EUROPEAN UNIVERSITY INSTITUTE, FLORENCE

DEPARTMENT OF ECONOMICS

EUI WORKING PAPER No. 86/242

FINANCIAL INNOVATIONS AND MONETARY THEORY

by

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This paper was presented at the Conference "Origins and Diffusion of Financial Innovation", held at the European University Institute in October 1985.

BADIA FIESOLANA, SAN DOMENICO (FI)

Printed in Italy in November 1986,
European University Institute
Badia Fiesolana
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Italy

Financial Innovations and Monetary Theory

Modern monetary theory coincides, in its development, with the development of deposit banks, and with the development of what can be defined as modern banking systems.

There is, indeed, a very large body of monetary theory which precedes the phenomenon of modern deposit banking. And that body includes extremely sophisticated analyses of the monetary phenomena.

Monetary theory as we know it, however, is fundamentally based on the analysis of the implications for economic theory of the series of stupendous financial innovations, which, in the last 150 years, have given rise to contemporary banking systems. Compared to recent financial innovations, the rise of deposit banking systems in the nineteenth century was a veritable revolution. It was a true technical revolution, as cheques, discounts, giros, clearing houses, telegraphic transfers developed very rapidly in the whole advanced world. And it implied a true revolution in economic theory. If we except the work of a few visionaries, monetary theory which preceded the rise of deposit banking was almost exclusively concerned with the fiscal aspects of money. Money was seen, as Sir John Hicks has put it, as "the finances of the sovereign". Only the sovereign, through his tax collection system and his expenses, was provided with an extensive network which would make his coins "current".

This technical prerogative was, of course, reinforced by the legal one of monetary sovereignty. But it is hardly believable that monetary sovereignty might have meant much had the sovereign not been, almost everywhere, such a large and extended collector of taxes and spender of their proceeds.

Once the sovereign had established himself as a credible money supplier, he would almost inevitably transform his service to the community into an "exorbitant privilege" faced with mounting expenses. He would debase his own currency rather than increase taxation.

Monetary theory, in the more than two thousand years of European monetary history, is thus almost exclusively dedicated to the analysis of the effects of the monetary deeds, and misdeeds, of the sovereign, on economic life.

With the rise of modern deposit banking, however, the sovereign's monetary privilege comes to be shared by the banking system. Banks, in developed countries, establish a network of branches as pervasive and diffuse as the sovereign's tax collection system. Banks, moreover, since they make money by giving credit, mix two activities that had hitherto tended to remain separate. Since they create money, i.e. by extending loans to their clients, they come to compete with the sovereign in one of his most jealously guarded prerogatives. But, in addition to that, they intermediate between savers and borrowers, something the sovereign did not do. For the economic life of modern countries, banks thus become the real planning centres. They soon become more economically important than the sovereign himself.

Modern monetary theory is thus dedicated to analysing how banks create money and intermediate between savers and borrowers, and how the sovereign and the banking system stand, in relation to one another, as they perform what are basically the same functions. And a large part of modern monetary theory is dedicated, in analogy to older monetary theory, to studying the ways in which the sovereign and the public can reign in the banking system. It soon becomes apparent that, by linking money creation to credit creation, banks have found the philosopher's stone. They can expand credit at will and without bounds, unless the sovereign, and the public, do not devise ways to constrain and constitutionalise their powers.

Studying what exactly are the powers that banks wield over the economy and how they use them constitutes the field of modern monetary theory.

How to constrain and to make the best use of the powers the banking system wields on the economy, is what modern monetary policy debates are about.

A considerable part of modern monetary theory is dedicated to the study of the unique phenomenon of financial intermediation (which often involves maturity transformation) conducted via money creation. And an equally important part of it is dedicated to the study of the uneasy, but basic, mix of industry and banking, of the tendency that Spätskapitalismus has of becoming finanz-Kapitalislmus. But also of the possibility that exists to start a process of industrial development by mobilising capital through banks.

Like the State, banking is essentally a macro-phenomenon. It is worthy of analysis as a system. Taken individually banks, if there is a large number of them in existence and they are not large, are hardly able to create credit. They can hardly create deposits. Like the telephone system, the whole constitutes a phenomenon qualitatively different from its component parts.

However, classical economic theory has tended to approach and study banking as it had approached other relevant actors of economic life, for instance, producers and consumers by considering them individually and studying their profit and welfare maximizing behaviour, as individuals.

Several of the shortcomings of modern monetary theory stem from this failure to realize that banking is a relevant phenomenon only if banks are studied as a system, a macro-structure. But what for some economists is myopia, for other economists is a subtler normative stand. A whole school of monetary economists, led by Edward Shaw, has developed a monetary theory whose main role is that of negating the peculiar functions that banking performs, as a macro-structure. And the same prerogative of monetary sovereignty is negated to the State. All money, including bank deposits, is taken to be somebody's debt and somebody else's credit. No special social or economic functions are attributed by this theory to money, so that every act of money creation must, by definition, all other things remaining equal, diminish the borrowing capacity of either the State or the banking system.

The "inside money" school's solution to bring money back into the micro-economic fold is only the last attempt to exorcise the "demonic" features of money, a man-made phenomenon which has played havoc with the economic theorists' attempts to give economic life a unitary explanation, based on natural laws.

As I said above, old economists tried to exorcise the monetary sovereignty of the State. Modern economists have tried to do the same with the banking system. That is to say, to devise either monetary theories or institutional reforms which would do away with the banking system's embarrassing ability to create money by giving credit, thus becoming the pivot of the capitalist economic system.

We have already mentioned the "inside money" attempt. But other attempts to reduce money to the nature of the "veil", which may in no way hide or distort the true relations between relative prices established by natural laws, have been more numerous. The best known among them is that of linking money creation to the production of a natural commodity, gold or silver. This would - so economists hoped - bring back money from the alchemist's crucible to the scientist's lab. Other attempts have been aimed more at institutional reform than at hitting the theoretical nail on the head. Suffice it here to remember the "one hundred per cent" banking reserves proposal of Henry Simons, or the Banking Reform of 1844 in England, which tried to legislate the separation of money from credit. More recent attempts have been the great banking reforms of the 1930s, whose effects are still with us, and have been the cause of much recent financial innovation.

If we consider the recent history of institutional financial reforms, we notice that, very often, these reforms attempt to turn the traditional poacher of monetary history, the Sovereign (the State, in modern parlance), into the gamekeeper who should control a more important poacher, the Banking System. Of course, for a model like that to function effectively, one has to be certain that the gamekeeper will stick to his new role, and will not relapse into his bad old habit of debasing the currency. To make that outcome less likely, Central Banks have been put between the State and the Banking System, and have been given the task of restraining, as far as they can, the inflationary tendencies of the State, and of controlling the Banking System.

The triad on which modern monetary systems are built is thus composed of the State, the original repository of monetary sovereignty, the Central Bank, to which the State sometimes gives the direct task of issuing money, and the Deposit Banks' System. More often than not the Banking System has come to be formed by a core - a few very large banks - and a periphery - a multiplicity of small banks and of financial institutions other than banks.

This configuration of a financial system is far removed from the ideal financial system as modelled by neo-classical economic theory. It is a configuration based on monopoly or oligopoly, where each financial institution performs most of the functions required by the modern economy. "Omnibus banking" clearly prevails over specialization. And, in this configuration, credit is administered according to what has come to be called in the literature "equilibrium rationing", which contradicts the basic tenet of neo-classical theory, that credit must be allocated only by interest rates rising or falling according to the movements of demand and supply.

The configuration of financial structure which has prevailed in most capitalist economies thus sees finance as being administered mainly by contractual, clientele-type relations between bankers and borrowers, bankers and savers. Auction markets in the financial system tend to be, the exception more than the rule.

Large banks thus seem to be linked by long-term contractual obligations to their best clients. Interest rate policy administered by the monetary authorities through open market operations only works because banks, when their available funds are decreased by open market bond sales operated by the Central Bank, tend to ration credit to their clients, and do that by starving the core of their clientele less than its periphery. Hence the inverse selectiveness of monetary policy, which tends to preserve what already exists, and to discourage what is new.

In a context like this, financial innovations can only come about if they are induced by technology changes. Engineers and electronic firms, for instance, perfect electronic wire transfer systems or automated teller machines, and banks adopt them, in an attempt to keep up with the times, or in an attempt to compete with other banks without touching the price of loans or deposits. In such a context, innovations are often introduced by the monetary authorities and fostered upon the banking system. The Central Bank operates as the impartial umpire, to prevent the outbreak of competitive wars.

A recent enquiry conducted by auditors Touche Ross among bankers in the main industrial countries has found that this is, indeed, how electronic banking innovations have come about. They are technology-induced, much more than market-oriented.

The model of financial system we have just depicted, however, contains a contradiction in itself. Monetary policy operates by achieving financial programming through equilibrium rationing, which works mainly through the large deposit banks allocating scarcer or more abundant credit according to their priority list of clients. The large banks try - as was said above - to reconcile the Central Bank's will with their long standing customary obligations to their clients. This model of financial programming, however, cannot be subjected to very severe strains without giving rise to important structural changes.

It cannot stand either a protracted budget deficit policy or a protracted dear money policy. Both policies are made effective by the Central Bank's special action on the large banks. If the Government wants to impose a protracted budget deficit policy by issuing large quantities of bonds, it must sooner or later disintermediate the banks and sell its bonds directly to the public, who will go out of deposits and buy bonds. The fear that the Government will have to put up taxes in the future to repay its debt comes into play only very late in the day, perhaps never in countries with governments that enjoy sufficient legitimacy with their citizens. An easy money policy of this kind may thus have the effect of disintermediating the banks and of transforming them into rentiers. Firms may also have to face the option of either going out of business or of becoming rentiers themselves.

A policy of protracted dear money will also operate through the banks. Faced with the unpleasant task of cutting credit even to their best customers, banks will react by starting side-shows which will allow them to carry on lending to their clientele.

The internal inconsistency is thus apparent: monetary policy operates via the large banks, but it operates, beyond certain boundaries, by making the banks weaker, or by changing the structure of the financial system. Banks are asked to cooperate to make effective measures which will, by their very effectiveness, make the banks weaker.

If one wanted to model this complex relationship between the three elements of the triad, one would need to use non-linear analysis. Within the bounds of fiscal and monetary moderation(*), the system is not internally inconsistent. It operates for its own institutional perpetuation. Outside these boundaries, the internal consistency we have noticed manifests itself, and the system, by its very functioning, leads to its own structural transformation.

We can now turn to consider the process of financial innovation from the intellectual viewpoint we have constructed. Financial innovation, not of the technological kind we considered above, but more of the organizational kind, will be inversely correlated to the specialization of the financial system under scrutiny. Since, even in specialized financial systems, monetary policy is essentially a policy of equilibrium credit rationing, and makes itself effective through large banks, its exceeding the boundaries of moderation spells, after a while, disaster for the latter, who cannot remain wed to a collusive behaviour with the Central Bank. The banks will, as a result, start evading the prescriptions of the Central Bank by creating other lending agencies through which they will continue to supply credit to their core clients. They will also turn themselves into money brokers: matching demand for, and supply of, loanable funds without intermediation. There will thus be an increase in off-books, primary financial operations, a forced transformation of contract markets into auction markets. Since these other functions, in specialised financial systems, are performed by distinct financial institutions, the banks will invade their preserves, in an attempt not to lose their market shares. Thus immoderate behaviour by the monetary authorities will result in specialised systems, in a gradual but inevitable breakdown of demarcation lines, in competition in all markets by all financial inter-

(*) The term "moderation", of course, rather evades the problem, as it would be definitely not easy to quantify moderation in a real world situation. Moreover, what is moderate in one context, may be excessive in another.

mediaries, which will, if it is left free to work itself out, eventually result in a financial structure where large, all-purpose, financial institutions will dominate.

The final outcome of financial innovation for specialized financial markets will thus be a drastic decrease of specialization, and a drastic increase of concentration levels.

From the point of view of efficient financial structures this outcome may not be at all negative. The theoretical foundations on which financial specialization rests are not very firm ones. The theories according to which financial development leads to specialization are more normative than positive. They rest on the assumption that markets are always more efficient than hierarchical structures, and that specialization, by reducing power concentration, will exorcise the threat a concentrated financial structure exerts over the freedom of action of the "real" sector of the economy.

A streamlined financial structure, consisting of a few large all-purpose institutions, is supposed to be somewhat conducive - to use Edward Shaw's parlance - to "financial repression". At least, it ought to be the point of departure, rather than the point of arrival, of "financial deepening".

There is, however, an intermediate stage, when the immoderate behaviour of the monetary authorities (which will usually be induced by external shocks or by the Government's decision to finance its deficit through the bond market) will lead to a financial structure where primary financial instruments will prevail over indirect finance, and there will be a rise of brokerage and a decline of intermediation.

This intermediate stage may superficially vindicate the Gurley-Shaw School and its model of financial development. But, when the stage is reached where the very consumer behaves - as Sir John Hicks wrote 50 years ago - as a little bank, being present on both sides of the financial market, and auction pricing prevails over contractual financial operations, at that very time the need of the industrial structure for financial intermediation will reassert itself. As a result, a yawning gap will open between the needs of individuals and the needs of firms. It is doubtful, in fact, whether the "securitization" of credits can proceed too far and whether the whole gamut of financial requirements of the business sector can be serviced by auction markets. Banks came into being because of the "lumpiness" of the debtor-creditor relationship, because of its contractual, customary nature. A banker's relationship with his clients is, an anthropologist would say, a deeply "embedded" one. It can hardly be reconciled with an "arm's length" relationship. This is apparent when one reads George Ackerlof's splendid article on "lemons". The less the bankers know their clients and the context in which they operate, the less they will risk. Embeddedness means to be part of a sensitive information network one of whose centres is the bank.

Thus, on balance, we see that the reduction of the financial structure to either a few large "omnibus" banks or to a system of securities markets will induce the needs of savers to diverge from those of borrowers. One may venture to foresee that either solution will induce the rise in concentration levels in the non-financial business sector. We can further venture to say that perhaps branch-banking will be more "embedded" into the productive sector of the economy than a system of financial markets where auction methods prevail, and where demand and supply are reconciled by price movements.

The forecast is, therefore, that the stage of "securitization" and auction financial markets' prevalence will be a passing one for the United States and Great Britain. In both those countries, regulation(*) cristall-

(*) Which in the U.S. was written in law, while in Britain was exercised by the authority of the Central Bank.

ized a financial structure based on a temporary division of functions and market shares. To some of the less sophisticated financial economists, this artificial solution appeared as the epitome of modernity, the stage of financial development towards which less advanced countries would, or ought to, move. In fact, the regulation of the British and American financial markets had stopped in mid-course a process of financial rationalisation which, if left to grind to its final consummation, would have meant the disappearance of a lot of politically powerful financial institutions.

The financial structure based on a plurality of financial institutions and markets was thus "frozen" by political action, and remained frozen until the political power of the institutions threatened with extinction diminished.

As John Hicks wrote in the article quoted above, capitalism requires, for its progress, that a large part of economic relations be allowed to remain of a contractual, customary nature. Only a top layer of economic relations must be allowed to be of an auction, arm's length nature. If this layer becomes thicker, the shocks which auction markets, by their working, communicate to the rest of the economy (which works to its best advantage on a long term contractual basis) will result in deep and con tinuous fluctuations in investment and employment, which will, in turn, cause continuous intervention by governments, with economic policies which will, by superimposing themselves on the already existing fluctuations, very often reach results opposite to those desired.

The "unfreezing" of the institutional set-up in the financial system of the United States which has occurred in the last thirty years, and which has given rise to a spate of "financial innovations", has been originated by a diminution of the relative political power of the financial sectors protected by the regulatory "freeze" of the 1930s and by the corresponding increase of the political power of their competitors.

Since this has not been a bloodless fight, it has gone on by fits and starts, but the trend has been clear. For the groups penalised by the Roosevelt Reforms to re-acquire a market share, a mainly fix-price system has had to be transformed into a mainly flex-price system. But monetary policy had adapted itself to being managed in a fix-price environment. With the move, by the financial system, to a mainly flex-price environment, monetary policy has lost its bearings. It still works, as far as it does, because the system is still a partly fix-price one. As Stiglitz and Blinder have observed, open market operations transmit a message from the FED to the economy only because banks give credit according to equilibrium rationing procedures. Once banks are disintermediated, and most of the credit market becomes an auction market, how will monetary policy messages be transmitted to the economy? If the only means will be interest rate changes, as seems inevitable in the new flex-price environment, the instability of the economy must certainly increase, if we accept Hicks's classic conclusions.

But we noted above that this is a necessary phase through which specialised financial systems must go, once the fetters of regulation are removed and a new competitive structure develops, which entails a drastic re-distribution of market shares.

The fix-price financial system, in other words, must become a flex-price system to allow the profound re-shuffle of market shares which will in turn allow it to become a fix-price system again. The danger, of course, is that in the intermediate phase, when the system has become a mainly flex-price one, instability may become so great, and interest rates may have to oscillate so much, that the system may get out of control altogether. In that case, one may easily envisage a return, after a few wild girations, to a drastically fix-price system. The fear is that the dynamics of the transition from one fix-price system to the other may involve a severe loss of welfare and resources for the U.S. and Britain.

And the fear is also, for the Europeans and Japanese, and even more for the developing countries, that their largely fix-price financial systems may be subjected to shocks emanating from the U.S. and U.K. financial systems, under the form, for instance, of deep interest rate oscillations. This fear has become reality in the last five years. The result has been that the European financial systems have been, though some more than others, dragged by these shocks into institutional transformations which are not altogether welcome, as they probably represent, for the more rational European financial systems, a retrogression into a previous, and less efficiently organised, phase of their development.

Will the European and Japanese systems be able to take the best from the "financial revolution" now going on in the U.S. and Britain, and keep the negative impacts at bay? It is essential that they will be able to do so, before the U.S. and U.K. financial systems get re-regulated according to the rules dictated by the new power structure which emerges from the flex-price phase.

The fear is that the shocks imparted by the "fall out" of the flex-price phase in the U.S. and U.K. to the European and Japanese systems may dislocate the latter, so that a penalty is paid by the European economies in terms of growth. This seems to have been the case in the last five years. But a penalty can be also a longer term one, if the Europeans become convinced that the flex-price system is a more advanced stage of financial development. In that case they will move into a phase which is totally unnecessary for them, as they have already been where the U.S. and the U.K. want to go. Once they move into a flex-price system, they will have lost all their institutional advantages vis-à-vis the U.S. and the U.K. The consequences of such a faux-pas may be momentous. It is only to be hoped that such a blunder may be avoided.

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