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FINANCIAL SYSTEMS FOR
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EMERGING DEMOCRACIES

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Financial Systems for Eastern Europe's Emerging Democracies

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PREFACE

The International Center for Economic Growth is pleased to publish *Financial Systems for Eastern Europe's Emerging Democracies* by Joseph E. Stiglitz as the thirty-eighth in our series of Occasional Papers, which present reflections on broad policy issues by noted scholars and policy makers.

This paper addresses the challenge of designing appropriate capital systems for countries new to the sphere of market-oriented private economies. Observing that the emerging democracies of Eastern Europe need well-functioning capital markets if they are to sustain reforms and establish enduring market-based economies, the author offers key insights for understanding these markets.

Dr. Stiglitz examines problems particular to the economic transition of the emerging democracies, among them the creation of new financial institutions and the introduction of competition in the financial sector. His Occasional Paper will provide a significant resource for policy makers who need to understand the requirements for successful economic transition in Eastern Europe's newly emerging democracies. It will be equally useful to those attempting to modernize the financial systems of developing countries.

Named by the president of the United States to his Council of Economic Advisers, Joseph E. Stiglitz is on leave from Stanford University, where he was the Joan Kenney Professor of Economics. He has received the highest professional recognition for notable contributions to economic theory and practice in the field of this Occasional Paper, as well as for work in public finance, information economics, and a number of other areas.

Dr. Stiglitz wrote this paper as a senior research fellow of the Institute for Policy Reform, the objective of which is to enhance the

foundation for broad-based economic growth in developing countries. Through its research, education, and training activities IPR encourages active participation in the dialogue on policy reform, focusing on changes that stimulate and sustain economic development.

Economists, policy makers, and leadership groups everywhere will benefit by the analysis of capital markets presented in this essay.

Nicolás Ardito-Barletta

General Director

International Center for Economic Growth

Panama City, Panama

April 1993

ABOUT THE AUTHOR

Joseph E. Stiglitz has been selected by President Clinton to serve on the Council of Economic Advisers. He is on leave from Stanford University, where he was the Joan Kenney Professor of Economics. While at Stanford, he was also a senior fellow at both the Hoover Institution and the Institute for Policy Reform, and was a research associate at the National Bureau of Economic Research. He received his Ph.D. degree from the Massachusetts Institute of Technology and was a Fulbright scholar and Tapp junior research fellow at Cambridge University. He has taught at Princeton, Yale, Oxford (where he held the Drummond Chair in Political Economy at All Soul's College), M.I.T., and Cambridge.

Dr. Stiglitz has been widely honored both in the United States and abroad for his contributions to economics. Among his awards are the John Bates Clark Award of the American Economic Association, a Guggenheim Fellowship, and the International Prize of the Academia Lincei in Rome. He has been a member of the Executive Committee of the American Economic Association since 1980 and has served as vice president of the national organization. He is founding editor of AEA's *Journal of Economic Perspectives* and is a present or past member of the editorial boards of many other journals of economics.

As a consultant in both the public and private sectors, Dr. Stiglitz has served the United States Department of State, Department of Labor, Department of the Treasury, Federal Energy Administration, and Department of the Interior; the Organization for Economic Cooperation and Development; the Inter-American Development Bank; the Seneca Nation of Indians; the World Bank; and a large number of states. He has lectured and written extensively on economics and has made notable contributions to the theory of market structures, the economics of the public sector, financial economics, macroeconomics, monetary economics, and the economics of development and growth. He is one of the originators of the "economics of information" and is the author, with A. B. Atkinson, of *Lectures on Public Economics*, a standard reference work in the field.



JOSEPH E. STIGLITZ

Financial Systems for Eastern Europe's Emerging Democracies

If capital is at the heart of capitalism, then well-functioning capital markets are at the heart of a well-functioning capitalist economy. Unfortunately, of all the markets in the economy, the capital markets are perhaps the most complicated and least understood. Few governments leave capital markets to themselves—they are affected by a host of regulations and government policies. Moreover, the structure of capital markets appears, in some important respects, vastly different among major capitalist economies. Are the differences inessential, perhaps a consequence of different historical experiences but of no more substance than that? Are the differences important, reflecting adaptations to the particular cultural or economic circumstances of their own countries? Or are some structures more conducive to economic success, so that the solid economic performance of some countries

This paper originated as a talk delivered to the Conference on the Transition to a Market Economy, held in Prague in March 1991. A different version appeared as "The Design of Systems for the Newly Emerging Democracies of Eastern Europe," in *The Emergence of Market Economies in Eastern Europe*, edited by Christopher Clague and Gordon Rausser (Cambridge, Mass.: Blackwell, 1991). Financial support from the Institute for Policy Reform is gratefully acknowledged.

is in part a consequence of their well-designed capital markets and the poor performance of others is in part a consequence of ill-designed capital markets?

To a large extent, the form of capital markets observed in the more developed countries is the consequence of a historical process. Technologies have changed everywhere, but nowhere so much as those that affect capital markets. These markets are transactions intensive: banks record millions of debits and credits a day. The computer revolution has lowered the costs of such transactions. To those in the more developed countries, it is not apparent that the capital markets that they have inherited are appropriate for the technologies of the twenty-first century. But change is not costless, and the evolution of financial systems, even when it is clear that they have quite serious problems, appears to be slow.

The newly emerging democracies of Eastern Europe face difficult choices in designing (or failing to attempt to design) capital markets. The choices they make will have a bearing not only on the efficiency with which capital is allocated, but also on the macroeconomic stability and performance of their economies. They have one advantage over other developed economies: they may have wider scope for choice, less encumbered by current institutional forms. But this, too, places a heavier burden on them. They should know that the choices they make now may not be easily undone. Institutions once established are not easily or costlessly altered.

My objective in this paper is not to lay out a blueprint for the ideal set of capital markets, but rather to help frame the discourse. Previously, commenting on the subject of agricultural policies for Eastern European economies in transition (Stiglitz 1993), I found myself in the uncomfortable position of an American saying, "Do as we say, not as we do." Our agricultural policies are hardly models of economic rationality. I now find myself very much in the same position. Parts of the capital market in the United States are, to put it mildly, in disastrous shape. One major part of our financial system, our savings and loan associations, has gone belly-up. The S & L debacle has cost the taxpayers hundreds of billions of dollars. That is a financial loss. But beyond that financial loss is a real loss: resources were misallocated. The government's losses are only a part of the total loss to society. If we take a middle ground

in the estimate of the loss, \$300 billion, then it is as if almost one year's investment of the United States was completely squandered. It is hard to fathom mistakes of this magnitude.¹ The S & L debacle is the most obvious problem with our financial markets, but other parts of the U.S. banking system are also not healthy.

This experience may put me in an advantageous position: I can relate, from first-hand experience, the consequences of ill-functioning capital markets and some of the causes.

The Functions of the Capital Market

To help frame the discussion, I need to spend a few minutes reviewing the central functions of capital markets. These have been variously described as²

1. Transferring resources (capital) from those who have it (savers) to those who can make use of it (borrowers or investors): in any capitalist economy, there is never a perfect coincidence between those who have funds and those who can make use of those funds.
2. Agglomerating capital: many projects require more capital than that of any one saver or any small group of savers.
3. Selecting projects: there are always more individuals who claim that they have good uses for resources than there are funds available.
4. Monitoring: ensuring that funds are used as promised.
5. Enforcing contracts: making sure that those who have borrowed repay the funds.
6. Transferring, sharing, and pooling risks: capital markets not only raise funds, but the rules that specify the conditions of repayment effectively determine who bears what risks.

7. Diversifying risk: by pooling a large number of investment projects together, the total risk is reduced.³

One of the central financial institutions, the banking system, has an additional function: recording transactions or, more generally, running the medium of exchange.

Capital markets are engaged, not only in intertemporal trade, but also in risk. The two are inexorably linked partly because intertemporal trades involve dollars today for promises of dollars in the future, and there is almost always the chance that those promises will not be fulfilled. Thus, even if we would like to separate the two, we cannot. As a practical matter, in all capital markets, the two are combined.

The various functions I have described are linked together, but in ways that are not inevitable. For instance, banks link transactions functions and selection and monitoring functions. With modern technologies, the transactions function can easily be separated. In cash management accounts, or CMAs (run by the various brokerage houses in the United States), money is transferred into and out of "banks" instantaneously. The brokerage house's bank performs the transactions function, but no balances are kept, and accordingly no loan function (such as selecting and monitoring projects) is performed. Some investment banks perform selection functions; they certify, in effect, bond or equity issues, but they play a very limited role in subsequently monitoring the borrower. Today, mutual funds provide risk diversification services, but provide few of the other services of capital markets.

The array of financial institutions is proof of the advantages that come from specialization and the possibilities of economies of scope. Thus, one of the traditional arguments for the interlinking of the medium of exchange function of banks and their loan functions was that in the process of mediating transactions, the banks acquired considerable information that might be of value in assessing and monitoring loans. This argument is still valid, though the presence of a large number of alternatives for processing transactions vitiates some of the information content; observations of a small fraction of the transactions of a potential borrower may provide little if any information of value.

Some of the interlinkages among functions arise from particular characteristics of information: judgments about whether a particular loan candidate is worthy have a lot more credibility when the persons or

organizations making the judgments are willing to put up money than when they are only willing to make a recommendation. Monitoring is enhanced when the borrower is likely to return to the lender for additional funds.

At the same time, it is important to bear in mind the distinctions among the various financial institutions and the roles they play. Although the capital market as a whole raises and allocates funds, much of the activity in bond and stock markets consists in trading existing assets. The stock market in particular is a relatively unimportant source of funds in the United States and the United Kingdom—two of the countries with the most developed equity markets.⁴ New firms, when they succeed in getting equity from outside sources, typically raise their capital through venture capital firms, and established firms finance themselves through retained earnings, resorting to bank loans and bond issues if they need outside funding. Though the liquidity provided by the stock market to shareowners may affect the firm's decisions about reinvesting its retained earnings, the equity market itself does not exercise a primary role in raising and allocating investment funds.

The distinctive aspects of capital markets and the role of government. What are the distinctive aspects of capital markets that result in government regulation in almost all countries? Capital markets are different from ordinary markets, which involve the contemporaneous trade of commodities. As we have noted, what is exchanged is money today for an often vague promise of money in the future. This distinction is important in explaining that capital markets cannot be, and are not run as, conventional auction markets, and that there may be credit (and equity) rationing.⁵ It also explains some of the important roles, described in the previous section, that financial institutions perform, such as monitoring and selecting. In conventional markets, there is no need to select; the item goes to the highest bidder.

Primary Roles of Government

We can begin our analysis of the role of the government with an examination of the four distinct primary roles that government has already assumed.

Consumer protection. The government is concerned that investors not be deceived. Thus, if a bank promises to repay a certain amount upon demand, the government wants it to be likely that it will repay that amount. There is a public good—information—that merits government intervention; information about the financial position of the firm is a public good.⁶ Of course, there are private incentives for disclosure (at least by the better firms);⁷ and in many areas, private rating agencies, such as Best for insurance, Moody's and Standard and Poor's for bonds, and Dun and Bradstreet for other investments, do play a role. The question is whether they are sufficient; most governments have decided that they are not.

Government attempts to protect consumers have taken four forms:⁸

1. By ensuring the solvency of financial institutions, governments make it more likely that financial institutions keep the promises they have made (that, for example, banks will return the capital of depositors upon demand, insurers will pay the promised benefits when the insured-against accident occurs).⁹
2. Deposit insurance and government-run guaranty funds protect consumers in the event of the institution's insolvency.
3. Disclosure laws make it more likely that investors know what they are getting when they make an investment.¹⁰
4. The market is regulated to ensure that certain individuals (insiders) do not take advantage of others. In the United States, there are a variety of such regulations, from those prohibiting insider trading to those that regulate the operation of the specialists (market makers) to those that attempt to prohibit unsavory practices, such as cornering a market.

The government's interest in consumer protection in this area goes beyond looking after the interests of investors. The government is concerned that, without such protection, capital markets might not work effectively. If investors believe that the stock market is not fair, then

they will be not be willing to invest their money, the market will be thin, and firms may have greater trouble raising capital. Incidents in which investors have been cheated—from the South Sea Bubble of the eighteenth century on—have been followed by a drying up of equity markets. Honest firms trying to raise capital are hurt by the potential presence of scoundrels; there is an externality. Government policies, in protecting investors, are thus aimed at making capital markets function better.

Enhancing the solvency of banks. The United States, perhaps more frequently than other countries, has periodically been plagued with bank runs. The government has employed three sets of instruments to enhance the solvency of banks.¹¹

Insurance. Government insurance for depositors was intended to restore confidence in banks and thus prevent bank runs. The government has undertaken this insurance role for two different reasons. One is to enhance the viability of the banking institutions by increasing consumer confidence and making runs less likely. In this role, the insurance reduces the likelihood that illiquidity will cause the default of a basically solvent bank. Here, the question is whether the other mechanisms (to be described below) suffice, whether there is much value added provided by government insurance. The second role is consumer protection. Today, it is hard *in principle* to see a justification for the latter role, because individuals can put their money in money market funds, investing in Treasury bills, in which there is no default risk (apart from that which might arise as a result of fraud).

Given that the government does provide insurance, the government, like any other insurer, has a vested interest in making sure that the insured-against event does not occur—that is, the government in its capacity as insurer, has a vital interest in ensuring the solvency of those that it has insured. This provides one (but only one) of the rationales for government intervention.

The lender of last resort. Another mechanism for preventing bank runs was provided with the establishment of the Federal Reserve Bank, a lender of last resort, ensuring that banks could obtain funds if they had a short-run liquidity problem. With this assurance, it was hoped,

bank runs would be less likely to happen. Obviously, this does not resolve problems if the bank is truly insolvent; its only intent is to prevent short-run liquidity problems from bringing down a bank.

Regulations. Various regulations have been designed to prevent banks from becoming insolvent. Such regulations are (or should be) based on the principles that monitoring banks is costly and necessarily imperfect; that, accordingly, the regulations must be designed to make it more likely that those in control of banks make the kinds of decisions that enhance the solvency of the institution; and that regulations should be designed to make it possible to detect problems before the bank is actually insolvent. The regulations must further be based on the recognition that there are important asymmetries of information between the bank and the bank regulators; that the “books” of the bank are largely in the control of the bank; and that, accordingly, the information presented to the bank regulators may quite possibly be “distorted.” Banks are in a position to sell undervalued assets but to keep overvalued assets on their books at book value. When banks systematically engage in this practice, then “book” value will systematically overestimate true value.¹²

The first objective, making it more likely that those in control of banks will take solvency-enhancing decisions, is aided by requirements that the bank have substantial net worth—so that it has much to lose if losses do occur—and by restricting the kinds of loans and investments that the bank may make, by, for example, restricting insider lending and restricting purchases of junk bonds.

Enhancing macroeconomic stability. One of the reasons that the government has been concerned about bank runs is that the collapse of the banking system has severe macroeconomic consequences. Banks and other financial institutions are a repository of specialized information about their borrowers; when banks fail, there is a concomitant decline in the economy’s information-organizational capital. This translates into a decrease in loan availability. This would not be a problem if capital markets were just auction markets. But they are not. A decrease in information not only impairs the efficiency with which funds get allocated, but also may lead to more extensive credit rationing, so that the effective cost of capital is greatly increased.

One of the functions that banks (and other financial institutions) are engaged in is certifying who is likely to repay loans, that is, whose promises to pay should be believed. If too many people are so certified—if too many people can get funds, and they decide to exercise that option—then the demand for goods can easily exceed the supply. Since the price system (interest rate) is not functioning to clear the capital market, there is, within the market system, no automatic market-clearing mechanism. This provides an important role for a central bank.

Policy on competition. In the United States, perhaps more than in other countries, there is (or at least has been) a concern that, without government intervention, the banks would be able to exercise undue concentration of economic power. Many of the restrictions imposed on banks, such as those relating to interstate banking and those relating to the activities banks can engage in, are intended to limit their ability to exercise economic power.

Rationale for government intervention. Listing the roles of government regulation in financial markets (what is government regulation seeming to do?) is one way to analyze its function. Another way is to ask if there is any reason to believe that free and unfettered capital markets result in the efficient allocation of resources. Until fifteen years ago, there was a quick and easy answer: Adam Smith's invisible hand theorem said that competitive markets would ensure efficient resource allocations. But over the past decade the functioning of the capital market has been analyzed in depth. What makes capital markets interesting and important is that information is imperfect. With imperfect information markets are, in general, not constrained Pareto efficient.¹³ There is no presumption in favor of unfettered markets.

This is not the occasion to review all the reasons for this. Let me just briefly mention one: much of the return in capital markets consists of rent seeking. Your knowing, a minute before anyone else does, that Exxon has made a major oil discovery may make you a fortune by buying Exxon stock; but it does not increase the efficiency with which society's resources get allocated.¹⁴ Much of the innovation in the financial sector entails the recording of transactions more quickly, but is society really that much better off as a result? Someone might get the interest that

might otherwise have accrued to someone else, but have more goods been produced or have they been allocated more efficiently?¹⁵ Suppose hundred dollar bills fell at our feet, one bill by each of us. Suppose we were busily engaged in some productive activity. If we could agree, it would pay all of us to wait until we finished the activity before each bent down to pick up the bill at his foot. But this is not a Nash equilibrium: if others were working, it would pay each of us to bend down to try to pick up as many dollar bills as we could. Of course, when we all do it, we each get only our own hundred dollar bill; we have lost the production we would otherwise have had; and we are all worse off as a result.¹⁶ In short, there is no a priori basis for arguing the government should not intervene in the market, and there seem to be strong arguments for government intervention. In any case, some government intervention is likely. The questions to be answered then are what kinds of financial institutions to establish and what role government should play.

Perspectives for Eastern Europe: Issues of Transition

Most of the problems discussed in the previous section are generic: they arise in virtually any economy, though with more force in some than in others. The problems take on a particular color within the newly emerging democracies of Eastern Europe, and it is upon that that I want to concentrate my attention.

We can distinguish two distinctive sets of issues—those that relate to the form of the financial institutions that will eventually emerge in these countries, and those that relate to the particular problems associated with the *transition* from the current situation to a market economy. Of course, the two problems are in a sense inseparable: views about the ultimate destination impinge on the way in which some of the short-run problems ought to be addressed, and answers provided for short-run transition problems will almost undoubtedly have a major impact on the ultimate destination. Indeed, I have already urged an awareness of this interaction: decisions made in the short run may not easily be reversed.