# THE INTERNET AND AN OPPORTUNITY TO RE-INVENT THE BANKING SYSTEM

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**Abstract**: This is an opinion paper. It argues that conditions are ripe for the re-invention of a core component of the banking system by having an autonomous institution to house the deposit accounts of individuals and companies. This institution would own and operate the payment and settlement systems. There would be no government guarantee for deposits with commercial banks, thereby removing one important factor of moral hazard. Governments would not need to worry about the collapse of the payment and settlement systems. The proposed set-up would constitute an important building block in a new international financial architecture. Banks could continue to thrive but they would need to innovate and earn their revenue by providing value-added services to their customers.

## 1. INTRODUCTION

In the last three to four decades, a profound and irreversible revolution has occurred in the world's financial markets and institutions. The hallmarks of this change are innovation, globalisation, and deregulation (Fabozzi et al 1994). Direct results of such changes are more intense competition in the business world and widespread use of information technology. Between them, they have reduced the traditional role played by banks as intermediary and indispensable players in payment and settlement systems.

Generally, banking activities fall into five categories: (1) payment systems, (2) custody of deposits, (3) provider of loans, (4) trading in stocks and asset management, (5) advice, namely in merger and acquisition. We argue that the sea change presents us with an opportunity to re-organize the

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first two activities of banking systems in economically developed countries before doing so elsewhere in the world. The central idea is to establish an independent institution to house the deposit accounts of individuals and companies. All payment transactions including the clearing between banks would happen there. This institution, which we shall call the Deposit Giro (DG), would function as the payment system within a country. It is autonomous and its independence is enshrined in the constitution. It is not profit-orientated, and will be managed by experienced bankers reputed for their competence, prudence and integrity. With this structure, governments no longer need to worry about the collapse of the payment system should one major bank go bankrupt. Moreover, there is no real threat to banks that live up to the standards of good banking practice. This new set-up will be an improvement on the status quo and because it is just one step beyond an emerging trend, it stands a chance of being implemented.

The new structure does not provide deposit guarantee for commercial banks, thereby removing a key factor of moral hazard. One manifestation of moral hazard was the reckless lending practices of banks in rich countries to East Asian companies and this was a crucial factor in the Asian economic crisis (Friedman 1999). By encouraging banks to be more prudent in their lending habits, the new set-up would contribute to a sounder financial system in emerging economies and a sounder international financial architecture. We suggest that the IMF encourage the set-up of such a Deposit Giro.

Anything new is likely to encounter resistance, and in this case we expect it from the banking industry. The American banking industry has one of the most powerful lobbies in Washington (Friedman 1999). Instead of fighting the tide by political lobbying, banks should welcome innovation and support the re-invention of the banking system. The new construction should not trouble banks that are prudent with their own capital and their customers' money. They would continue to flourish by providing value-added services to their customers. Four such services include: (1) acting as financial manager for small and medium-sized companies, (2) insuring businesses against foreign exchange losses at an affordable premium, (3) functioning as a knowledge system for their clients, and (4) providing services to support electronic commerce.

The rest of the paper is organised as follows. Section 2 reviews the major trends in the world of financial, which gives rise to shocking crises treated in Section 3, and also gives rise to an emerging opportunity to re-invent the banking system, treated in Section 4. The outline of the proposed new set-up is discussed in Section 5, which also leaves room for customers with choices (Section 6). The new environment is challenging to banks which are

prepared to provide value-added services to their customers, and some possibilities are described in Section 7. The conclusion is in Section 8.

## 2. MAJOR TRENDS

A reading of business newspapers reveals that commercial banks are being exposed to some major structural changes. To ordinary bank customers, the trends are visible. Banks are trying to be bigger as a defensive measure; they are adopting multi-channel approaches, closing small branches and introducing account managers into their system. These changes are certainly not the result of some international conspiracy but that of wider forces at work, namely deregulation, globalisation, advances in information technology and the accompanying growth in importance of financial markets.

The last few decades witnessed a continuing trend towards the erosion of banks' intermediary role. The first disinter mediation involved savings, and the growth of mutual funds, specialized pension funds and life-insurance policies at the expense of bank deposits. In the second, the capital markets assumed some of the banks' traditional role as providers of loans. In the third, technology helped to streamline back-office operations. The threat associated with the Internet is the fourth, where the distribution of banking products is being disintermediated (Long 2000).

The Internet as a technological platform is to financial transaction what money as a common medium of exchange is to the economy. Just consider the convenience and flexibility provided by money in economic activity. The beauty of Internet banking lies in its low cost, convenience and availability. It enables banks and financial companies to offer services with the following qualities: 24-hour, seven-days-a-week availability, convenience, fast delivery, customer focus and personal service. The commercial use of the 128-bit encryption opens the way for secure on-line financial transaction. A pure Internet bank does not need brick and mortar branches, which means a lower entry barrier for newcomers and lower operating costs. Newcomers see the Internet as an opportunity to offer attractively priced products, higher interest rates for savings deposits, and lower service charges. They hope to beat the more established banks with a solid, easy-to-use, reliable and secure Internet banking services. The dreadful scenario for incumbent banks could have been such: embracing the Internet would mean destruction of banks in their current form; to do otherwise means opting out of banking.

Fortunately, what has come to pass is more benign. The pure Internet banks' single channel solution does not seem to work. The current trend is more towards multi- channel distribution than single channel banks. Yet the

challenge remains. Banks have large legacy systems and a rigid culture. It takes them several years to accommodate a new channel like the Internet and to profit from the opportunities offered.

The business of acting as money intermediary is yielding lower profit. Under such conditions, some banks may not survive at all. The fierce competition could be a welcome challenge to provide better and cheaper services to customers. The problem is that banks tend to engage in risky, speculative activities in order to earn more profits and this can sow the seeds of financial crises.

## 3. MORAL HAZARD, BANKING CRISES AND DEFINING MOMENT

Banks take risks in the knowledge that should they be lucky, the profits are theirs to reap. Should they blunder, there is a safety net provided by the government. And there has been no shortage of blunders. "The past 20 years have seen more than 90 serious banking crises, each of which resulted in bank losses that, in proportion to GDP, exceeded the costs of banking collapse during the Great Depression (Beddoes 1999:6)." As Blinder (1999: 53) correctly observes, "The current system breeds too many crises that are too severe."

This problem of moral hazard partly encouraged by the safety net is getting more serious now for two reasons. The first is the upshot of globalisation, which has reduced governments' ability to raise taxes (Castells 2000). This means less money with which government can weave the safety net. Moreover, taxpayers are revolting against the costs of bailing out failed banks. Secondly, inter-bank loans are growing. In America it rose from $74 billion in 1980 to $170 billion in 1995. Turnover in foreign exchange market, in which banks are the main players, has reached to $1.2 trillion a day, almost double the figure in 1989. Banks are doing more business with each other. If one of the big systems breaks down, the banks would be the first to be hit hard, followed quickly by the rest of the economy (Giles 1996).

The crises from Mexico (1994) to East Asia (1997), Russia (1998) and Brazil (1999) are shocking in their frequency, virulence, contagion and scale. The crises highlight how interconnected and vulnerable the world's financial systems have become (Blustein 2001). This series of events constitutes a defining moment in the history of international finance, with the Mexico crisis described by the former managing director of the IMF as the first crisis of the 21st century (Summers 1995). They have led to the most serious re-thinking of the structure of the international financial system since the breakdown of the Bretton Woods system in 1971 (Fischer 1999). They

are crises caused by interaction between weaknesses in domestic sector of those countries and free flow of international capital, magnified by financial innovations and speeded up by advanced information technology. A crisis erupts "when investors lose confidence in the country's banking system, stock market, or public debt management and when their scramble for the exits, facilitated by the existence of an open capital account, brings the financial system and the currency crashing down (Eichengreen 1999:5-6)." The sad story is that financial crises hurt hundreds of millions of innocent bystanders who play no part in the speculative excesses but suffer when the bubbles burst (Blinder 1999).

A simple answer to the problem of moral hazard is to tighten regulation dramatically, while retaining comprehensive deposit insurance. However, there are several problems with this approach. For a start, it may not work, because banks are old hands at finding loopholes in the law. Worse, an attempt to tighten the screws might simply drive business to more lightly regulated offshore havens. It would certainly impose an even heftier burden on banks, which would pass it on to their customers (Giles 1996:31)

In examining moral hazard, we should distinguish the hazards associated with different types of international lending. "The problem is far more serious for inter-bank lines of credit than for equity investment. The responsibility for dealing with the moral hazard problem for inter-bank lines of credit lies as much with the government of the lender as with the borrower government, for it is the former that supervises and tends to protect its banks. Lender supervisory authorities will have to recognize the responsibilities of their institutions to participate in bail-ins and work out procedures (Fischer 1999:14)." Herein lies the significance of improving the banking system in the rich countries as a contribution to the new international financial architecture.

## 4. AN EMERGING OPPORTUNITY

The dilemma of moral hazard encouraged by the safety net has prompted some people to propose the idea of a two-tier system of banks – the narrow banks whose accounts are guaranteed by the government and subject to very strict supervision. The other type of banks, which are not covered by the safety net, are not subject to strict supervision and are free to operate like any other ordinary business (Bryan 1991). The proposal generated heated debate (Seidman et al 1991), and enjoyed attention for a while. However, whatever the merits of the two-tier system, the idea is less exciting now that a new opportunity is emerging.

Currently, banks are being squeezed from the deposit and payment system side as well as the lending side (Claessens et al 2000). On the deposit and payment system side, many deposit substitutes are emerging and many non-banks such as mutual funds are offering transaction accounts. With Internet banking, consumers no longer have to pay high prices to transfer money from one country to another. On the lending side, technology and deregulation allow non-deposit-taking financial institutions and capital markets to serve many more segments of borrowers including small and medium size borrowers. Transaction costs are lower, information more widely available and better credit scoring and secularisation techniques are designed. Banks are losing their proprietary information about borrowers who do business with more than one bank and financial firm.

Historically, banks have played a dominant role in the provision of loans to finance trade and industrial development. By promoting development rather than passively following the course, they have helped to advance the development of incipient industrialization. In his study of history of American banks Bodenhorn (2000) found that they formed long distance relationships that promoted geographic capital mobility, thereby assuring the direction of short-term capital towards socially desirable ends. There existed an inherent tension between banks' duty to depositors and their responsibility to foster economic growth. Such responsibility is diminishing by virtue of new development in the capital market. Today, the technology and the economic environment have greatly reduced the need for banks' involvement in the provision of credits for such purposes. Many corporations have made good use of financial instruments such as stocks and bonds to raise capital. Blue chip companies enjoy higher credit ratings than commercial banks. As for new and promising companies, they can lean on the support of venture capital.

We concur with Claessens et al (2000) in arguing that current developments in technology and deregulation are eroding the special nature of banks. An opportunity presents itself for governments to re-evaluate the overall need of a public safety net.

The new environment provides a new opportunity for governments and the financial world to re-invent the banking system. Consider an independent institution created to house the bank deposits of individuals and companies. All payment transactions would happen there. In other words, the institution would function as the payment system and depository within a country. With this construction, governments no longer need to worry about the collapse of the payment system should one major bank go bankrupt as a result of its speculative activity. The system will continue to function regardless of the ups and downs of the financial market.

## 5. RE-INVENTING THE BANKING SYSTEM

The Deposit Giro we are discussing is already existing in a nascent form in West European countries, in the form of the clearing house used by commercial banks and financial firms to process their payments. It is currently owned and operated by commercial banks. The transaction services are yielding very marginal revenues for their operators thus reducing the government's difficulty in taking over the clearing bank. In fact, banks might welcome the Deposit Giro because it rids them of expensive payment systems. The Deposit Giro will also act as the custodian for individuals and companies to deposit their money. As a result of developments on the money market over the last few decades, this custodian function is yielding little profits for banks. There could be two sources of opposition. The first comes from banks which will still like to operate with the safety net and use the customers' money to indulge in high-risk business activities. The second objection comes from those customers who like to earn more interests with a high-risk profile. These two points will be discussed in the next two sections.

With due preparations and by designing the payment infrastructure on a non-competitive basis, banks can be persuaded to co-operate and benefit from this non-partisan, technical institution.

An independent body is established to manage this Deposit Giro. This body will own, control and operate the payment system serving the banking and financial community. The Deposit Giro enjoys autonomous status and its independence is enshrined in the constitution. Its board of management must consist of experienced bankers known for their competence, prudence and integrity. It is free from political interference and its guidelines are based on professionalism, not political expediency.

On the whole, the Deposit Giro is thoroughly clear in its mission, and transparent in operation. It is easy to manage provided it is embedded in a tight set of regulations and legislation. It is purely a clearing institute in the technical sense, avoiding all the trappings of commercial banks.

The Deposit Giro is not profit-orientated. While serving as a custodian of deposits, it pays out modest interests to savings account, and lends money in the form of buying government bonds and other gilt-based investments where no risk is involved. This modus operandi serves two purposes. It rewards its customers and earns an income to pay for all its expenses. At the same time, it provides liquidity to the capital market.

Another possibility is for the Deposit Giro to earn its income from transaction and not from interest margins. It is a place to keep your money safe without interest and to be able to pay your bills. Your salary is put into that account, without any special costs related. Electronic transactions at that scale cost almost nothing, so let the companies which pay their employees

using Deposit Giro bear that cost. It can, in fact, operate as the post office does i.e. the sender pays. This was how the old post bank of the Netherlands worked. Its task was only in money transfer. It gave no interest and could not act as a financial intermediary.

In the new construction, commercial banks and other loan providers can be given permission by a customer to look at that customer's financial profile, based on income and expenditure information stored at the Deposit Giro. These banks can analyse the data before making decisions on whether or not to give loans to those individuals and companies. The privacy of the customers is not compromised as only high level information revealing the required pattern of income and expenditure (and not the detailed information) is made available to third party. Because the DG is non-profit orientated there is no incentive to sell information to other parties. Hence, there is less danger of infringing on the privacy of account holders.

To whom should the DG be accountable? To the society. Some of the features of the Deposit Giro are already there in the form of the central bank, which operates under very strict rules, and is non-profit orientated. Just as the central bank, it should generate enough revenue to pay for itself and to offer sufficient incentive to attract good people with integrity and skill. It is worth considering making the Deposit Giro a joint stock company with no majority shareholder. Such a stock or certificate pays, say, only one percent dividend and retains profits for upgrading the payment systems. The public should be encouraged to have an interest in this socially and monetarily useful institution. Its stocks can be classified as a socially responsible investment (or ethical investment as it is referred to in some countries) whose dividend is tax-exempted. By having a thinly spread out ownership (e.g. trade unions, church organizations, central banks, financial watchdogs and regulators, and university endowment funds) there is a wider involvement and control by the general public.

Within the euro zone, the European Central Bank should take the initiative to establish the Deposit Giro to serve member states.

The recent series of financial crises has highlighted the urgency and importance of strengthening banking systems and reforming international financial systems. It is instructive to remember that in the 1920s-1930s the fragility of the international financial system helped turn a slump into the Great Depression (James 2001). That the global economy is not as bad as the 1930s has ambivalent implications. On the one hand, a healthy economy masks bad lending. On the other, the current relatively benign business environment is favourable for planning and implementing a new structure. It makes sense to carry out much needed surgery when the body is strong enough to cope with the physical trauma rather than postpone it to a point of crisis. Although the idea of an operation may be more readily accepted when

there is "no choice", the body, at that point, may not be able to take it. Shock therapy is a last resort for those without foresight and lacking in discipline.

We suggest implementing the scheme first in the Western countries, where the trends are most advanced. Over time, with the benefit of experience, the scheme would become more robust. It is then appropriate to let the scheme diffuse to other countries. There is no need to rush to apply the idea world-wide in a short period.

## 6. THERE SHOULD BE ROOM FOR CHOICES AND RISK TAKING

There may be people who like to keep their money with commercial banks and financial firms to earn higher interests. The choice should be open to them, but they must be told that they run the risk of losing their money. Having deposits with these banks and firms would be basically similar to buying bonds or owning company stocks. To give themselves the guarantee of their savings, depositors can buy insurance, very much like stocks owners buying put options. The insurance providers would have to continuously monitor the risk exposure of these banks and firms, and if need be, impose some form of discipline on them. Their reliability is also indicated by the ratings provided on a regular basis by rating agencies.

Banks would no longer be special. Gone would be the days where, upon a major bank going bankrupt, other banks would be pressured by the authorities to cough up princely sum to help in bailing out the failed bank. Moreover, commercial banks can insure themselves against whatever risks in which they are engaged. Largely the market would now handle the control function traditionally exercised by the government.

Although government would no longer act as guarantor of deposits, it will still have to supervise and regulate the banks. It does so directly in the form of legislature and indirectly by establishing independent supervisory boards, just as it is doing now with the stock exchanges, insurance companies and pension funds. The reason is quite clear. The government must exercise its duty to protect the interests of the people by preventing fraud and embezzlement, partly because individual depositors are not good at monitoring their banks. This forms part of the institutional infrastructure needed for a free market to function properly. It will not hamper the banks in performing their usual function of financing promising and innovative, but risky, business ventures (Bodie and Merton 1998).

The DG set up is not a panacea. Financial crises and bank failures will still happen, fuelled by human shortcomings such as greed, panic, hubris, corruption, incompetence and mismanagement. Because of these deep-

seated flaws in the human condition and weaknesses of the system, volatility and contagion cannot be banished. Financial crises and panic have been taking place for centuries (Kindleberger 1978; MacKay 1841), and they will be with us for a long time to come (Garten 1999). In many countries, the central bank is given the responsibility to maintain the stability of the financial system. It is in this context of preventing panic-induced declines in money stock and mitigating financial crises, that the central bank takes on the role of "lender of last resort" (Humphrey 1975; Fischer 1999). While acting to stabilize the system, the central bank should follow the famous advice of Bagehot (1873): that in a crisis the lender of last resort should lend freely, at a penalty rate, on good collateral. Companies that would be bankrupt in normal times should be left to disappear.

In other words, the new structure would not exorcise the demons of reckless speculation which is a part of business life. To deal with the problem, we need (1) official regulation, (2) monitoring and self-regulation by the private sector, (3) imposition of costs on those who make mistakes including, when appropriate, the enforcement of bankruptcies (Fischer 1999).

## 7. BANKS TO FLOURISH ON A FIRM BASIS

This section examines four areas where banks can do well by providing value-added services to their customers, based on which they earn their revenue. Banks may know a lot about their customers, but do they use the information to help them improve management of their financial affairs?

### 7.1 As Financial Manager of Small and Medium-Sized Companies

Medium-sized businesses form the backbone of the vast majority of the rich economies and the emerging economies. In terms of products, technology, marketing and customer service, they usually have the needed critical mass. But in financial management many do not have the size to support the competence they need (Drucker 1999). Typically they operate with a woefully low productivity of capital and have either too little or too much cash. Banks can add value to their customer service by providing money management services for their clients' businesses. Related to this is the conversion of their needs into investment products for the retail investor.

## 7.2 To Insure a Business against Foreign Exchange Losses

Another service for business clients is in developing financial instruments to protect a business against catastrophic foreign exchange losses. They convert currency risks into another ordinary cost of doing business. In the words of Drucker (1999), the need is desperate, mostly among the world's huge numbers of medium-sized businesses that suddenly find themselves exposed to a chaotic global economy. Only aggregation, which subjects the risks to probability, could protect these businesses against such risks.

## 7.3 As a Knowledge System for Their Clients

Risk management and information management are the two major tasks of financial institutions (Saunders 1994). Competent information management cannot be divorced from business knowledge, as evidenced from the use of data mining technology to supplement database technology. Credit risk analysis requires in-depth knowledge of the business, as illustrated by the work of venture capital. Besides risk assessment, the venture capitalists serve as a source of early capital and as a locus of high-tech investment expertise and services to start-up companies. In the USA the role of venture capital firms in high-tech companies in the Silicon Valley is well known (Cohen and Fields 1999).

Knowledge-intensive services provided by banks in the more "traditional" activities are the vetting and tracking of growth companies, assisting clients in finding partnership abroad, identifying export opportunities, financing projects that promote sustainable economic development, etc. New types of knowledge services are emerging. For example, a vehicle lease company in the Netherlands combines the use of its knowledge about cars and information technology to create values for the stakeholders (Heng and Peters 2001). An important point to emphasise here is that bank needs to position itself as player in the knowledge intensive economy and to *consciously* see itself as a knowledge network to serve its customers.

## 7.4 To Provide Services To Serve Electronic Commerce

Commerce in our age inevitably involves monetary transaction. It would thus come as no surprise that e-commerce could affect banking in a very fundamental way, and could be affected by the approaches banks take to respond to the new demands. For example, e-commerce will further

undermine the power of bank branches (Lawrence et al 1998). It has created a demand for low cost facility for micro payments (Choi et al 1997). Some areas for banks to develop products and services are: protection for e-commerce participants against fraud arising from misrepresentation of identities, assistance to small business entries into e-commerce, provision of electronic billing services and provision of technology for business-to-business e-commerce (Wenninger 2000). In short, the new form of commerce may provide banks a new playing field.

## 8. CONCLUSION

The global capital markets have got so huge, so unruly, and so panic-prone that the IMF can be easily overwhelmed when crises arise, and this is especially true if the IMF's response is confined to large loan packages and demands for economic reforms in the country involved (Blustein 2001). The recent series of financial crises shows the urgency of strengthening the international financial system. Our paper is essentially a proposal to build an institution to cope with systemic volatility of global financial markets. We have not seen it being proposed this way, either in academic journals or in serious newspapers like *The Economist.* The whole endeavour will not be easy. It would not be easy for the usual reason that opposition would come from those banks which have a vested interests in being protected by the safety net. It will not be easy because we would be embarking on a project to build social-economic institution under a new historical condition. But the benefits in the form of more prudent use of taxpayers' money and, more crucially, a sounder and more stable international financial system are too enormous for the governments of the rich countries not to strive for it. Writing in the closing chapter of his recent book on the changes associated with the Internet, Castells (2001) says, "Systematic volatility of global financial markets and vast disparities in the utilization of human resources require new forms of regulation, adapted to the new technology and to the new market economy. It will not be easy. Particularly it will not be easy to enact effective, dynamic regulation of global financial markets .... Yet, since no one has really tried, we really do not know. It would be wise to find sensitive ways of channelling global finance before a major crisis forces to do it under more strenuous conditions (ibid: 279)."

In an interesting way, some of the factors responsible for these crises are creating the conditions needed for re-inventing the banking system. We suggest the formation of an institution to house the deposits of individuals and companies and to operate the payment and settlement systems. It is non-

profit orientated and its independence is enshrined in the constitution. Government would no longer need to provide deposit guarantee, thereby removing one key factor of moral hazard. Governments are right in perceiving their responsibility as creating a benign environment for business firms to operate. Re-inventing the banking system in the new technological and economic conditions fits this scheme well. In so doing, they contribute to a sounder international financial architecture.

The new banking system would kiss goodbye to the strange capitalistic practice of privatising the profits and socializing the losses. It would put an end to the burden on innocent taxpayers brought about by the moral hazards. Though there is no need for deposit guarantee, there is still need for lender of last resort to cope with sudden actual, or potential, breakdown of the system in a financial crisis.

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