-time according to social necessity.

Moreover, as far as the readjustment of market disequilibria and the expansion of pro-duction are concerned, the credit system allows much greater flexibility than that inher

ntly possessed by individual industrial capitals, restricted as these are by their limited size, heir limited profits, and the need to invest in fixed capital. The pyramid-like capitalist redit system is an instance of socialisation of resources, allowing for their more rational tilisation, although under capitalist social relations. Consequently, since the beginnings of apitalism, social reformers and others have considered the credit system as a social lever or the construction of a more stable and rational economic order.

Finally, the functioning of the credit system is not always beneficial to capitalist accumulation. Credit institutions constantly run the danger of making losses, and even becoming insolvent, through the unexpected failure of borrowing capitalists to make return payments. During the peak periods of capitalist booms, in particular, the optimistic mood in the markets conceals an enhanced danger of speculative trading. The creation of speculative booms and their collapse leading to economic crises, more on which in the next section, show the limits of the benefits conferred by the credit system to capitalist accumulation, as well as the system's potentially destructive role.

V. Joint-stock capital and the capital market

The credit system mobilises idle money capital and enables circulating capital to expand and acquire elasticity. The social organisation constructed on joint-stock capital, on the other hand, mobilises idle money capital to facilitate the creation of large enterprises and the building of enormous industrial fixed capital far exceeding the limited powers of individual capitals. According to Marx (1894, 567), the foration of joint-stock companies involves the 'tremendous expansion of production, and enterprises which would be impossible for individual capitals.' The shares of joint-stock capitals are traded in the capital market.

The capital market and expected dividend yield

The capitalist economy is a historically specific socio-economic formation grounded on the commodity form. Through the commodity form, capitalism systeatically embraces all elements of economic life and subsumes them under the motion of capital. Commodification extends over a great number of the products of labour, but also over labour-power, land, and loanable money in the money market. The process of commodification finally reaches capital itself: the capital market (or stock exchange) is a market in which capital is itself transacted in the form of shares. Shares in joint-stock capital essentially represent common ownership of capital actually in motion. For Marx (1939, pp 264, 275-7), 'joint stock capital' is the highest and most complete form of 'capital', which logically follows 'capital in general', 'competition' and 'credit'. Historically speaking, capitalism has not produced a form of capital that transcends joint-stock capital.

Given that transactions in the capital market can be undertaken on a daily basis, relatively cheaply, and with comparatively small sums of money, idle money across society is mobilised for investment in the stock exchange. For the shaeholers, the purchaser of shares aims, in the first instance, at earning dividends out of company profits. In this connection, the dividend yield of shares is important. In general, a share's actual dividend yield at a given time is the ratio of dividends per share, D, over the share price, P. However, since dividends are a part of future profits, what matters for stock exchange investors are expected dividends. Thus, the expected dividend yield, y^e, is given by the ratio of expected dividends per share, D^e, over the actual share price, P_s.

$$y^e = D^e / P_s \tag{1}$$

Alternatively, actual share prices can be thought of as the ratio of expected dividends over the expected dividend yield. The rate of interest in the money market serves as the point of reference for the dividend yield expected by investors in the capital market. Given that idle money invested in shares can also be potentially lent out at interest, the market rate of interest regulates the expected dividend yield of shares. When, for instance, the expected dividend yield exceeds the rate of interest, funds tend to flow into the capital market raising the price of shares and lowering the expected yield. The opposite tends to take place when the expected yield is below the rate of interest. Thus, at the margin, the expected yield per share is equal to the market rate of interest, that is $y^e = i$. Consequently, actual share prices can be thought of as the value of expected dividends capitalised by the market rate of interest, i.

$$P_s = D^e / i \tag{2}$$

Thus, share prices vary directly with a company's expected profits and dividends, and inversely with the market rate of interest.[8] This simple formulation of share prices, however, must be complemented by three further factors that take into account both the fact that the future is unknown and the dynamic character of capitalist accumulation.

First, while the market rate of interest is a definite nominal rate of return promised on future payments, the expected dividend yield contains elements of risk since future profits cannot be guaranteed in advance. Two types of risk are immediately relevant in this connection; first, risk due to the inherent variability of the unknown future profits; second, the risk of company default. The expected dividend yield allows for risk by incorporating a certain risk premium in excess of the rate of interest.

Second, stock exchange investors also aim at capital gains resulting from future increases in share prices. Thus, the total expected yield of a share Y^e, is the expected dividend yield plus the expected capital gains expressed as a proportion of the share price. The total expected yield of a share also includes a risk premium to cover the risks generated by the fact that share prices in the future are inherently unknowable. Expectations of capital

[8] Strictly speaking, this formula holds for the mathematically simple case of a perpetual stream of dividend payments of the same size. Under less stringent assumptions there is considerable complexity in the capitalisation calculations. Conceptually, however, there is no difference between the various calculations; they are all based on the simple notion of interpreting every regular payment of money as a payment of interest on some imputed capital. Marx called the imputed capital of shares, bonds and the like, 'fictitious' capital. 'The formation of fictitious capital is known as capitalisation' (1894, 567). In this context, there are two obvious ways of interpreting the term 'fictitious' capital. First, as for government bonds, the money sum does not generally represent capital value invested in producing surplus value. Second, as for company shares, the money sum often represents more capital than actually invested in the production of surplus value. Thus, the collapse of financial asset prices in a crisis might be treated as the destruction of fictitious capital rather than of real capital productively employed. However, since the behaviour of asset prices in the course of the business cycle can be fully analysed by examining the relationship between expected dividends, capital gains and the market rate of interest.

gains, and their changes in the course of economic fluctuations, play an important role in determining both individual and general share prices. Generally rising share prices promote an optimistic perspective of the future in the capital market, and sometimes cause stock exchange bubbles by mobilising the flexible powers of expansion of the credit mechanism. The inevitable burst of such bubbles is often caused, and always worsened, by a swing of expectations toward pessimism. Both individual and general share prices are subject to instability induced by speculative expectations; this makes analyses of share prices that use a static demand and supply framework very problematic. Capital market price instability is an important source of monetary crisis both as an integral part of the industrial business cycle and quite independently of it. As the significance of joint-stock firms has increased in the twentieth century so has the potential for instability generated by the capital market.

Third, the determination of the long-term rate of interest might become quite separate from that of the short-term rate. The short-term rate of interest is determined in the money market, based on the activities of banks mostly in the short-term lending of money capital. The long-term rate of interest, on the other hand, is determined in the market for state (and company) bonds, which are typically promises to pay a fixed amount of interest at regular intervals over a certain period. Bond market transactions usually involve the lending of money over considerably longer periods of time. The total yield of fixed income bonds is determined along the same lines as the total yield of shares, and incorporates the expectation of future bond price changes. The important difference with shares is that future interest payments on bonds are known with certainty whereas dividend payments are uncertain. The price of bonds thus varies inversely with the market rate of interest, and is also subject to speculative increases and decreases.

For the holders of idle money capital available for short-term investment the risk of losses involved in bond transactions is usually forbidding. On the other hand, idle money capital available for long-term lending is always available for lending to the short-term money market. The asymmetry in the demand and supply of loanable capital is the foundation for the generally higher long-term rate of interest compared to the short-term rate. The extent of difference between long-term and short-term rates of interest, however, cannot be theoretically determined a priori, and depends on the concrete historical and social circumstances of the country in question. The difference could also be reversed in favour of short-term rates during particularly critical phases of economic fluctuations.

It is intrinsic to its nature that the long-term rate of interest might become relatively independent from the short-term rate for certain periods of time. Were such relative independence of the long-term rate of interest to materialise, share prices might also be affected since the expected dividend yield is more naturally compared with the long-term rather than the short-term interest rate. Nevertheless, as both rates broadly relate to the motion of loanable capital, they generally move in the same direction driven by the changes in the short-term rate. Other things equal, a rise in the market interest rate leads to a fall in bond and share prices; the opposite holds for a fall.

Founder's profit

For Marxist political economy, the determination of the profit rate is quite distinct from that of the interest rate. The general rate of profit is determined by factors reflecting

the material and technical features of capitalist accumulation namely, the organic composition of capital, the turnover time of capital, the length of the working day, and the value of the necessary means of consumption for workers. The general rate of interest, on the other hand, is determined purely by the balance between the demand and supply of loanable money capital in the money market; it does not reflect any aspect of the underlying material reality of capitalist accumulation.

With the exception of some periods of financial tension and crisis, the rate of profit is generally higher than the rate of interest. Given the systematic difference between the rate of profit and the rate of interest, when a new company is established, the money value of the capital invested in real accumulation per share is lower than the share price, as the simple formal presentation below shows. Hilferding (1910, p 112) called the difference between the share price and the capital initially invested in real accumulation per share, 'founder's profit' (Gruendergewinn).

Assume that the entire mass of profits is regularly paid out as dividends, and that share prices are the capitalised value of expected dividends, ignoring capital gains. Transfers of funds between the money and the capital markets equalise the expected dividend yield and the market rate of interest (ignoring risk premia). The following variables are relevant: the initially invested money capital in real accumulation, K, expected total profit, G^e, expected dividend, D^e, rate of profit, r, and market rate of interest, i. The money capital invested per share in real accumulation is (K / N). If money capital flows between the money market and the capital market equalise the expected dividend yield with the market rate of interest, the share price is given by,

$$P_s = (D^e / i) \qquad \text{(i)}$$

Since all profits are paid out as dividends,

$$D^e = G^e / N \qquad \text{(ii)}$$

Given the general rate of profit, r,

$$G^e = rK \qquad \text{(iii)}$$

Hence,

$$D^e = (K / N)r \qquad \text{(iv)}$$

Thus,

$$P_s = (K / N)(r / i). \qquad \text{(v)}$$

If $r > i$ the share price, P_s, exceeds the money capital initially invested in real accumulation per share, (K / N). Managerial and other costs of financial transactions covered out of profits leave the substance of the argument unchanged.

The social functions of joint-stock capital

The form of joint-stock capital greatly facilitates the undertaking of joint investment

persons unknown to each other, it is therefore appropriate in order to mobilise idle money capital and construct huge fixed capital in potentially profitable industries. Increases in the share capital of existing companies, or the issuing of shares by newly established companies, act as an effective lever for the mobilisation of idle money capital. The difficulty which individual capital faces in creating big industrial enterprises employing huge fixed capital, is thereby overcome.

The form of joint-stock capital does not become universal across all branches of industry, including trade and services. Capitalism aims at the self-expansion of private capital, hence, there is no necessity for capitalists to opt for joint-stock investment when either personal or partnership investment is adequate for a potentially profitable capitalist project. Even in the twentieth century quite a few branches of industry exist in which small and medium private firms continue to be appropriate for the technological characteristics of production; in such branches of industry the form of joint-stock capital is either not dominant or does not exist at all. In this regard, the form of joint-stock capital cannot be an universal form of economic organization, even though it represents the most socially developed form of capital. This weakness of the form of joint-stock capital ultimately derives from the historically limited nature of the capitalist economy, grounded as it is on private money-making.

Two implications for real accumulation follow from the fact that joint-stock capital facilitates the growth of new industrial branches with massive fixed capital, similar to the implications of the operations of the credit system for real accumulation. Firstly, joint-stock capital can accelerate the accumulation of the total social capital by transforming idle money capital into industrial capital in motion; the production of surplus-value is intensified and the general rate of profit can be raised. Since it is idle capital that is turned to profit-making, the beneficial effect on the mass of surplus-value is unaffected by changes in the organic composition of capital. Secondly, joint-stock capital effects the reallocation of capital and productive resources across industries in the direction of more profitable industries. The concomitant increase in the output supply of such industries leads to a lowering of their profit rate toward the social average. In this respect, the social mechanism erected on the basis of joint-stock capital broadly promotes the equalisation of the rate of profit among industries.

Instability induced by capital market speculation

In a capitalist economy speculative operations and outright swindling could potentially develop in every area of economic activity. It is implicit to the general formula of capital M - C - M' (or the purchase of commodities cheap in order to sell them dear) that even industrial capitalists are always prepared to take advantage of opportunities for speculative gains. When the price of a certain commodity is expected to rise, all capitalists are tempted to buy and hold speculative stocks in order to make future profits.

Speculative transactions typically appear and grow massively under certain conditions in the capital market. The expectation of high future profits during the upswing of the business cycle encourages speculative purchases of shares leading to further temporary gains from share price rises; new share issues can be smoothly floated, for both potentially profitable projects and already established enterprises; correspondingly large amounts of

'founder's profit' are realised. During the gestation period of large fixed capitals, in particular, effective demand appears strong and durable, especially for firms engaged in producing the elements of fixed capital. For projects that lead to substantial increases in the productive capacity of an industrial branch, such as a new steel plant or a new heavy chemical plant, speculation starts at their inception and lasts for years.

The growth of joint-stock capital, and the emergence of a capital market add a further element of instability to the capitalist economy. Suffice it to state here that during the upswing of the business cycle share prices rise not merely because of the actual increase of industrial activity and profits, but also because of expectations of strong demand and high profitability in the future. The credit system, particularly the money market, is also fully utilised to finance large share purchases. The combination of these factors can lead to the emergence of a speculative boom in the capital market, which subsequently feeds upon itself. When the upswing turns into recession, speculative booms collapse, and previously optimistic expectations about the future turn to pessimism. The rise in the rate of interest, which typically takes place at the time when the upswing turns to recession, accelerates the fall of share prices. Further speculation, but now in the opposite direction, might also worsen the fall in share prices and destroy the values of financial assets in the hands of banks, securities companies and individual investors.

VI. Concluding remarks

It is pointless to try and reproduce the many and varied points of this essay in a few paragraphs. Perhaps its most important contention is that Marxist political economy shows very clearly the interrelationship between capitalist accumulation and the financial system (comprising a credit system and a capital market), and does not accept that the latter plays a leading role in this relationship. Capitalist credit is rooted in the advance of commercial credit among companies, a process that does not rely on the existence of sophisticated institutions and a financial system. The proliferation and development of commercial credit is a condition for the development of the financial system. On the other hand, the development of the financial system promotes capitalist accumulation and credit's further expansion. At the same time, the social role of the financial system is not purely and entirely beneficial. The element of expectation about the future inherent to credit allows and encourages speculation that can, under certain conditions, prove inimical to capital accumulation. This is most apparent in the operations of the capital market precisely because of the very nature of joint-stock capital.

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2. *VALUE-AT-RISK (VAR) MODELS FOR FINANCIAL RISK MANAGMENT AND REGULATION*