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Alexandr V. Akimov

Reforming the financial system.

The Case of Uzbekistan

W a r s a w , 2 0 0 1

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Abstract

The financial development of transition economies is a hotly debated issue in academic and policy circles. Responsible policy makers in transition countries must address the enormous changes which are taking place at a considerable pace.

This work will discuss the major challenges facing transition economies restructuring their financial systems to integrate with world financial markets. Discussion will include the particular development of capital markets.

Special attention is paid to the example of the Republic of Uzbekistan; the achievements to date and the challenges to come, including the development of securities markets and factors that will influence this.

This work commences with a discussion on the importance of financial development on economic growth. The history of Uzbekistan's financial development is presented to clarify and illustrate the present situation. The work continues by highlighting some of the key decisions faced by the transitional economies and, again using the Uzbekistan situation as an example, the causes and effects of implementing such decisions.

The work concludes by focusing on the issues surrounding the development of the capital market in Uzbekistan. The last part of the paper is experimental, concentrating on an investigation into the relationship between foreign exchange regimes and market capitalisation based on a thorough analysis of transition economies.

I. Introduction

Uzbekistan used to be part of the centrally planned giant known as the Soviet Union, or USSR. The USSR had an economy fundamentally different in almost every dimension from a market economy. The collapse of the USSR showed the bankruptcy of such a centrally planned economy model.

The process of transformation and restructuring has been on-going for some years now in the countries of Central and Eastern Europe as well as the former Soviet Union. This process is unprecedented and was therefore not well underpinned by academic research before it started. This lack of any past model to follow has made the process of transformation much harder. The key difficulty of the process is that transition countries have had to build a system based on a market-economy mechanism in a very short period of time. One should bear in mind that such systems have evolved in the Western developed countries very gradually and over a long period of time.

The main problem dealt with in this work is the development of the financial system in transition economies. Why is such a development important for the transition countries? What are the benefits from financial development? Is it necessary for Uzbekistan to execute restructuring in the financial sphere? These issues are discussed in the first part of my paper (Chapter 2).

Transition economies are those which are replacing one type of economic system for another, in this case the administrative command economy for the market economy. This is the key factor uniting all countries of Eastern and Central Europe and the former Soviet Union. However, every country has had its own history of evolution, its own culture and initial conditions and possibilities for transformation. Therefore it is very important to analyse the applicability of a general model to a particular case of each country concerned, considering its own specifics. Western academics as well as policy makers have tended to pay most attention to the countries of Central and Eastern Europe of the countries in transition, for a number of reasons. Unfortunately, much less attention is given to countries of Central Asia in general, Uzbekistan in particular. That is one of the reasons why I have chosen to case study Uzbekistan and in particular the scope of challenges facing it in the development of a market-oriented financial system. The history and sequencing of reforms of the financial system in Uzbekistan is presented in the second part of this work (Chapter 3). This provides a clear picture of the specific issues which have arisen in Uzbekistan and allows for a discussion on the issues related to financial development in Uzbekistan with a higher degree of confidence.

The type of contribution the financial system can make to the process of economic growth depends, among other things, on how the system is designed. Knowledge of exactly how the design of the financial system may help to improve the process is of course of particular importance to transition economies since they still have the option of influencing the direction in which their financial systems will develop. Many different aspects of financial system design, such as the type of financial institutions that should be established, the design of the regulatory and supervisory systems and the role of government policies related to stabilising and controlling the financial system, play their roles. Broadly speaking, the design of the financial system involves the choice between two dominant systems: the market-oriented financial system and the bank-dominated system. (Issues related to the advantages and disadvantages of each are discussed in Chapter 4 of this paper).

With respect to implementing reforms in the financial system a number of specific questions are of particular importance.

One of them concerns the role of the Central Bank. The Central Bank has two main tasks. On the one hand, it is responsible for the reform and safeguarding of the payment system. On the other hand, it aims to contribute to a stable banking system by acting as the lender-of-last-resort. In transition economies especially, the former function is of crucial importance, since the payment system has been reformed only relatively recently. As regards the safeguarding of the payment system, the question is how to reduce inflationary pressures. In the Chapter 4, the issues of Central Bank independence and the consequences of delegating such independence are discussed.

Another issue of particular importance for transition economies I discussed in Chapter 4 is the pace and sequencing of reforms, providing the arguments for and against a gradual way and "shock therapy".

Chapter 5 of my work concentrates on the issue directly related to the development of the capital market in Uzbekistan, in particular the the role played by the stock exchange; providing arguments for and against its development. Problems and achievements in the capital markets in Uzbekistan are also discussed in this chapter.

The final part of my work focuses on the hottest issue in Uzbekistan at present, which is the introduction of full national currency convertibility at the end of this year. Using the simple regression model the possible consequences of this on stock exchange market capitalisation are tested and some very interesting results are come up.

The paper ends with concluding remarks.

2. The Importance of the Development of a Financial System

Does finance make a difference.....? Raymond Goldsmith (1969, p. 408)

The impact of money and capital markets on the market for real goods and services is similar to that of reduction of transport costs on trade or exchanges across space. V.V. Bhatt.

In recent years, financial system development has gained increasing attention, both in academic and policy circles. In particular, the subject has been discussed in the context of developments in transition economies. Until recently, these countries did not really have a financial system. Financial transactions were simply a part of the planning system. When these countries started the process of economic and political transition during the late 1980s and early 1990s one of the key policy issues was how they should design their domestic financial systems.

As is acknowledged in recent literature, the financial system plays a crucial role in economic development (Levine, 1997).

There are two types of argument that can be presented to prove this point: theoretical and empirical.

2.1. Theoretical Arguments

Unlike the market for real goods and services, credit and capital markets are inherently imperfect in the sense that there is no certainty about the completion of a credit transaction. A credit transaction involves a relationship between a lender and a borrower in timely manner and hence in the context of uncertainty. A credit transaction is completed only when the borrower repays the amount borrowed and there is no certainty about this repayment. Firstly, there is the borrower's risk; the expected excess income required for repayment may or may not materialise. But, in addition, there is the lender's risk, which has two elements. One relates to the same risk facing the borrower; though the lender may have a different perception of the same risk. The other element relates to the borrower's willingness to repay – even if he is able to repay, he may not. Both the lender's as well as the borrower's expectations regarding the outcome in prospect their perceptions of the risk of their ventures – are of necessity subjective, based, of course, on whatever data and information are available to each one of them and each's ability to interpret them.

Financial systems serve one primary function: they facilitate the allocation of resources, across space and time, in an uncertain environment. This primary function can be broken down further into five sub-functions.

Specifically, financial systems:

- 1) mobilise savings,
- 2) allocate resources,
- 3) monitor managers and exert corporate control,
- 4) risk transfer,
- 5) facilitate exchange of goods and services.

Mobilising savings

Essentially, there are 3 sources of financing available:

At the simplest level, in an economy that is completely underdeveloped financially, there will be no transfer of savings from one individual to another, and the only investment possible will be out of personal savings. In effect this may mean that many who want to invest cannot do so, while many who could invest do not wish to do so. Thus resources available for investment are not utilised efficiently, and those who do not wish to invest have no incentive to save.

The transfer of savings from savers to investors may be achieved directly by personal loans or by taking a share in the investor's undertakings. Alternatively it may be achieved indirectly through financial intermediaries. If these intermediaries are effective, savers will find that they have the possibility of financial investments that offer them a return, which they might prefer to continued high consumption or direct investments. At the same time putative investors will have access to savings other than their own that increases their funds available for investment. Also the development of money markets and financial instruments will tend to channel funds towards more productive investments.

In this way the development of financial instruments, institutions, and markets provides increased opportunities and incentives for savers to save and investors to invest.

Allocating resources

It is difficult and costly to evaluate firms, managers and market conditions, Vincent Carosso (1970) rightly argues. Individual savers may not have the time, capacity or means to collect and process information on a wide array of enterprises, managers, and economic conditions. Savers will be reluctant to invest in activities about which there is little reliable information. Consequently, high information costs may keep capital from flowing to its highest value use.

Information acquisition costs create incentives for financial intermediaries to emerge (Diamond 1984; and John Boyd and Edward Prescott 1986). The ability to acquire and process information may have important growth implications. Because many firms and entrepreneurs will solicit capital, financial intermediaries and markets that are better at selecting the most promising firms and managers will induce a more efficient allocation of capital and faster growth (Jeremy Greenwood and Boyan Jovanovic 1990).

Monitoring managers and exerting corporate control

Besides reducing the costs of acquiring information ex ante, financial contracts, markets and intermediaries may arise to mitigate information acquisition and enforcement costs of monitoring company managers and exerting corporate control ex post, e.g. after financing the activity. For example, company owners will create financial arrangements that compel company managers to manage the firm in the best interests of the owners. Furthermore, "external" creditors – banks, equity and bond holders – that do not manage firms on a day-to-day basis will create financial arrangements that compel the owners and managers to run the firm in accordance with the interests of the external creditors. The absence of financial arrangements that enhance corporate control may impede the mobilisation of savings from disparate agents and thereby keep capital from flowing to profitable investments (Stiglitz and Andrew Weiss 1981, 1983).

Aside from particular types of financial contracts, financial intermediaries can reduce information costs even further. If borrowers must obtain funds from many external sources, financial intermediaries can economise on monitoring costs. The financial intermediary mobilises the savings from many individuals and lends these resources to project owners. This "delegated monitor" arrangement economises on aggregate monitoring costs because a borrower is monitored only by an intermediary, not all individual savers (Diamond, 1984). Besides reducing duplicate monitoring, a financial system that facilitates corporate control "also makes possible the official separation of ownership from management of the firm. This in turn makes feasible efficient specialisation in production according to the principle of comparative advantage" (Merton and Bodie 1995, p.14).

Risk transfer

Risk transfer is an equally important function. Many savers are reluctant to take the risk of undertaking physical investments themselves. They may also be reluctant to lend directly to those investors who are prepared to take such a risk. Quite apart from the loss of liquidity involved in such direct financing, the savers may feel that they do not possess the know-how or the financial and legal muscle necessary to protect their loans

or investments. Such savers prefer to use financial intermediaries, in which they have confidence. These institutions then provide finance to many investors, thereby diversifying risk. With the use of securities and guarantees the investment risk can be apportioned between the intermediary and the investor in a variety of different ways, all of which have the effect of reducing the risk faced by individual savers.

Facilitating exchange

Besides easing the mobilization of savings and thereby expanding the set of production technologies available to the economy, financial arrangements that lower transaction costs can promote specialisation, technological innovation and growth. The links between facilitating transactions, specialisation, innovation and economic growth are the core elements of Adam Smith's (1776) "Wealth of Nations". Smith (1776) argued that the division of labour – specialisation– is the principal factor underlying productivity improvements.

The critical issue for our purposes here is that the financial system can promote specialisation. Modern theorists have attempted to illuminate more precisely the ties between exchange, specialisation and innovation (Greenwood and B. Smith, 1997). More specialisation requires more transactions. Because each transaction is costly, financial arrangements that lower transaction costs will facilitate greater specialisation. In this way, markets that promote exchange encourage productivity gains. There may also be feedback from these productivity gains to financial market development. If there are fixed costs associated with establishing markets, then higher income per capita means that these fixed costs are relatively less burdensome as a proportion of per capita income. Thus, economic development can spur the development of financial markets.

For a deeper understanding of the importance of this type of development it is also very useful to refer to the works of various other theorists. For example: Pagano (1993) offers a theoretical approach to how financial development may have a positive effect on growth using a simple algebraic equation. He also stresses the role of financial institutions, e.g. banks, in providing important services such as facilitating trade, hedging, diversifying and pooling risk, all of which stimulate the mobilisation of savings, and allocating financial savings to the most efficient investment projects by screening and monitoring borrowers. Moreover, he points out that financial development may influence the rate of private savings.

The extent of the positive contribution the financial system can make to the process of economic growth depends, among other things, on how the system is designed. Knowledge of exactly how the design of the financial system may help to improve welfare

is of particular importance to transition economies, since they have various options still open to them in this area. Many different aspects of financial system design play a role, such as the type of financial institutions that should be established, the design of the regulatory and supervisory system and the role of government policies related to stabilising and controlling the financial system.

2.2. Empirical Evidence

It is difficult – perhaps impossible – to establish the direction of causality between financial and economic development by empirical research. But empirical research can be used to establish whether or not statistical relationships exist between financial development and economic development and whether the relationship is positive or negative. The seminal work done in this area is from Goldsmith (1969). He calculated the values of a financial interrelation ratio (FIR) – the value of assets of financial intermediaries divided by GNP to gauge financial development under the assumption that the size of the financial system is positively correlated with the provision and quality of financial services. Using data on 35 countries from 1860 to 1963 Goldsmith (1969) finds:

1) a rough parallelism can be observed between economic and financial development over periods of several decades;

2) that there are even indications, in the few countries for which data is available, that periods of more rapid economic growth have been accompanied, though not without exception, by an higher than average rate of financial development.

The relationship between financial and economic development has been carefully analysed by many other scientists. For example, McKinnon (1973) studied the relationship between the financial system and economic development in a number of countries in the post-war period. McKinnon interprets the mass of evidence emerging from these country-case studies as strongly suggesting that better functioning financial systems support faster economic growth. Disagreement exists over many of the individual cases, and it is extremely difficult to isolate the importance of any single factor in the process of economic growth. Thus, any statements about causality are – and will remain – largely impressionistic and specific to particular countries and specific periods. Nonetheless, the body of country-studies work suggests that, while the financial system responds to demands from the non-financial sector, well functioning financial systems have – in some cases at various times – greatly spurred economic growth.

Building a bridge between all of the transition economies and the particular case of Uzbekistan I consider here, I believe that the development of the financial system is a necessary step for further economic development in Uzbekistan.

3. Uzbekistan's Financial System

3.1. Uzbekistan's Financial System Before Independence

In order to get a clear picture of the financial structure of Uzbekistan before 1991, we should first consider the financial system of the Soviet Union, since the financial system of pre-independent Uzbekistan was an integral part of the communistic financial system of the USSR.

In analysing the Soviet financial system I consider how and who executed the functions of the financial system.

The allocation of investments is an important function for the financial system to fulfil. In market economies, decisions on investment allocation are largely governed by a cost-benefit framework in which projected benefits from investment projects are weighed up against estimated costs. Investment costs and benefits must be converted to present values using interest rates from financial markets. In the planned Soviet economy there were no financial markets – such decisions were made by planners and enterprise managers.

All the other functions of the financial system were executed by the banking system. The reason for this was the extremely low level of development of NBFIs (Non-Bank Financial Institutions). Furthermore, the overwhelming majority of banking services were provided by Gosbank (the State Bank). This bank combined the services of a central bank and those of a commercial bank, but owing to the absence of money and capital markets, Gosbank did not perform some traditional banking functions (open market operations, commercial paper transactions, and the like). It did, however, perform significant functions: granting short-term loans for working capital, overseeing enterprise plan fulfilment, monitoring wage payments (as the centre for all accounts) and, finally, creating money. Thus, enterprises held their accounts with the local branch of Gosbank, upon which they were dependent for short-term credit to finance inventories and for working capital. Receipts were normally deposited with the bank and cash for wage payments were drawn at the discretion of the bank. In addition, profits remained in special accounts in the bank.

Gosbank was the sole provider of short-term credit, with interfirm lending strictly prohibited. Indeed, with the exception of small payments, all interfirm transaction was handled by and supervised through Gosbank. In these respects, Gosbank was in a unique position to monitor enterprise activities, as the single clearing agent and the sole source of short-term credit. In drawing up short-term credit plans and in controlling enterprise accounts, Gosbank played a largely passive role, providing the credit necessary to implement the physical plan. In short-term loans, Gosbank granted credit for specific targeted purposes.

Besides Gosbank there were also a number of specialist banks, which in effect complemented the role played by Gosbank. In the former Soviet Union such banks included Promstroybank (supporting industry and construction), Agroprombank (supporting agriculture), Sberbank (the national savings bank) and Vneshtorgbank (for business involving foreign exchange transactions).

NBFIs in the former Soviet Union were almost totally undeveloped. The only insurance company was Gosstrakh (State Insurance), which was fully owned and run by the government. The variety and quality of its services was limited. There was also only one pension fund owned and run by the State.

Other important feature of the financial system of Soviet Union were the absence of a capital market for government and enterprise debt and equities, absence of money markets and foreign exchange markets, restrictions on monetary circulation which, effectively, meant the absence of a universal payments system.

The above review of financial system of Uzbekistan was done on the basis of the stage of development of financial institutions. Another angle with which to explain the financial system in the former Soviet Union is to consider the character of monetary circulation.

The dominant financial institutions in market economies, banks (or the subgroup otherwise known as commercial banks, money deposit banks, or similar banks) operate the mechanisms that enable money to circulate. Their liabilities (bank deposits or a subset of deposits) act as money since they are fully liquid, and the banks operate the mechanisms for transferring money and making payments, especially cheque clearing systems. By contrast, the main characteristics of monetary circulation in the former Soviet Union were as follows:

1. Bank deposits were not able to act fully as money since they were not fully liquid. During times of chronic shortages and quantity rationing, neither deposits nor cash were freely exchangeable for commodities (Kornai, 1980).

2. The circulation of money in centrally planned economies is formally divided into two circuits with distinct types of money, "passive" and "active" money. Passive money

consists of bank deposits in the name of ministries, large enterprises and other state bodies. These passive money deposits increase or decrease as a result of "transactions" determined by the plan, therefore, they are accounting entries as debits and credits which do not themselves confer any active entitlement on their owners. Active money, by contrast, consists of cash used for payments between the state system (ministries, enterprises and other units) and the general population. These cash payments are used for wages and salaries, transfer payments and other payments, while, in the opposite direction, individuals use cash for retail purchases, tax payments and for accumulating savings deposits. The consequence of having two circuits is that the characteristic identified above, that is the failure of monetary instruments to act as money, varied: in the "passive" circuit, deposits were highly illiquid because their use was completely planned, while in the "active" circuit, the use of cash had a greater degree of autonomy, although it was still subordinated to rationing and other administrative controls.

3. Even within each circuit, the payments mechanism were significantly under-developed and cumbersome.

4. Deposits and cash were not convertible into foreign exchange by enterprises and individuals.

3.2. Uzbekistan's Financial System Since Independence

3.2.1. The Banking sector

After Independence in 1991, the departments of the Soviet banks located in Uzbekistan became the independent banks of Uzbekistan. A law was passed in February 1991 establishing the new structure of the banking system. The new structure envisaged the creation a two-tier banking system, with the Central Bank of Uzbekistan formed from the Uzbekistani department of Gosbank, as well as commercial banks based on various non-state forms of property. The primary tasks of the Central Bank included conducting monetary policy and bank supervision and providing Uzbekistan with its own payment system.

The Uzbekistani department of Vneshtorgbank became the National Bank for Foreign Economic Activity of Uzbekistan (NBU). Its task was to implement government policy in the field of international economic activity, to service external economic transactions and to accumulate the nation's foreign exchange reserves.

Legislation created to regulate the banking system emphasised administrative measures of regulation. This was understandable in view both of the background from which policy makers and legislators had emerged, and of the primitive state of the

financial system at the time. Since then banking legislation and reforms have steadily improved, although the pace of the improvements has been very slow.

In 1997 foreign assets earlier held by the Ministry of Finance at the National Bank of Uzbekistan were transferred to the Central Bank. However, the NBU continues to be the depository of a large proportion of official gold reserves on behalf of the Central Bank. Monetary and credit policies, as well as foreign exchange allocation, are determined by the Chairman of the Central Bank, with the involvement of representatives of various government agencies and the banking sector.

As of April 1998, there were 31 commercial banks in Uzbekistan (there are 37 as of Oct. 2001): two state banks (fully owned by the government), three state-owned joint-stock banks, 17 joint-stock commercial banks with capital participation, four private banks and one subsidiary of a foreign bank (Appendix I). Twenty-eight banks were licensed to carry out foreign currency transactions, but the bulk of foreign exchange transactions were conducted by the NBU.

The NBU, which is state owned (planned to be partially privatised in 2002) is the largest commercial institution in Uzbekistan. At the time of writing it accounts for nearly 70 percent of total commercial bank loans and about 85 percent of all transactions in foreign currency. In addition, there are 13 representative offices of foreign banks registered in Uzbekistan.

The development of commercial banking has been affected in Uzbekistan by direct government intervention in foreign exchange and financial markets. In addition to a rule limiting enterprises to one account (which seriously limits competition among banks), enterprise deposits can be withdrawn only for the payment of wages and travel expenses, in accordance with quarterly cash plans. The most important commercial banks are controlled by the government and follow the credit policies set by the Republic's Monetary Policy Commission, which gives priority to sectors in line with the government's agricultural and industrial policies.

In December 1997, compulsory reserve requirements at the Central Bank were reduced from 25 to 20 percent of deposits (for deposits over 3 years, the reserve requirements were kept at 10 percent). The liquidity impact of the measure was neutralised by the auctioning of treasury bills yielding interest 1.5–2 percentage points higher than the rates ordinarily paid in treasury bill auctions. This step resulted in an improvement in banks' income positions, since required reserves are not remunerated. Foreign currency deposits are not subject to reserve requirements at the Central Bank.

In November 1996, the Board of the CBU adopted new charts of accounts for the CBU and the commercial banks. The new accounting system was introduced in March 1997 and has improved the quality of monetary statistics. However, commercial banks

have experienced difficulty in using the new system. In addition, risk assessment, and the corresponding classification of loans in commercial banks' balance sheets, remains impaired by the fact that enterprises typically do not perform bookkeeping in accordance with internationally accepted accounting standards, and banks are inexperienced in risk assessment and risk management.

Uzbekistan's The banking system is characterised by a small number of relatively sophisticated banks (the NBU and some joint venture and private banks) side by side with the successors of the formal branch (specified on the basis of financing of particular sector of the economy) banks. This second group of banks is undercapitalised, has low-quality loan portfolios and limited bank management skills. These problems are aggravated by (i) the absence of adequate legal instruments (bankruptcy procedures, asset sequestration, etc.) to protect the integrity of the banks' assets and (ii) the way banking activity is taxed.

3.2.2. Non-bank financial institutions

The formation of specialised NBFIs began in 1995 both at the instigation of the government and the private sector. Specialised finance and credit institutions were set up: a Business Fund for financing small and medium sized businesses, state insurance companies "Mada" and "Uzbekinvest", and a number of private insurance and investment companies. But the information available on this sector is very limited and there is no statistical data at all.

There have been no significant attempts to reform the country's pension system. The single pension fund remains state-run and no private pension institutions have been created.

In late 1996 a new type of financial institution was created in Uzbekistan, the Privatisation Investment Fund (PIF). Under this PIF scheme, 30 percent of the shares of about 300 large enterprises would be sold to investment funds in the first phase of implementation. It was further expected that in a subsequent second phase, the shares of 300 more enterprises would be sold. Progress in implementing the scheme has been substantially slower than originally expected, although more than 50 investment funds and management companies have been established so far, and about 100,000 individuals have bought shares in PIF's.

3.2.3. Securities market

From 1994 to 1996 the development of the stock exchange took place alongside the development of the market economy including privatisation and de-monopolization. Restructuring of corporate firms has led to the circulation of privatised enterprises' shares.

At present, the market for these shares is small in terms of quantity and variety, as well as the volume of transactions conducted through the stock exchange. The low level of development of the market reflects to some degree the approach that has been taken to privatisation. Shares have simply been distributed among the companies themselves, to selected foreign investors, outside shareholders and to the state. Investors who obtained shares this way had no real incentive or any real opportunities to trade these securities. The low interest of potential investors in equities also reflects the absence of reliable information about the issuers of shares and the consequent high risk of such investments. Although the Republic's Stock Exchange "Tashkent" (RSET) – the only stock exchange in Uzbekistan – was established in January 1994 its activity has been mainly connected with servicing new issues of securities as part of the privatisation process.

Since 1995–1996, there have also been other types of securities issued in Uzbekistan: banks' equities, deposit certificates, commercial bills and state treasury bills. But the availability of these securities is highly restricted (only three-year deposit certificates are available for individuals) and very few of these securities are issued.

More detailed issues concerning the securities market will be discussed in a later chapter.

4. Important Decisions in Financial Development. Implementation in Uzbekistan

With respect to financial system design every country in transition has to face a number of questions of particular importance. In this chapter I will try to highlight some of them.

4.1. A Market-Oriented or Bank-Dominated Financial System?

One of the first decisions countries in transition have to face is what model of financial system to construct. Should they try to imitate one of the existing models currently in use in one of the OECD countries or try to design a new system that better fits their requirements. If they choose the first option, there are a number of different alternatives, from "bank-dominated" (German and Japanese systems) to "market-oriented" (US-UK systems). Each decision has implications for the set of reforms that should be advanced first.

There exist a number of works concerning this issue. For example, Steinherr (1993) argues: "The issue of a securities market vs. banking approach is therefore a mute one: Transition economies can only have banking-based financial intermediation". His arguments are based on the view that, "... for efficiency, securities markets require highly stable political institutions, a sophisticated legal system and commitment to market economies and they can only be observed in a few of the most developed societies". Also, the work of Mayer (1990) tends to support the superiority of banks over markets: "...the implication of the both empirical observations of the preponderance of external finance coming from banks and control models of corporate finance is that banks may be superior to the market in promoting economic development and growth".

In order to identify which system is more appropriate for Uzbekistan, it is useful to firstly present the advantages and disadvantages of each model.

Let me start with the "market-oriented" model.

The advantages are:

- this form of finance emphasises a more direct relation between the saving population and investing firms;
- the development of financial markets implies the creation of new institutions so that the break with the institutions of the previous regime will be more profound;
- the creation of competitive conditions in the securities market should aid economic efficiency.

The disadvantages are:

- direct finance requires a more active portfolio choice, which is relatively costly for small savers;
- firms financed through widespread sales of securities may have passive shareholders which can lead to serious agency problems where managers pursue their own goals and do not maximise firm value;
- securities-based financing relies on well-developed company law and securities regulation, which are difficult to develop quickly in the context of transition economies.

The advantages of the "bank-dominated" system are:

- it builds on existing institutions;
- the superiority of banks in collecting information and monitoring the execution of projects;
- firms face a smaller number of creditors with whom to deal.

The disadvantages are:

- since the banking sector emerged from a monobank there will be a tendency for banks to be dominated by the government;

- banks may be influenced by a variety of pressures from the Central Bank or other bank regulators.

In reality no capitalist financial system is purely based on banks or capital markets. And there is no doubt that no financial system can exist without banks. Also experience shows that a modern financial sector requires – at least – a liquid government securities market. So, the choice lies somewhere between.

Considering the case of Uzbekistan some important issues should be noted.

Undoubtedly Uzbekistan should create its own financial system, which better fits its need and constraints. The design of the system should firstly be carefully analysed and well researched, looking at both the advantages and disadvantages of all alternative models (see G. Szego, 1993 as an example).

4.2. Central Bank Independence

One of the issues of specific importance to transition economies concerns the role of the Central Bank. The bank has two main tasks. Firstly, it is responsible for the reform and safeguarding of the payment system. Secondly, its goal is to contribute to a stable banking system by acting as the lender-of-last-resort. In transition economies especially, the former function is of crucial importance, since the payment system has been reformed only relatively recently. As for safeguarding the payment system, the question is how to reduce inflationary pressures. In discussions on this issue it has been argued that an independent central bank needs to be established. The argument for independence rests on the following views (Dow, 2000):

- the separability of money from real variables,
- the view that monetary policy is more credible if not subject to political interference,
- the view that central banks can control inflation.

Many transition economies have been confronted with relatively high levels of inflation. This results mainly from public sector pressure to monetarise large government budget deficits. One way a central bank may contribute to the reduction of inflationary pressures is by acting independently of the central government. In this way its aim of stabilising the real value of the domestic currency may become more credible if, at the very least, it is able to communicate to the public that it is tough on inflation and that it will therefore restrain from financing government budget deficits. Another argument in favour of establishing an independent central bank is related to reducing inflationary pressures which result from the creation of what we may call "inflation surprises". The

chances that the public will be confronted with high inflation due to such "surprises" resulting from government policies aimed at accruing political benefits from increased output and employment – based on the time consistency problem – are reduced with the establishment of an independent central bank. Again, this holds only if the central bank can credibly establish a tough regime on inflation (De Gregorio, 1996).

Following the above line of reasoning the more independence a central bank of a given country has from central government – assuming that one of its main tasks is to pursue price stability – the better the performance of the central bank will be in keeping inflation low and stable. Establishing an independent central bank is a major challenge for transition economies. In the past, the central banks of these countries were subjected to instructions from the central planning bureau and/or Ministry of Finance. Breaking the historically close ties between central bank officials and central government will not be easy.

As an empirical support for the statement made above I provide results from studies of the former Soviet Union countries (Majidov, 1999). The author has found a quite high correlation coefficient between Central Bank independence and the inflation rate in a test in which two countries with an extreme level of inflation rate were excluded. Countries with a relatively high level of central bank autonomy tend to have a lower inflation rate.

There is a lot to consider, in particular, for the Uzbekistan authorities, whose central bank independence level has been ranked as low as 10. Its relative success in anti-inflation policy in the first years after independence could possibly mislead the government. However, Uzbekistan's current achievements are not as impressive in this area in comparison to those countries that delegated independence to their central banks in earlier years. A good example is neighbouring Kyrgyzstan, which has the highest rank of central bank independence, and an average inflation rate in 1993–1998 that was three times lower than in Uzbekistan.

There are still not enough theoretical and empirical studies into the relationship between central bank independence and the inflation rate, particularly in Uzbekistan. However, most economists tend to agree that there is a strong relationship between the two.

I therefore also suggest the Uzbekistani authorities continue delegating the independence to the Central Bank of Uzbekistan and, in particular, abolish the CBU's obligation to provide directed credits to finance fiscal deficits.

4.3. Pace and Sequencing of Reforms

Two of the most hotly debated issues in policy-making for transition economies are the pace at which financial reform should be implemented, and the need – if any – for a fixed

sequence of reforms. Some have pushed for rapid reforms through the use of so called "shock therapy", without the use of a fixed sequence of reforms. Others have criticised such an approach as misguided in that it imposes unnecessarily high adjustment costs on the population. There are three main lines of argument for gradual reforms. One important factor in support of gradual reforms is the possibility of avoiding pushing the economy into either hyperinflation or depression. The second line of arguments emphasises the costs of adjustments imposed on the population. Another argument often presented is the political and economic context within which the financial system operates.

In contrast, proponents of rapid reforms argue: in a case of slow reforms "bad money drives out good" (Hawtrey, 1996), and fast development of modern financial institutions gives an impetus to better mobilisation of capital.

In addition, rapid reform theorists offer empirical evidence supporting their view. Hawtrey, for example, observed 20 transition countries in 1990–1995 and concluded that "the fast reformers, by and large, are experiencing better growth in real output and lower inflation rate". (see Table I for reference).

Like most of the transition economies, Uzbekistan has adopted a gradualist approach to reforming its economy. One of the 5 principles proclaimed by the country's president is " ...Development of Uzbekistani economy must be run in an evolutionary, non-revolutionary manner." (Karimov, 1995).

There are a number objective reasons for this. Firstly, political and economic: almost half of Uzbekistan's population is engaged in agriculture. Rapid reforms would definitely cause a very high level of unemployment in this sector, which could push some of the unemployed into the arms of Islamic extremist movements, which may become very influential in this area. Also, empirical evidence shows that of the gradualists Uzbekistan has had relative success in GDP growth and inflation targeting.

However, I would argue that even considering the above reasoning, Uzbekistani policy-makers could speed up the process of financial reform. As a result of the slow pace of reform to date, the present financial system has exhausted its resources and macroeconomic achievements are already not as impressive as those of other CIS countries. Therefore, I would strongly suggest speeding up the reform of Uzbekistan's financial system.

5. Capital Markets in Transition

The particular issue of my interest here is the role of development and regulation of capital markets in the architecture of financial systems in transition economies. Therefore in this chapter I will discuss issues related to development:

1. The securities market.
2. The derivatives market.

It is widely known that, in most cases, the securities market is the basis for the derivatives market. I will therefore start my discussion by considering the issues related to this.

5.1. The Securities Market

"The development and regulation of stock markets play a key role in the financial system architecture in transition economies" (Hermes, Lensink, 2000).

There were no stock markets in these countries during the 40–70 years of socialism. Nowadays, the fast expansion of stock markets is seen as an important component of the development of the financial sector in these economies. Stock market development and other aspects of financial market development take place simultaneously and complement each other (Demirguc-Kunt and Levine, 1996). A crucial question, however, is to what extent and under which conditions stock market development may contribute to a process of long-term economic growth. For example, Levine and Zervos (1998a) strongly suggest that stock markets contribute positively to economic growth. Moreover, they do not find any evidence of a negative effect of stock price volatility or capital market integration on economic growth. However, there are others who argue that stock markets do not play an important role since only a small part of corporate investment is financed by means of equity. Singh (1997) is a well-known opponent of the view that stock markets are crucial for long-term economic growth.

In order to outline the importance of the securities market, its advantages and disadvantages should be presented.

The advantages are:

1. Stock markets enable companies to raise fresh capital both initially (via primary issues) and subsequently through secondary issues. The ability to raise new equity capital then enables companies to overcome gearing constraints when they wish to expand.
2. Stock markets provide savers and financial institutions with a further outlet for their funds. A stock market enables investors to select the portfolio which gives the risk-return combination they prefer. Moreover it enables them to reduce risk.
3. Stock markets provide liquidity insurance since shareholders desiring liquidity can sell their shares.
4. Stock markets improve the allocation of resources to investment projects that provide the highest return, and therefore may have a positive influence on economic growth.

5. Stock markets help to overcome problems of asymmetric information when the country starts to liberalise its financial sector.

6. Stock markets provide a hierarchy of rates of return (and therefore of the cost of capital) between equities, corporate bonds and government stock.

7. Stock markets provide the government with an alternative means of raising capital through selling bonds.

8. Stock markets can bring foreign capital into a country from foreign portfolio investors wishing to diversify internationally.

The disadvantages are:

1. Stock markets can provide an opportunity for dishonest activity, such as market-rigging, insider dealing, issuing false or misleading prospectuses, pushing and selling over-priced or worthless stocks, etc.

2. Stock markets encourage unequal distribution of wealth, by enabling those who are sufficiently wealthy to invest with a view to increasing their wealth, without ostensibly working for it. Furthermore stock markets may be regarded as a form of gambling.

3. In most transition economies the stock markets are very thin. This may lead to excessively volatile share prices and therefore seriously hamper economic development.

4. Liquid stock markets with a substantial number of small shareholders, and hence diffuse ownership, decrease incentives to monitor the investors carefully.

5. The allocation of funds to those activities which are expected to show the greatest profit may well not be the most profitable from a national point of view.

Weighing up the advantages and disadvantages – and considering that some of disadvantages can be overcome through, for example, a proper regulatory system and fiscal instruments – we can conclude that in principle stock markets may fulfil an important role in inducing growth. However, a prerequisite seems to be that the regulatory infrastructure is well developed and that measures are taken to reduce extreme volatility of stock prices. Yet, not many empirical studies explicitly deal with regulatory issues concerning stock markets in transition economies.

Another important question is whether or not stock markets are able to fulfil their functions and improve the economic growth. This depends, among the other things, on how stock markets are designed, or their microstructure. Market microstructure theory highlights the stock market's institutional features and trading mechanisms as important determinants of market behaviour. According to this theory, policy makers and market administrators, through their choice of trading systems and other institutional features, can influence trading and price behaviour.

Market microstructures are complicated and involve a number of important aspects of the trading process. They vary in the way transactions are handled – discrete versus continuous auctions, manual versus automated systems, market-maker markets versus

jobber markets, on- and off- exchange transactions and the types of transactions permitted. An important issue also, is how well the market structure provides information to market participants.

"The importance of microstructure arises from the role it plays in each of four fundamental attributes: liquidity, efficiency, trading costs and volatility" (Glen, 1994).

All four attributes are closely related, though each of them is differently influenced by the market microstructure. Of course, market microstructure is not the only factor influencing the price of securities, but its importance cannot be underestimated.

For example, the market microstructure can influence the liquidity of the market by limiting the number of trading hours and the manner in which traders meet, either continuously or by infrequent auctions.

Market microstructure has an important role to play in encouraging market efficiency; both through the information services that are provided to participants, as well as through the nature of the trading system itself. Information on volume, market depth and recent price movements can all provide important signals about market activity that investors employ to determine what trades to make. The availability of information reduces uncertainty and increases market interest, which leads back to liquidity.

Volatility, the frequency and magnitude of price movements, is another characteristic that can be influenced by microstructure. Volatility obviously arises primarily from the economic fundamentals that drive prices. For that reason, even if microstructure could be designed to enhance liquidity and efficiency, volatility would remain. Market microstructure has been called upon to isolate fundamental volatility from trading owing to asymmetric information or temporary order imbalances.

In conclusion, given that microstructure can affect the success of a market in mediating between savers and investors, it is very important for transition economies competing for international capital to upgrade their microstructures. However, all decisions need to be made very carefully. Once market a microstructure has been adopted, it is difficult to change from one trading system to another.

Further, the discussion will be concentrated separately on these issues in relation to development:

- a) The equities market of Uzbekistan.
- b) The bonds market of Uzbekistan.

5.1.1. The Equities Market

Many enterprises in the transition economies (including Uzbekistan) have been transferred to private ownership – often as joint-stock companies whose shares can be bought and sold. An important post-privatisation issue for these countries is what the role

of government should be in developing capital markets, where these shares can be traded fairly and efficiently. These markets include organised stock exchanges and associated institutions such as depositories and clearinghouses, over-the-counter markets and informal markets. Participants include financial services providers (such as brokers, dealers, banks, pension funds, and mutual funds), as well as individual investors.

The major problems that are encountered by investors in transition economies are presented in Appendix II. Some of these problems exist for Uzbekistan as well.

It has been decided that in Uzbekistan, as was mentioned in an earlier chapter, that a gradual approach to structural reform would be adopted. In line with this, the pace of privatisation has thus far been rather slow. Privatisation has been taken place in three stages. The first stage concentrated on housing units and small enterprises mainly in the service sector and was largely completed by 1995, with 90 percent of small enterprises being privatised (Appendix III). The second stage, which involves the creation of privatisation investment funds, began in late 1996 and is still being implemented. These privately owned funds purchase shares in selected medium- and large- scale enterprises. In turn, the public is able to purchase shares in the funds. As of September 1999, 86 investment funds were licensed, of which 68 were actively purchasing enterprise shares. The third stage, case-by-case privatisation of large enterprises, began in 1998 but with limited results to date.

The slow pace of privatisation as well as the approach chosen for privatisation (the simple distribution of state-owned shares of the enterprises between their employees and selected foreign investors) has negatively influenced stock exchange activity in Uzbekistan. The situations were worsened by poor legislative support and lack of knowledge and skills both by market participants themselves and the population of the country in general.

In the first case the situation was such, that until late 1996 there were only two laws: "On Securities and the Stock Market" and "On Economic Societies". The regulations issued by the various regulatory bodies often contain obscure and even contradictory passages that complicated the functioning of the market. More recent legislation (laws "On the mechanism for Security Market Functioning" and "On Joint Stock Societies and Protection of Shareholders' Rights") has somewhat improved the situation, but not entirely. The most urgent improvements needed are definition as to the regulation of some types of professional participants' activity, as well as removal of contradictions present in legal and regulatory documents.

As at 1st May, 2000, the regulatory documents can be summarised as follows: 9 Laws (Appendix IV), 11 Presidential Decrees, and 31 Orders of Resolutions of the Cabinet of Ministers of the Republic of Uzbekistan are in place.

Another important reason why activity on the securities market has been low is the absence of convertibility of local currency and tight constraints on hard-currency flows

(particularly outflows) imposed by the government. The situation seems to be improving as the government announced full convertibility of national currency at the beginning of 2002 and a number of positive steps are made.

Things were slightly better in Uzbekistan with the formation of the Market Infrastructure. At the moment the following have been developed and modernised (Source: The publication of the Centre of Co-ordination and Control of Securities Market and State Property Management of Uzbekistan):

- The Republic's Stock Exchange "Tashkent" is in operation with 12 branches;
- An electronic OTC System "Elsis-Savdo" with more than 20 order reception offices;
- A two-tier depository system, including the Central Depository "Vakt" and 25 second-tier depositories;
- A clearing-settlement agency "Elsis-Kliring";
- Around 30 information analysis, consulting, rating, evaluating, and auditing organisations;
- More than 650 investment funds, management and investment companies, brokerage and dealer's firms.

As for further developments the following might be suggested.

Firstly, the improvement of legislation, particularly that concerned with shareholder protection.

Secondly, the rapid introduction of full convertibility of the national currency.

Thirdly, the creation of more than one stock exchange to encourage competition.

Fourthly, the creation of a more transparent environment around stock exchanges,

Fifthly, the relaxation of constraints on outside investors in trading of securities. And

finally, a reduction of participation by the state in newly-privatised enterprises.

As for recommendation on stock market structure, the work of Marco Pagano (1994) on transition economies might be used. (Appendix V).

5.1.2. The Bond Market

Bond markets fulfil a useful function in satisfying longer-term credit needs in an economy by channelling ultimate savings directly, or indirectly, through financial intermediaries, into marketable debt instruments, issued either by ultimate borrowers or by financial intermediaries engaged in longer-term lending operations. If an efficient secondary market exists, a bond market also performs an important maturity transformation function by channelling shorter-term funds into longer-term marketable instruments, thereby increasing the amount of longer-term marketable debt instruments and the amount of longer-term funds available in the economy. Intermediation costs can be kept at relatively low level depending on the number of stages of institutional

intermediation involved in the process of linking the credit supply process with the savings collection process.

The development of a national bond market, which should not be considered as an objective in itself, should only be envisaged if the efficiency of the financial system as a whole could be improved in this way. For a bond market to function well, two basic conditions would need to be met (Broker, 1993): firstly, inflation rates should remain slow and stable; secondly, interest rates should be allowed to move freely to reflect genuine market conditions.

The development of a bond market in Uzbekistan is at the moment in the very early stage of development, partly because neither of the above mentioned conditions have been fulfilled. Other reasons, as in the case of the equity market, are poor legislative foundations and the bureaucracy of issuing procedures. Therefore, companies in need of borrowing prefer to go to the commercial banks. Also, company managers do not have sufficient knowledge of such instruments. At present, no corporate bond issue has yet been registered in Uzbekistan.

The only available debt instruments in Uzbekistan are short-term government Treasury bills, issued for the first time in March 1996. These bonds have no coupon and are sold at a discount in auctions held once a month by the Republic's Currency Exchange (RCE). The Central Bank of Uzbekistan services treasury bills as a financial agent of the Ministry of Finance. As of January 2000 there were 22 dealers (21 of them banks) authorised to operate in the bond auction as dealers on their own account and on behalf of their clients. A secondary market developed which creates a degree of liquidity for these securities; secondary market auctions are held by the RCE four times a week and all maturities are traded in the same auction. However, market penetration of treasury bills is still limited, with only 25 percent of outstanding stock being held by the non-banking public in June 1998. This is due, among other things, to:

- (i) low yields compared to inflation (Appendix VI) and high return on holding US dollar bank notes;
- (ii) the lack of permission for the banks to sell the bonds to the general public.

5.2. The Derivatives Market

The issue concerning the development of the derivatives market in Uzbekistan has not yet appeared in official publications. There are a number of reasons for this. Firstly, there is lack of understanding of derivatives, both by the financial community and the regulatory bodies. There is only one official document in Uzbekistan which has ever even

mentioned derivatives (Appendix VII). The second reason is the low level of development of the securities market, which serves as a basement role for financial derivatives. Some can argue that there are still currencies and commodities which can be used as a benchmark for derivatives, like the most successful trades in Russia (Iakovlev, Danilov, 1997). However, there are also an additional number of constraints in the case of Uzbekistan leading to the absence of derivatives. The national currency of Uzbekistan is still not fully convertible, causing the absence of currency forwards. In the case of the commodities, the reasons are quite obvious – problems in regulation and lack of knowledge. However, it is with commodities that I see the prospect of development of the derivatives market in Uzbekistan.

In general for transition economies the following barriers for derivatives markets can be presented (Kilcollin, Frankel, 1993):

- Awareness and understanding of derivatives;
- Domestic laws and regulations inhibiting such investments;
- Limits on access to brokerage services;
- Cost of entering a new market;
- Increased risks;
- Lack of adequate infrastructure;
- Lack of customers.

In developed countries derivatives markets fulfil important roles of price discovery and hedging opportunities. Therefore I see the future of the derivatives market in transition economies in general and in Uzbekistan in particular, as at least a long-run prospect.

6. Market Capitalisation and the External Factors Influencing It

One of the primary conditions for countries in transition for a fast integration to the world community and global markets is liberalisation of the domestic economy. This includes liberalisation of trade, a shifting of exchange regimes towards greater flexibility and liberalisation of capital account restrictions.

"Correlated with the level of economic development, but not perfectly so, are both the degree of domestic financial sophistication and the extent of involvement with the global economic system, especially global financial markets". (Mussa M., Masson P., Swoboda A., Jadresic E., Mauro P., Berg A, 2000).

Most transition economies, following the advice of international organisations, have taken significant steps in the direction of liberalisation of their current accounts towards integration with the global markets. In the case at hand in this work, Uzbekistan has also taken steps towards liberalisation. First of all, in the area of the national currency – the Uzbek soum was introduced at a 1.07.94 exchange for dealing with foreign currencies. However, the pace of liberalisation was rather slow, leaving Uzbekistan far behind some of the other transition countries. Furthermore, since 1996 the authorities have started to resist major adjustments to the official exchange rate in response to external shocks, defending such a policy by saying "they had ensured stability in times of crises and provided the base for future reforms and full currency convertibility". (Reuter, July, 12, 2000). In contrast, most Western economists say "...the capital controls introduced in 1996 led to a rise in foreign debt, discouraged investment and caused substantial capital flights every year". (Reuter, July, 12, 2000).

Officials in Uzbekistan finally took the decision to introduce full currency convertibility at the end of 2000, beginning of 2001 in order to receive an IMF credit package though have not yet implemented. Empirical evidence shows that the level of liberalisation is positively correlated with foreign direct investment (EBRD, 1995). However, there are no published studies on how liberalisation of foreign exchange can influence indirect investments in the country, particularly market capitalisation in the Stock Exchanges.

In order to find out whether such relationship exists and also what other external factors influence market capitalisation in transition countries we conducted regression analysis. In this we used as independent variables different transition indicators (Appendix VIII) – at the small and large-scale privatisation levels, the level of governance and enterprise restructuring, the level of price liberalisation, the level of development of the trade and foreign exchange systems, competition policy, the level of banking reform and interest rate liberalisation and the level of development of the legal system. We used the relative qualitative position for each of these variables assigned by the European Bank of Reconstruction and Development (EBRD) for each country. As a dependent variable, it was obvious we could not use market capitalisation (of transition countries) themselves as, we had to make allowance for the size of the economies. For this reason, we used market capitalisation relative to GDP (MC-to-GDP ratio). According to the model constructed, our hypotheses were that (Appendix IX) all independent variables had to have a positive coefficient. Primarily, 14 transition countries were chosen. These happen to be the countries for which all relevant data were available (Appendix X).

The first regression was done for all variables. Results showed that none of the variables were statistically significant. The highest value for t-statistics (-1.99) was

obtained for Trade and Foreign exchange, but we still could not reject the null hypothesis that the coefficient is significantly different from zero ($Df=8$, $t_c=2.306$ (95% significance)). However, the result for R-squared was quite promising.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.8745647
R Square	0.7648635
Adjusted R Square	0.3886451
Standard Error	0.0864129
Observations	14

ANOVA

	df	SS	MS	F	Significance F
Regression	8	0.121448084	0.01518	2.0330304	0.22542141
Residual	5	0.037335916	0.00747		
Total	13	0.158784			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 90.0%	Upper 90.0%	Tc=2.306 (5%)
Intercept	-0.663222	0.43038044	-1.541	0.1839466	-1.76954795	0.443105	-1.530459	0.2040161	
Large scale privatization	0.1518455	0.128634758	1.18044	0.2909177	-0.17882013	0.482511	-0.10736	0.4110509	do not reject
Small scale privatization	0.066441	0.142560002	0.46606	0.6607733	-0.30002059	0.432903	-0.220824	0.3537064	do not reject
Governance and enterprise restructuring	0.0969016	0.242021438	0.40038	0.7054076	-0.52523327	0.719037	-0.390783	0.5845867	do not reject
Price liberalization	0.1524189	0.226457386	0.67306	0.5307599	-0.42970743	0.734545	-0.303904	0.6087416	do not reject
Trade and foreign exchange system	-0.120314	0.060377393	-1.9927	0.1028956	-0.27551828	0.034891	-0.241977	0.0013499	do not reject
Competition policy	-0.132434	0.138866217	-0.9537	0.3840431	-0.48940007	0.224533	-0.412256	0.1473886	do not reject
Banking reform and i/r liberalisation	-0.013636	0.187289164	-0.0728	0.9447828	-0.49507722	0.467805	-0.391033	0.363761	do not reject
Legal basis	0.0592725	0.039298011	1.50828	0.1918517	-0.04174611	0.160291	-0.019915	0.1384599	do not reject

We continued our analysis by dropping different variables and trying a number of combinations of them in order to sort out any problems of misspecification.

The best result was achieved by regressing 3 independent variables – small-scale privatisation, trade and foreign exchange and legal reform.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.810033242
R Square	0.656153854
Adjusted R Square	0.55300001
Standard Error	0.073889963
Observations	14

ANOVA

	df	SS	MS	F	Significance F
Regression	3	0.104186733	0.03473	6.36092	0.0109839
Residual	10	0.054597267	0.00546		
Total	13	0.158784			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Tc=2.201
Intercept	-0.590064468	0.198349462	-2.97487	0.01393	-1.032015	-0.148114	-1.0320147	-0.148114	
Trade and foreign exchange system	-0.093050801	0.037767439	-2.46378	0.03346	-0.177202	-0.0089	-0.1772019	-0.0089	reject
Legal basis	0.079238832	0.028726712	2.75837	0.02019	0.0152317	0.1432459	0.01523172	0.1432459	reject
Small scale privatization	0.216303707	0.068018142	3.18009	0.00982	0.0647498	0.3678576	0.06474982	0.3678576	reject

However, we still could not rely on the results of regression, because of the relatively low level of R-squared and we still could not reject the null hypothesis for 2 variables with a 99% level of significance.

We tried to look for an explanation behind this problem. We first took the average of all EBRD assigned values of the independent variables and ranked the countries accordingly. Next we ranked the countries according to their respective MC-to-GDP ratio. The differences in the rankings of each country are reported below.

	Average score	Rank (av)	MC-to-GDP	Rank (ratio)	Difference
Croatia	3.08125	8	22.50%	6	2
Czech Republic	3.5825	3	30%	2	1
Estonia	3.415	4	25.20%	4	0
Hungary	3.79	1	36.20%	1	0
Kazakhstan	2.79125	11	5.90%	13	-2
Latvia	3.03875	9	6.20%	11	-2
Lithuania	3.12375	7	22.80%	5	2
Poland	3.58125	2	9.80%	9	-7
Romania	2.915	10	6.80%	10	0
Russia	2.70625	12	29.40%	3	9
Slovakia	3.2475	6	9.70%	8	-2
Slovenia	3.20625	5	10.90%	7	-2
Ukraine	2.415	13	6.10%	12	1
Uzbekistan	2.1225	14	3.90%	14	0

As an example, we see that Russia's rank for the average assessment of reforms was 12, but MC-to-GDP ratio was 3. On the other hand, Poland's assessment for reform was 3, but MC-to-GDP ratio only 9.

I came up with the following explanation for such a imbalance. MC-to-GDP ratios were calculated based on figures from the end of 1997. This was the high point of Russia's GKO (State short-term Treasury bills) bubble, significantly overheating the securities market. The reasons for Poland were not so obvious and therefore required further investigation into the Polish model of financial development. Some explanations such as the absence of publicly available corporate bonds and limited issue of municipal bonds, which account for a large part of market capitalisation in other countries, are available in statistical sources (EBRD, 1998). There are also some sources describing the superiority of banking debt financing over securities issues in Poland.

Dropping some of the problem variables from our regression model we obtained significant results in our regression analysis. (We present the result of regression using all variables in Appendix XI). For 3 variables – small-scale privatisation, trade and foreign exchange, legal reform – we obtained the best result.

There was high level of R-squared equals 0.856 and rejection of the null hypothesis with 95% level of significance for all 3 variables and 2 variables with 99% of significance. Further improvement was achieved using squared variable for trade and foreign exchange.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.93568173
R Square	0.8755003
Adjusted R Square	0.82881291
Standard Error	0.0461266
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	3	0.119696358	0.0399	18.75239	0.000561
Residual	8	0.017021309	0.00213		
Total	11	0.136717667			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Tc=3.25 (1%)
Intercept	-0.9751225	0.179990531	-5.4176	0.000633	-1.3901816	-0.560063289	-1.390181645	-0.560063289	
Legal basis	0.11696668	0.021382752	5.47014	0.000594	0.06765793	0.166275426	0.067657931	0.166275426	do not reject
Small scale privatization	0.28431808	0.058624203	4.84984	0.001272	0.14913034	0.419505823	0.14913034	0.419505823	do not reject
Trade ^2	-0.0221035	0.006316942	-3.4991	0.00809	-0.0366704	-0.007536623	-0.036670429	-0.007536623	do not reject

The high level of R-squared and the rejection of the null hypothesis for all variables with 99% level of significance ensures us a high reliability of received results. Therefore we could start to analyse relationship between each variable on the MC-to-GDP ratio.

The results from regression were somewhat surprising. It had been expected to find a positive relationship between legal reform and trade and foreign exchange variables, but the coefficient for trade and foreign exchange variable was in fact negative.

One can offer a number of explanations for this. First of all, liberalisation of trade itself without providing sound legal basis will not encourage foreign capital inflow, especially in the little-known and therefore highly risky securities market of transition countries. Furthermore, liberalisation of trade does encourage local investors to search for better investment opportunities outside of the country, which can cause a significant outflow of capital, or capital flight, from the country. Also, liberalisation of trade and foreign exchange which is relevant to foreign investors to make decisions, may not influence domestic investors at all. Significant differences can be made through the simultaneous development of a legal basis and further privatisation of state owned companies (not only small ones).

In conclusion, in the case of Uzbekistan, it might be suggested that the authorities should not expect an explosive positive shift of capital inflows into the securities market after the introduction of full-currency convertibility overnight, given the still low level of development of a legal regulation of the securities market. Furthermore, careful measures for controlling capital outflows should be introduced. Certainly, the processes of privatisation and de-monopolisation should be speeded up, supported by intensive legal reform.

7. Conclusion

Financial system development is an important topic for transition economies. Of course, though several aspects of this topic could have been highlighted here, we have decided to focus on a limited number of issues that are of particular importance in Uzbekistan at present. However, one is well aware of the fact that there are other key issues in the area of financial system development which have not been addressed in this issue. These issues include bank regulation and supervision, the lender-of-last resort function of the central bank, the role of non-bank financial institutions and deposit insurance, etc. However, I maintain that my choice to focus on the role of the stock market, the importance of establishing independent central bank in order to reduce

inflationary pressure, the issue concerning foreign exchange liberalisation and its relationship with stock exchange market capitalisation, is valid, since these issues are of the most immediate concern for policy makers and researchers in Uzbekistan today.

The dissertation provides challenging contributions to one of these four aspects. It offers a novel approach both at the theoretical as well as empirical levels. It is also the first study concerned with such a large scope of financial challenges in the case of Uzbekistan. Moreover, it offers various policy recommendations – albeit in an indirect sense in some cases – for the financial development of Uzbekistan.

Certainly, each issue mentioned in this dissertation requires further consideration and investigation, therefore some assumptions made in the dissertation may have to be altered when more up to date information becomes available.

The relationship found in the analytical part of the dissertation may also have to be re-examined at a later date. However, given the lack of relevant time series data we had to simplify the approach used in it. More precise output may be obtained by tracking time series for each country. Also, primary data in some cases does not give one hundred per cent confidence of their validity. However, in spite of all these constraints useful results have been obtained.

I believe in the future of the countries in transition and their success in the reformation process.

Appendix I. Uzbekistan: Commercial Banks' Prudential Ratios, August 30, 1999

	Ratio	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13
Bank	Standard	> 0.10	> 0.05	> 0.06	> 0.3	> 0.15	< 0.5	< 8.0	< 0.15	< 0.25	< 0.5	< 0.15	< 0.05	< 1.0
1. National Bank		0.20	0.18	0.05	0.75	0.00	0.00	0.00	0.01	0.03	0.18	0.00	0.00	0.00
2. Promstroibank		0.25	0.21	0.09	0.72	0.00	0.00	7.78	0.01	0.01	0.03	0.00	0.00	0.00
3. Pahtabank		0.12	0.12	0.09	0.76	0.00	0.00	5.61	0.02	0.09	0.09	0.00	0.00	0.00
4. Tadbirkorbank		0.15	0.14	0.15	0.45	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00
5. Mevasabzavotbank		0.35	0.30	0.21	0.68	0.00	0.00	0.00	0.02	0.00	0.08	0.00	0.00	0.00
6. Savdogarbank		0.26	0.26	0.24	0.70	0.60	0.00	0.00	0.01	0.01	0.06	0.00	0.00	0.00
7. Gallabank		0.07	0.05	0.04	5.13	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
8. Zaminabank		0.54	0.60	0.45	45.56	0.00	0.00	0.00	0.00	0.04	0.14	0.00	0.00	0.00
9. Turanbank		0.21	0.24	0.21	0.73	0.00	0.00	0.00	0.00	0.11	0.25	0.00	0.00	0.00
10. Andijanbank		0.31	0.27	0.24	75.40	0.00	0.00	0.00	0.01	0.00	0.01	0.04	0.02	0.08
11. Asakabank		0.34	0.30	0.16	1.05	0.00	0.00	0.00	0.04	0.02	0.09	0.00	0.00	0.00
12. Ipak-Yuli Bank		0.78	0.81	0.28	116.13	0.12	0.04	0.12	0.04	0.06	0.14	0.12	0.00	0.66
13. Namanganbank		0.43	0.42	0.40	0.40	0.15	0.03	0.29	0.00	0.00	0.00	0.08	0.00	0.93
14. ABN-AMRO		0.11	0.10	0.02	0.90	0.00	6.94	7.47	0.00	0.00	0.00	0.00	0.00	0.02
15. Umarbank		0.30	0.26	0.22	0.78	0.00	0.00	0.00	0.00	0.11	0.11	0.13	0.00	0.00

Appendix I. Uzbekistan: Commercial Banks' Prudential Ratios, August 30, 1999 cont.

	Ratio	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13
Bank	Standard	> 0.10	> 0.05	> 0.06	> 0.3	> 0.15	< 0.5	< 8.0	< 0.15	< 0.25	< 0.5	< 0.15	< 0.05	< 1.0
16. Parvinabank		0.13	0.14	0.10	1.16	0.03	0.03	2.12	0.08	0.22	0.61	0.00	0.00	0.00
17. Olimbank		0.78	0.76	0.87	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18. UT-bank		1.59	1.34	0.25	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
19. Aviabank		0.96	0.97	0.44	0.53	0.00	0.00	0.00	0.04	0.00	0.05	0.00	0.00	0.00
20. Uzinvestbank		0.28	0.48	0.34	0.48	0.21	0.14	0.60	0.02	0.10	0.56	0.00	0.00	0.00
21. Trastbank		0.43	0.52	0.18	0.87	0.14	0.02	0.14	0.06	0.09	0.36	0.00	0.00	0.01
22. Alokabank		1.20	1.48	0.32	0.92	0.11	0.00	0.31	0.00	0.00	0.26	0.00	0.00	0.00
23. Privatbank		0.86	0.73	0.15	0.79	0.00	0.00	0.00	0.06	0.13	0.07	0.00	0.00	0.00
24. Uzzhilsberbank		0.30	0.29	0.18	0.55	0.14	0.05	1.14	0.04	0.05	0.09	0.01	0.00	0.01
25. UzDaewoobank		0.54	0.46	0.10	3.03	0.31	0.00	0.31	0.00	0.93	0.99	0.00	0.00	0.00
26. TSAB		0.93	0.90	0.38	19.19	0.24	0.00	0.46	0.00	0.04	0.00	0.00	0.00	0.00
27. Alp Jamol		0.20	0.23	0.15	0.68	0.19	0.12	2.01	0.19	0.05	0.57	0.00	0.00	0.00
28. HIF		0.48	0.58	0.29	98.00	0.00	0.00	0.00	0.11	0.14	0.33	0.00	0.00	0.00
29. Turkiston bank		0.45	0.45	0.30	0.51	0.00	0.00	0.43	0.00	0.13	0.13	0.00	0.00	0.00
30. Istikbol bank		0.37	0.36	0.35	0.36	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00
31. Uctam		0.93	0.92	0.57	0.98	0.23	0.00	0.22	0.00	0.00	0.00	0.15	0.00	0.15

Source: IMF staff country report 00/36.

- K1 Total capital adequacy ratio (total capital/risk-weighted assets).
- K2 Ratio of bank capital to liabilities.
- K3 Instant liquidity ratio (cash/current deposits).
- K4 Current liquidity ratio (assets up to 30 days/liabilities up to 30 days).
- K5 Short term liquidity ratio (assets 30 days to one year/liabilities 30 days to one year).
- K6 Lending limit per borrower (ratio to total capital).
- K7 Large exposure limit (ratio to total capital).
- K8 Lending limit per depositor (ratio to deposits).
- K9 Limit for investment in marketable securities (ratio to common stock).
- K10 Limit for investment other than marketable securities (ratio to common stock).
- K11 Limit on credits to one connected person (ratio to common stock).
- K12 Limit on credits to all connected persons (ratio to common stock).
- K13 Loans to insiders.

Appendix II. Problems Encountered by Investors During the Trade Cycle

Phase	Problems
Market access	<ul style="list-style-type: none"> - Legal limitations on foreign portfolio investments. - Foreign exchange limitations. - Only "on the spot" transactions, no possibility to trade offshore.
Custodian agent selection	<ul style="list-style-type: none"> - Shortage of qualified local institutions. - Internationally recognized custodian banks not yet present.
Trade	<ul style="list-style-type: none"> - Lack of information on market practices and investment opportunities. - Small number of traded securities. - Incompetent domestic brokers, and foreign brokers not allowed to trade.
Settlement, cash side	<ul style="list-style-type: none"> - Slow payment system. - Margin transactions are not allowed. - Required full, up-front payment. - Counterparty's failure to pay. - No guarantee fund.
Settlement, securities side	<ul style="list-style-type: none"> - Nonexistent or inefficient depository. - Slow physical delivery. - Borrowing of securities does not exist. - Counterparty's failure to deliver.
Market exit	<ul style="list-style-type: none"> - Limitation on repatriation of capital and dividends. - Liquidity.

Source: World Bank Technical Paper No 295.

Appendix III. Uzbekistan: Corporatized and Partially Privatized Enterprises, 1992–98

	1992	1993	1994	1995	1996	1997	1998
Number of state-owned enterprises existing prior to 1993	64547	-	-	-	-	-	-
<i>Of which</i>							
Small	52782	-	-	-	-	-	-
Medium	7059	-	-	-	-	-	-
Large	4706	-	-	-	-	-	-
Number of corporatized and partially privatized enterprises (in each year)	0	33571	9744	7511	1915	1231	451
<i>Of which</i>							
Small	0	32571	6649	7209	658	775	135
Medium	0	600	2725	174	1109	425	315
Large	0	400	370	128	148	31	1
Number of corporatized and partially privatized enterprises (cumulative)	0	34577	44321	51832	53747	54978	55429
<i>Of which</i>							
Small	0	33577	40226	47435	48093	48868	49003
Medium	0	600	3325	3499	4608	5033	5428
Large	0	400	770	898	1046	1077	1078
Share of corporatized and partially privatized enterprises (in percent)	0	54	69	80	83	85	86
<i>Of which</i>							
Small	0	64	76	90	91	93	93
Medium	0	8	47	50	65	71	76
Large	0	8	16	19	22	23	23

Source: IMF Staff Country Report 00/36.

Appendix IV. List of the Laws of Uzbekistan Concerned Securities Market

1. LAW OF THE REPUBLIC OF UZBEKISTAN: "On Securities and Stock Exchange".
September 2, 1993. No.918-XII

As amended by the Laws of the Republic of Uzbekistan of September 23, 1994,
December 22, 1995 and April 26, 1996, August 30, 1996, December 27, 1996, 20.08.99
No. 832-I

2. LAW OF THE REPUBLIC OF UZBEKISTAN: "On Joint-Stock Companies and
Protection of Shareholders Rights".April 26, 1996 No. 223-I

This Law has been amended by the

Law of 27.12.96 No. 357-I,

Law of 26.12.97 No. 349-I

Law of 29.08.98 No. 681-I

Law of 20.08.99 No. 832-I

3. LAW OF THE REPUBLIC OF UZBEKISTAN: "On foreign investments"

April 30, 1998 No. 609-I

Law was amended in accordance with Section XXIII of the Law of the Republic of
Uzbekistan No. 832-I dtd 20.08.99

4. LAW OF THE REPUBLIC OF UZBEKISTAN: "On Denationalization and Privatization".
November 19, 1991

In this Law amendments were introduced by the Law dtd May 7, 1993

5. LAW OF THE REPUBLIC OF UZBEKISTAN: "On Business Companies And
Partnerships". December 9, 1992 No. 732-XII

In this Law amendments were introduced by the Laws dated 23.09.94, 31.08.95,
30.08.96 No. 281-I, 29.08.98 No. 681-I 20.08.99 No. 832-I

6. LAW OF THE REPUBLIC OF UZBEKISTAN: "On the Mechanism of Securities Market
Functioning". 25.04.96 No. 218-I

7. LAW OF THE REPUBLIC OF UZBEKISTAN: "On the Depositories' Activity on the
Securities Market". 29.08.98 No. 672-I

8. LAW OF THE REPUBLIC OF UZBEKISTAN: "On the Investments". 24.12.98 No. 719-I

9. LAW OF THE REPUBLIC OF UZBEKISTAN: "On the Guarantees and Protection of
the Foreign Investors' Rights". 30.04.98 No. 611-I

Appendix V. Options and Recommendations for Stock Market Structure (Compared with Existing in Uzbekistan).

Recommendations	Existing in Uzbekistan	Options	Comment
	+	Fragmentation	Traders should not be required to use a single exchange, but multiple exchanges should be integrated to the extent possible to create a single market.
+		Intergration	
	Undefined	Single function brokers and dealers	Broker-dealers are needed to ensure the presence of speculative traders but create conflicts of interest.
+		Dual function broker-dealers	
	+	Dealer (quote-driven) market	Unofficial speculators and dealers should be allowed to participate in auctions to increase stability.
+		Auction (order-driven) market	
+	+	Discrete trading (call market)	A call market is best until order flow increases to a level adequate for continuous trading.
		Continuous trading	
	+	Opaque system (slow or no reporting)	Trading is increased in order-driven markets. An issue is reporting of off-market transactions.
+		Transparent system (fast reporting)	

Source: Based on the presentation by Marco Pagano at the November 1994 Prague workshop on "Creating Capital Markets in Central and Eastern Europe" sponsored by the Central and Eastern Europe Privatization Network and the World Bank. Uzbekistan's case added by A. Akimov.

Appendix VI. Uzbekistan: Yield on Government Bonds in the Primary Market, 1996–99

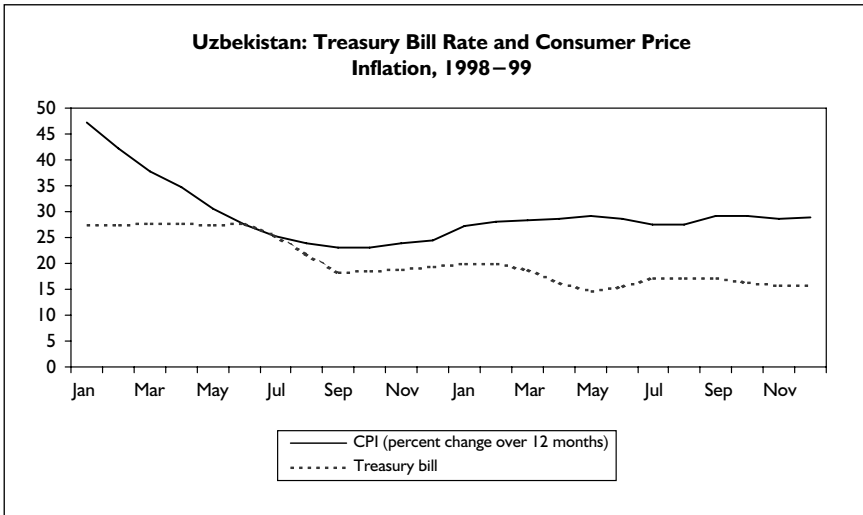
	1996	1997	1998				1999							
			Q1	Q2	Q3	Q4	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Primary market 1/														
91-day treasury bills 2/	36	26	26.7	25.1	17	16.6	16.6	16.1	---	---	---	---	---	---
182-day treasury bills 2/	---	27.5	28.1	27.2	18.5	20.4	20.9	20.4	18	16.3	13.1	18	17.5	18.2
273-day treasury bills 3/	---	---	---	---	24.9	23.8	23.8	21.9	19	15.5	15	18.9	19	19.2
364-day treasury bills 4/	---	---	---	---	---	---	---	---	20	16.8	16.3	20	20	20.5
Memorandum item:														
CBU refinance rate	60	48	48	48	48	48	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6
							(in millions of soums)							
Treasury bill outstanding	4140	19455	24143	34390	40658	42112	42817	44359	52001	53348	53552	56891	57336	58394
Held by commercial banks	3082	15852	19169	27748	30190	34540	35428	35040	42050	42693	42848	45895	45399	44474
Held by rest of economy	1058	3603	4974	7642	10468	7572	7389	9319	9951	10665	10704	10996	11937	13920

Source: IMF staff country report 00/36.

1/ Annualized average simple interest for the last month in the period.

2/ The 91-day treasury bill was discontinued in March 1999.

3/ Introduced in September, 1998.



Source: IMF staff country report 00/36.

Appendix VII.

LAW OF THE REPUBLIC OF UZBEKISTAN: "On Securities and Stock Exchange".

Article 8-1. Securities' derivatives

Article 8-1 is introduced by the Law of the Republic of Uzbekistan of December 22, 1995)

Securities' derivatives are securities, income (losses) our estimation of which depends on one or several factors (indexes).

Securities' derivatives can be issued as options, futures and other finance tools.

Options is agreement giving the right to its owner to acquire securities or goods at prices stipulated in the contract within a stipulated term.

Futures is security (contract) certifying unconditional obligation of purchase or sale of some securities and others finance tools or goods at the price stipulated in the contract for the stipulated date.

The procedure of issue and circulation of securities' derivatives is determined by the State Commission on Securities and Stock Exchange under the Ministry of Finance of the Republic of Uzbekistan.

Classification system for transition indicators*

Large-scale privatization

- 1 Little private ownership.
- 2 Comprehensive scheme almost ready for implementation; some sales completed.
- 3 More than 25 per cent of large-scale enterprise assets in private hands or in the process of being privatised (with the process having reached a stage at which the state has effectively ceded its ownership rights), but possibly with major unresolved issues regarding corporate governance.
- 4 More than 50 per cent of state-owned enterprise and farm assets in private ownership and significant progress on corporate governance of these enterprises.
- 4+ Standards and performance typical of advanced industrial economies: more than 75 per cent of enterprise assets in private ownership with effective corporate governance.

Small-scale privatisation

- 1 Little progress.
- 2 Substantial share privatised.
- 3 Nearly comprehensive programme implemented.
- 4 Complete privatisation of small companies with tradable ownership rights.
- 4+ Standards and performance typical of advanced industrial economies: no state ownership of small enterprises; effective tradability of land.

Governance & enterprise restructuring

- 1 Soft budget constraints (lax credit and subsidy policies weakening financial discipline at the enterprise level); few other reforms to promote corporate governance.
- 2 Moderately tight credit and subsidy policy but weak enforcement of bankruptcy legislation and little action taken to strengthen competition and corporate governance.
- 3 Significant and sustained actions to harden budget constraints and promote corporate governance effectively (e.g. through privatisation combined with tight credit and subsidy policies and/or enforcement of bankruptcy legislation).
- 4 Substantial improvement in corporate governance: for example, on account of an active corporate control market; significant new investment at the enterprise level.
- 4+ Standards and performance typical of advanced industrial economies: effective corporate control exercised through domestic financial institutions and markets, forcing market-driven restructuring.

Price liberalisation

- 1 Most prices formally controlled by the government.
- 2 Price controls for several important product categories, state procurement at non-market prices remains substantial.

- 3 Substantial progress on the price liberalisation: state procurement at non-market prices largely phased out.
- 4 Comprehensive price liberalisation; utility pricing which approaches economic costs.
- 4+ Standards and performance typical of advanced industrial economies: comprehensive price liberalisation; efficiency-enhancing regulation of utility pricing.

Trade and foreign exchange system

- 1 Widespread import and/or export controls or very limited legitimate access to foreign exchange.
- 2 Some liberalisation of import and/or export controls; almost full current account convertibility in principle but with a foreign exchange regime that is not fully transparent (possibly with multiple exchange rates).
- 3 Removal of almost all quantitative and administrative import and export restrictions; almost full current account convertibility.
- 4 Removal of almost all quantitative and administrative import and export restrictions (apart from agriculture) and all significant export tariffs; insignificant direct involvement in exports and imports by ministries and state-owned trading companies; no major non-uniformity of customs duties for non-agricultural goods and services; full current account convertibility.
- 4+ Standards and performance typical of advanced industrial economies: removal of most tariffs barriers; membership in WTO.

Competition policy

- 1 No competition legislation and institutions.
- 2 Competition policy legislation and institutions set up; some reduction of entry restrictions or enforcement action on dominant firms.
- 3 Some enforcement actions to reduce abuse of market power and to promote a competitive environment, including break-ups of dominant conglomerates; substantial reduction of entry restrictions.
- 4 Significant enforcement actions to reduce abuse of market power and to promote a competitive environment.
- 4+ Standards and performance typical of advanced industrial economies: effective enforcement of competition policy, unrestricted entry to most markets.

Banking reform and interest rate liberalisation

- 1 Little progress beyond establishment of a two-tier system.
- 2 Significant liberalisation of interest rates and credit allocation; limited use of directed credit of interest rate liberalisation ceilings.
- 3 Substantial progress in establishment of bank solvency and of a framework for prudential supervision and regulation; full interest rate liberalisation with little

preferential to cheap refinancing; significant lending to private enterprises and significant presence of private banks.

- 4 Significant movement of banking laws and regulations towards BIS standards; well-functioning banking competition and effective prudential supervision; significant term lending to private enterprises ; substantial financial deepening.
- 4+ Standards and performance typical of advanced industrial economies: full convergence of banking laws and regulations with BIS standards; provision of full set of competitive banking services.

The extensiveness and effectiveness of legal rules on investment**

- 1 Legal rules often very unclear and impose significant constraints to creating investment vehicles, security interests or repatriation of profits; availability of legal advice is limited; judicial and administrative support of the law is substantially deficient.
- 2 Legal rules often unclear; legal advice often difficult to obtain; legal rules impose constraints to creating investment vehicles, the taking of security or the repatriation of profits; judicial and administrative support of the law is rudimentary; where legal rules or legal advice exist, administration of the law is deficient
- 3 Legal rules do not impose major obstacles to the creation of investment vehicles, the taking of security or the export of profits; legal rules are reasonably clear and specialised legal advice is available judicial and administrative support of the law is often inadequate; where such support is adequate, legal rules often impose significant constraints.
- 4 Legal rules are clear, generally do not discriminate between foreign and domestic investors and impose few constraints; specialised legal advice readily available; investment laws reasonably well administered and supported judicially, also that support sometimes patchy.
- 4+ Legal rules closely approximate generally accepted standards internationally and readily ascertainable through sophisticated legal advice; investment laws well administered and supported judicially, particularly regarding functioning of courts and land and the orderly and timely registration of proprietary or security interests.

* Source: EBRD "Transition Report-1998".

** Source: EBRD "Transition Report-1995".

Appendix VIII. Progress in Transition in Central and Eastern Europe, the Baltic States and the CIS

Countries	Enterprises			Markets and trade			Financial institutions	Legal reform
	Large-scale privatisation	Small-scale privatisation	Governance & enterprise restructuring	Trade & foreign			Banking reform & interest rate liberalisation	The extensiveness and effectiveness on legal rules on investment
				Price liberalisation	exchange system	Competition policy		
Armenia	3	3	2	3	4	2	2+	3
Azerbaijan	2	3	2	3	3	1	2	2
Bulgaria	3	3	2+	3	4	2	3-	4
Croatia	3	4+	3-	3	4	2	3-	3
Czech Republic	4	4+	3	3	4+	3	3	4
Estonia	4	4+	3	3	4	3-	3+	3
FYR Macedonia	3	4	2	3	4	1	3	3
Hungary	4	4+	3+	3+	4+	3	4	4
Kazakhstan	3	4	2	3	4	2	2+	2
Latvia	3	4	3-	3	4	3+	3-	2+
Lithuania	3	4	3-	3	4	2+	3	3
Moldova	3	3+	2	3	4	2	2+	3
Poland	3+	4+	3	3+	4+	3	3+	4
Romania	3-	3+	2	3	4	2	2+	4
Russian Federation	3+	4	2	3-	2+	2+	2	3
Slovak Republic	4	4+	3-	3	4+	3	3-	2
Slovenia	3+	4+	3-	3	4+	2	3	3
Ukraine	2+	3+	2	3	3-	2	2	2
Uzbekistan	3-	3	2	2	2-	2	2-	2

Source: Transition report-1998, EBRD.

Appendix IX. Hypothesis

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + u$$

where

Y – Market capitalisation/GDP ratio (MG ratio)

X₁ – Large-scale privatisation

X₂ – Small-scale privatisation

X₃ – Governance and enterprise restructuring

X₄ – Price liberalisation

X₅ – Trade and foreign exchange system

X₆ – Competition policy

X₇ – Banking reform and interest rate liberalisation

X₈ – The extensiveness and effectiveness of legal rules on investment

u – Random error

β-s – coefficients of explanatory variables

There is a linear positive relationship of each variable with the MG ratio, because:

- 1) Large and small scale privatisation should encourage foundation of the other types of companies rather than State enterprises, in particular joint-stock companies, which should increase market capitalisation.
- 2) More advanced governance of enterprises should encourage such a type of financing as equity financing which should increase market capitalisation.
- 3) Absence of restrictions of the price fluctuations on the Stock Exchange should encourage more participation of companies in the Stock Exchange.
- 4) Free competition should encourage reduction of costs for equity financing.
- 5) Banking reform will influence banks to make more portfolio investments rather than only direct financing as it was before.
- 6) Liberalisation of trade and foreign exchange should influence more participation of foreign investors on the local stock exchange activity.
- 7) Advanced regulations should provide confidence and trust in participation in stock exchange activity.

Appendix X. Primary Data for Simple Regression Model*

Countries	Enterprises			Markets and trade			Financial institutions	Legal reform	Market capitalisation-to-GDP ratio (%)
	Large-scale privatisation	Small-scale privatisation	Governance & enterprise restructuring	Trade & foreign			Banking reform & interest rate liberalisation	The extensiveness and effectiveness on legal rules on investment	
				Price liberalisation	exchange system	Competition policy			
Croatia	3	4.33	3-	3	4	2	2.66	3	22.5
Czech Republic	4	4.33	3	3	4.33	3	3	4	30
Estonia	4	4.33	3	3	4	2.66	3.33	3	25.2
Hungary	4	4.33	3.33	3.33	4.33	3	4	4	36.2
Kazakhstan	3	4	2	3	4	2	2.33	2	5.9
Latvia	3	4	2.66	3	4	3.33	2.66	2.33	6.2
Lithuania	3	4	2.66	3	4	2.33	3	3	22.8
Poland	3.33	4.33	3	3.33	4.33	3	3.33	4	9.8
Romania	2.66	3.33	2	3	4	2	2.33	4	6.8
Russian Federation	3.33	4	2	2.66	2.33	2.33	2	3	29.4
Slovak Republic	4	4.33	2.66	3	4.33	3	2.66	2	9.7
Slovenia	3.33	4.33	2.66	3	4.33	2	3	3	10.9
Ukraine	2.33	3.33	2	3	2.66	2	2	2	6.1
Uzbekistan	2.66	3	2	2	1.66	2	1.66	2	3.9

Source: EBRD Transition Report-1998.

* Amendments. To make qualitative data applicable for regression there were made following transformation:

Sign "+" was repaced by adding 0.33, sign "-" by minusing 0.33.

Appendix XI. Regression Output

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.975191202
R Square	0.950997881
Adjusted R Square	0.820325563
Standard Error	0.047256236
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	8	0.130018211	0.016252276	7.277730253	0.065123655
Residual	3	0.006699455	0.002233152		
Total	11	0.136717667			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%	Tc=2.132	Tc=2.776
Intercept	-1.047405539	0.326330047	-3.209650927	0.048969298	-2.085934367	-0.008876711	-2.085934367	-0.008876711		
Large scale privatization	-0.143312833	0.116536788	-1.229764748	0.306432424	-0.51418525	0.227559584	-0.51418525	0.227559584	do not reject	do not reject
Small scale privatization	0.530001234	0.245765165	2.156535215	0.119966534	-0.252133943	1.31213641	-0.252133943	1.31213641	reject	do not reject
Governance and enterprise restructuring	-0.390153557	0.292826165	-1.332372595	0.274903595	-1.322057977	0.541750863	-1.322057977	0.541750863	do not reject	do not reject
Price liberalization	-0.034391539	0.138315712	-0.248645207	0.819685114	-0.474574278	0.4057912	-0.474574278	0.4057912	do not reject	do not reject
Trade and foreign exchange system	-0.239153306	0.088030969	-2.716695148	0.072751955	-0.5193074	0.041000788	-0.5193074	0.041000788	reject	do not reject
Competition policy	0.245129733	0.161063594	1.521943766	0.225382149	-0.267446987	0.757706453	-0.267446987	0.757706453	do not reject	do not reject
Banking reform and i/r liberalisation	0.206751284	0.138582232	1.491903258	0.232536377	-0.234279643	0.64778221	-0.234279643	0.64778221	do not reject	do not reject
Legal basis	0.147949143	0.049993173	2.959386921	0.059573313	-0.011151596	0.307049881	-0.011151596	0.307049881	reject	reject

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