

FINANCIAL SYSTEMS IN TRANSITION: COULD SMALL ACTUALLY BE BEAUTIFUL?

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INTRODUCTION

Numerous empirical studies on the determinants of growth in transition economies (for example, De Melo, Denizer, and Gelb [1996]; Havrylyshyn [2001]; Havrylyshyn, Izvorkski, and van Rooden [1998]; Havrylyshyn and van Rooden [2000]; and Berg et al. [1999]) aim at explaining the major differences in growth performance among these countries. The standard question, by now, is to ask what are the relative roles of initial conditions, policies, and institutions? No real consensus has emerged, at least partially because such, in principle, alternative explanations are, in practice, intertwined and endogenous. Most researchers converge towards a view that, while initial conditions dominate as the explanation during early transition years, over time policies become more important, though not always compensating for adverse initial conditions. Partially reflecting recent growth discussions [Easterly, 2001; de Soto, 2000], the role—positive or not—of institutions is now unanimously emphasized. At the same time, it is admitted that institutional development itself can not be easily measured or explained, making using it as an explanatory variable somewhat problematic. One does not like using a key explanatory variable that cannot itself be explained.

One standard recommendation for transition and developing economies is that they enhance the development of financial markets. Kenneth Rogoff, the Economic Councillor and Director of Research Department of the International Monetary Fund (IMF) writes of probably the most successful economy of recent times that “to continue such stellar economic performance...China will eventually require a world-class capital market” [Rogoff, 2003]. The relationship between financial markets and economic growth has been studied for the cases of developing economies, but it has been largely ignored in the cases of transition economies, perhaps because of the inevitable lack of longer time-series for analysis. There has been debate on the sequencing of financial liberalization (starting with McKinnon [1991]) and also some discussion on

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the relative merits of different financial systems, often dubbed the Continental (or bank-based) and the Anglo-American (or the markets-based) models. It has not been debated, though, whether countries should aim at one or another of two possible wider goals. One goal is to develop a set of as meaningfully large financial markets as possible. The second is to concentrate on improving the efficiency of any markets that one may have at a given time, whether they exist by design or by default. Although these two goals may seem to be two goods both of which one should have, in practice they may, to a degree, be alternatives. Obviously, to be efficient, markets need to exceed some minimal size, but beyond that threshold there are alternatives. This is especially so in the intriguing case—to be discussed below using the example of the three Baltic States—of a country that has the possibility of “borrowing” existing foreign markets. This example of borrowing foreign institutions is another aspect of what has been much debated in legal literature as “legal transplants”.

The distinction should be kept separate from another recently debated issue. When Stiglitz [2002] and Rogoff [2003] debate the pros and cons of capital account liberalization, the argument is easily seen in terms of controlled and market-based development strategies. Stiglitz [2002], arguing against (at least early) liberalization, proposes state controls and thus fewer markets, whereas Rogoff [2003] sees a full set of markets as an inevitable goal—at least at some development phase. In light of such debates, the view proposed here is perhaps paradoxical. We argue that the Baltic Development Path of deep integration based on early and complete liberalization will lead to fewer domestic markets. This will—at least in the peculiar Baltic circumstances—not prevent, and might well promote, relatively fast growth through speedy structural change. Also, it facilitates a macroeconomic regime that is usually viewed as being inherently contradictory and unstable.

Though there were early proposals that transition economies import institutions wholesale, such as small European countries adopting Dutch legislation, there is only one case of a (former) country adopting foreign legislation and institutions almost overnight. This is the case of the German reunification, which few would now regard a success story. More generally, the conditionality imposed by the European Union (EU) accession process could well be seen as a case of importing institutions. This process and the act of importing financial credibility by selling the domestic banking system to foreigners are usually regarded as success stories. Below, we discuss Estonia, (and also partially, at least by implication) Latvia, and Lithuania, as an extreme case of the possibility of thriving by borrowing foreign markets. One potentially important question that this discussion raises is whether the conclusions could be used for developing financial systems in different kinds of economies. Is, for instance, the Baltic experience applicable to Russia? First, however, we must discuss the more general relation between financial development and growth in transition economies.

To our knowledge, Drakos' [2003] paper on the effects on economic performance of the banking sector's structure is the only study that empirically tests the relationship between financial markets and economic growth in transition countries. No study specifically assesses the roles of the size and efficiency of domestic financial markets on economic growth in transition countries. This paper is a second modest attempt to start to rectify this gap in the literature.¹

In transition countries, the link between financial sector development and economic growth in transition economies seems to be ambiguous, at best [Krkoska, 2001; Berglöf and Roland, 1995; Berglöf and Bolton, 2002]. There does not seem to be a direct causality from financial development to growth. Most investment in transition countries has been financed by retained earnings. Foreign direct and other investment has often substituted for domestic financing. Domestic saving rates have been depressed due to declining statistical incomes and much improved availability of consumer goods, while financial intermediation has left much to be desired. Even in Central Europe, where financial sectors tend to be better developed than in Commonwealth of Independent States (CIS) countries, banks have sometimes concentrated on financing the chronic deficits of the public sector. The level of loans granted to the private sector remains considerably lower than the EU average. For these reasons, one might easily infer that emerging domestic financial sectors have only modestly, if at all, affected economic growth in transition countries.

This would seem to conflict with existing international experience. Over the past decade, much interest has been focused on the link between financial development and economic growth. Since the late 1980s, endogenous growth theory has suggested new theories exploring the link. Pagano [1993] explains three ways in which financial development might affect economic growth under the basic endogenous growth model. First, it can increase the productivity of investments. Second, an efficient financial sector reduces transaction costs and thus increases the share of savings channeled into productive investments. Third, financial sector development—or lack of it—can either promote or depress savings.

Empirical literature on the growth-finance nexus has also expanded much. Most empirical studies using cross-country and/or panel analysis conclude that financial development accelerates economic growth [Levine, 1997; Thiel, 2001; Wachtel, 2001]. A few time-series analyses, however, contradict this finding [Demetriades and Hussein, 1996; Arestis and Demetriades, 1997; Shan, Morris, and Sun, 2001]. Both the method and the data set used seem to affect the results. Studies that use large bodies of data from both rich and poor countries normally find a causal relationship running from financial market development to economic growth. Studies of smaller groups of relatively homogenous countries often show quite opposite results. The starting point of this paper is that these differences may be explained by the fact that most studies use the size of the financial sector as the measure of development of the sector. Size, however, cannot be the whole story. It does not necessarily capture the effect that financial sector efficiency might have on economic growth. If efficiency, not size, were to matter, a positive finance-growth relationship would only be found when the size of the financial sector is correlated with the efficiency of the sector. For data covering both high- and low-income countries, it is to be expected that high-income countries have both larger and more efficient financial sectors than low- or middle-income countries. In this case, the size of the financial sector thus correlates both with efficiency and income levels. Very small financial markets, often found in poor countries, simply cannot be efficient. If, on the other hand, one studies countries with similar income levels, the size of the sector itself tells nothing about qualitative differences among countries. Measuring size, therefore, only measures size, and any efficiency differences

are ignored. No causality running from financial development to economic growth is found and the financial sector does not seem to contribute to economic growth. As we just argued, however, this result is based on a questionable premise.

In this study, we attempt to avoid this problem by two means. We link the empirical test more closely than usually with the relevant theoretical models. Also, we use variables that measure both qualitative and quantitative financial sector development. The margin between lending and deposit interest rates measures the qualitative development in the sector. To our knowledge, this variable has not been used previously to measure the efficiency of the banking sector when studying the growth-finance nexus, but it is closely linked to the theoretical model by Blackburn and Hung [1998]. They identify a two-way causal relationship between growth and financial development. In their model, the lack of a financial sector means that every investor must individually monitor projects, so that the costs of monitoring are excessive. With a well-developed financial sector, monitoring tasks are delegated to intermediaries. Transaction costs are reduced and more savings can be allotted to investments that produce new technology. Ultimately, this promotes economic growth. Blackburn and Hung [1998] also show how a country might become trapped in a vicious cycle of sluggish economic growth and weak financial development. This situation occurs when the initial level of technical development in the country is very poor and the expected flow of new technology remains low. Monitoring costs remain so high that financial intermediation is never organized. As a result, transaction costs remain high and economic growth remains low.

Following the earlier studies, our second variable is linked to the size of the financial sector. We measure the quantitative development by the amount of bank credit allocated to the private sector as a share of the production in the private sector. We analyze the finance-growth nexus using a fixed-effects panel model and unbalanced panel data from 25 transition countries during 1993-2001. Our findings support the view that the presence of an efficient banking sector accelerates economic growth in transition economies. Moreover, the interest rate margin is significantly and negatively related to economic growth. This finding parallels theories suggesting that greater efficiency in the banking sector accelerates economic growth. Indeed, as banking sector reforms and the interest rate margin are negatively correlated, it has significant policy implications.² Countries with evolved banking sectors have smaller interest margins and higher economic growth than countries struggling with banking sector reform.

The relationship between the amount of credit to the private sector (the second variable) and economic growth is less clear. Our results indicate that when lagged one year, a higher amount of credit is negatively linked to GDP growth. The relationship between the current amount of credit and economic growth is not statistically significant, however. This outcome contradicts the general literature, but is in line with financial market development in transition countries. A couple characteristics of transition economies should be noted. First, banking crises rocked the financial sectors of many countries during the first decade of transition. Thus, large amounts of credit could have led to significant drops in GDP growth. Second, our findings probably reflect the soft budget constraints still prevalent in many transition countries. Their existence may have encouraged private sector actors to make counterproductive investments.

Given this, it is clear that a large banking sector in itself does not necessarily promote high economic growth. Overall, we can argue that the size of the financial sector is not a good variable to measure the development of effectiveness in the sector in transition countries.

The lack of comparable information on equity and debt markets means that they cannot be analyzed here. Since they have yet to become significant channels for financing in transition countries, however, the overall picture of the relation between the financial sector and economic growth in transition countries should not be seriously biased by their absence.

The rest of the paper is organized as follows. Section 2 presents the data used in this study, while section 3 summarizes the empirical results. Section 4 examines the empirical case of Estonia, which would seem to support our results, even in a somewhat extreme form. Section 5 asks what our results might mean for further reform in Russia, a country in which the small size of the financial system is widely seen as a major problem. Section 6 concludes.

DATA

We analyze the link between efficiency and size of the banking sector and economic growth using panel data for 25 transition countries during the period 1993-2001 (see Appendix 1 for the list of countries). The short time period is unfortunate, but inevitable. We measure economic development in terms of annual real GDP growth. As noted, development of the financial sector is difficult to measure, but we attempt to get beyond earlier studies that only measure development with a variable for size of the financial sector. Size does not necessarily reflect efficiency, so the growth of the financial sector may not indicate development.

We look at both qualitative and quantitative development of the financial sector. To measure the qualitative effectiveness of the sector, we use the interest rate margin (*INT*). *INT* measures the difference between deposit and lending rates in the banking market. The margin is likely a good estimator for efficiency in the banking sector as it describes transaction costs within the sector. If the margin declines due to lower transaction costs, the share of savings going to investments increases. As growth is positively linked to investment, a decrease in transaction costs should accelerate economic growth. This variable is closely linked to the theoretical model of Blackburn and Hung [1998]. The interest rate margin may in some cases also reflect an improvement in the quality of borrowers in the economy. As those improvements are often linked to favorable economic development, however, we attempt to eliminate the problem with control variables for economic growth in the regression. We use interest rate margins from the European Bank for Reconstruction and Development (EBRD) Transition Reports.³

Our second variable, *CREDIT*, is similar to the variables that have been used in earlier studies. *CREDIT* measures the size of the banking sector by dividing the banks' claims on the private sector by the production of the private sector. The data come from the IMF's International Financial Statistics. Many earlier studies have used the amount of credit to the private sector as a share of GDP as a measure for the size of the financial sector. Because this study deals with transition countries, however,

the small share of the private sector could restrict the amount of the credit to the private sector as a share of GDP. Despite the drawbacks of *CREDIT* discussed above, it still appears a superior option to the pure ratio of broad money to GDP used in some studies because it excludes credits by development banks and loans to the government and public enterprises. *CREDIT* also enables us to compare the results with previous studies.

We use a number of control variables to control for other factors that influence economic growth. The reform index (*RI*) consists of five indices published by the EBRD. These indices measure large-scale and small-scale privatization, price liberalization, foreign exchange (forex) and trade liberalization, and competition policy. For each country, we use a simple average of these indices for each year. The bigger the index is for a country, the more advanced it is in regard to the reforms in the five areas. Due to the nature of the reforms, their effects on the economy can be seen with a lag of one or two years. We use a one-year-lagged reform index in this study. Inflation (*INF*) is measured by using the end-of-period consumer price index. A number of studies have found significant effects of inflation and reforms on economic growth in transition countries [De Melo, Denizer, and Gelb, 1996; Havrylyshyn, Izvorkski, and van Rooden, 1998; Berg et al., 1999; Grogan and Moers, 2001].

In addition to macroeconomic variables and variables representing structural reforms, the initial conditions at the beginning of transition also determine later economic development [De Melo, Denizer, and Gelb, 1996; Havrylyshyn, Izvorkski, and van Rooden, 1998; Havrylyshyn and van Rooden, 2000]. Here, however, we leave out initial conditions as control variables. In a fixed-effects model, the initial conditions should be contained in the individual dummies. Moreover, our research period begins in 1993, when the effects of initial conditions were already, to a degree, at least waning. Table 1 provides a summary statistics of the variables.

TABLE 1
Summary Statistics 1992-2001

Variable	Period	Mean	Median	Max.	Min.	Std. Dev.	Obs.
<i>INT</i> , %	1992-2001	32.29	10.8	1898.4	-15	143.40	206
<i>INT</i> , ^a %	1992-2001	15.22	10.4	77.9	-0.3	13.46	190
<i>CREDIT</i> , %	1992-2001	37.05	25.87	506.87	0.57	45.31	198
<i>RI</i>	1992-2000	2.76	3	3.8	1	0.72	225
<i>INF</i> , %	1992-2001	441.8	19.8	10896	-7.6	1432.1	250
Real GDP growth, %	1993-2001	0.9	3.3	17.6	-31.2	7.7	225

a. Sixteen outliers have been removed from the data (Bulgaria 1996, banking crisis; Croatia and FYR Macedonia 1992, profound instability in the area; Azerbaijan 1992-1994; Russia 1995-1996; Tajikistan 1995-1998; Turkmenistan 1992-1995; and Ukraine 1992, probable disturbances in the data).

ESTIMATION RESULTS

To analyze the finance-growth nexus, we use a fixed-effects panel model. This choice is reasonable, as our data consists of almost the entire population of transition economies. Wachtel [2001] criticizes the use of a country fixed-effects model to determine causality between financial sector development and economic growth. In his view, fixed effects dominate the equation, since the differences in the level of the

financial sectors are larger among countries than over time. This is not normally the case in transition economies, however. Banking sectors developed quickly and the level of financial development changes substantially over time. We thus estimate the following regression:

$$(1) \quad GROWTH_{i,t} = \beta_{0,i} + \beta_1 FINANCE + \beta_2 [CONDITIONINGSET] + u_{i,t},$$

where the dependent variable, *GROWTH*, equals real GDP growth, $\beta_{0,i}$ is the individual dummy for each country (constant in time), *FINANCE* equals either *INT* or *CREDIT* and **CONDITIONINGSET** represents a vector of conditioning information that controls for other factors associated with economic growth. The error term is $u_{i,t}$.

TABLE 2
Link between the Financial Sector and Growth:
Fixed-Effects Panel Regressions

Regressors	(1)	(2)	(3)	restricted sample (4)
RI ₋₁	1.554 (2.160)	2.453 (1.882)	5.222*** (1.887)	-1.840 (1.256)
INF	-0.001*** (0.000)	-0.001** (0.000)	-0.001* (0.000)	-0.006*** (0.001)
INF ₋₁	-0.002*** (0.000)	-0.002*** (0.000)	-0.001 (0.001)	-0.002*** (0.000)
INT	-0.062*** (0.011)	-0.052*** (0.014)		-0.212*** (0.029)
INT ₋₁	-0.025** (0.010)	-0.005*** (0.001)		-0.054 (0.037)
CREDIT	5.876* (3.328)		1.313 (5.300)	
CREDIT ₋₁	-2.190 (2.709)		-2.991** (1.409)	
Number of Countries	22	25	22	25
Number of Observations	154	180	176	165
R ²	0.56	0.56	0.47	0.63
WALD 1	5,310***	490***	100.6***	2,336***
AR(1)	1.733	2.470**	0.992	1.473

Standard deviations in parentheses.

* indicates significance at the 10 percent level, ** at the 5 percent level, and *** at the 1 percent level.

Results from the panel estimations are presented in Table 2. Note that a shrinking interest rate margin (measure of efficiency of the financial sector) promotes economic growth. In contrast to many earlier studies, the amount of credit does not seem to accelerate economic growth. Among the control variables, the reform index seems to have the expected positive sign in three out of four regressions and the coefficient is significant only in one case. This result is somewhat different from most earlier results and seems to be due to our data set. Our data set is constrained in the first half of the 1990s to include only the Central and Eastern Europe (CEE) and Baltic countries, as we do not have financial data for many CIS countries for those years. In addition, *INT* might catch a part of the effect of the reforms on economic growth. As expected, inflation affects GDP growth negatively. Following the results of the earlier studies, inflation is significantly related to growth.

In the first regression, we have both variables for the financial sector with their current and lagged values. As expected, both the current and the lagged interest rate margins are negatively and significantly associated with growth. The results do not change significantly when the credit variable is dropped in the second regression. The absolute values of the coefficients of *INT* get smaller but, according to our tests, this is due to a larger sample of countries available in the second regression. We test the significance of the interest rate margin by leaving out several outliers (regression 4). Also in this case, the margin is negatively linked with economic growth. These results are in line with theory presented in Blackburn and Hung [1998], that is, an efficient banking sector decreases transaction costs and the margin between lending and deposit rates. The share of savings allocated to investments increases and, according to the endogenous growth theory, leads to higher economic growth.

The amount of credit allocated to the private sector is insignificantly associated with economic growth. In stark contrast to earlier studies, the lagged value of *CREDIT* has a negative coefficient. In fact, our results are quite in line with our earlier thoughts about using the size of the financial sector as a measure of financial development. In transition countries, the size of the financial sector is not an indicator of the quality of the sector. For example, soft budget constraints are prevalent in many transition countries and lending to enterprises applying soft budget constraints may have resulted in counterproductive investments and financial losses. According to Mitchell [2002], banks may even make the situation worse by keeping such loans on their balance sheets. As a result, growth in credit has not been profitable. Another phenomenon linked to the negative coefficient may be a number of banking crises that transition countries experienced in the 1990s. Unsustainable credit growth precipitated banking crises that hurt transition economies [Tang, Zoli, and Klytchnikova, 2000]. Thus, the size of the sector does not correlate with the qualitative development of the financial sector in transition countries.

We checked the robustness of our results with additional control variables in the regressions. The growth rate in OECD countries has a positive and significant impact on growth in transition countries. Including the OECD growth rate into the model does not affect the coefficient or significance of *INT* and *CREDIT*. None of the other control variables—government expenditure as a percentage of GDP, share of exports as a percentage of GDP, gross domestic investments as a percentage of GDP—has any significant effect on *INT* or *CREDIT*.

We checked the causality between financial sector development and GDP by using a Granger causality test. According to those results, causality runs from financial sector development to GDP growth regardless of whether we are using interest rate margin or the amount of credit to the private sector as a measure for financial development. In addition, the causality seems to be working both ways as interest rate margin and the amount of credit are affected by GDP growth, although the coefficients in this direction are relatively small. Overall, this two-way causality fits with the theoretical model of Blackburn and Hung [1998].

AN EMPIRICAL CASE: ESTONIA

The previous section argued that it is not the size, but the efficiency, of the financial system that contributes to economic growth. Though new, these results are theoretically robust and also—at least on second thought—in line with everyday thinking. Nevertheless, empirical economic research quite often produces results that, while in line with some theoretical framework and also intrinsically believable, would, for instance, be a seriously faulty guideline for policy reform. It is always advisable, therefore, to perform a simple reality check: can we tell a credible real-life story that corroborates our findings? The story we choose here is that of Estonia, the smallest of the three Baltic States now entering both NATO and the EU.⁴

On the political economy level, Estonia has succeeded in escaping from the USSR to the Euro-Atlantic unions in just more than ten years. Economically, it has grown by an average annual rate of 2.9 percent in 1993-2002, in spite of having to change not only its economic and political system, but also its production structure and trade orientation—all the while building an independent state. In 1991, at least 95 percent of its export trade was with the USSR. By the late 1990s, this share was down to less than 20 percent and by 2002 the share had shrunk to 3 percent. Growth in 1997-2002 averaged 5.3 percent annually and is widely expected to continue by 5-6 percent annually. Estonia was also able to close its privatization office in late 2001: almost everything had been privatized. Crucially for our discussion, the country has been able to combine, since the summer of 1992, a fixed (and unchanged) exchange rate, total and fast financial liberalization before appropriate supervision was in place, and very large current account deficits, usually fluctuating between 5 and 12 percent of GDP. This should be an impossible economic triad, but Estonia (as well as Latvia and Lithuania) is an important exception to that rule. This has to be explained, and the explanation fits well with our analysis above.

One has to start with the history to understand the choices Estonians made in 1989-92. The Baltic countries never joined the USSR willingly, they were annexed. As soon as the opportunity emerged, they aimed at restoring their independence. As the prevailing expectations of Russian developments were gloomy, and given the political uncertainties created by the large non-Estonian resident population, it was estimated that independence could only be safeguarded by distancing oneself as fast from the post-Soviet space as possible. This could only be done by rapid and deep integration with Northern-Western Europe. In spite of their celebrated patriotism, which was defensive in character, Estonians consequently never focused on establishing a full-fledged national economy with a complete set of markets. Their defense against an uncertain future was not to develop a full range of institutions, but rather to borrow the appropriate institutions, which could be found ready-made in geographical and cultural proximity in Northern-Western Europe.⁵ The goal was, fundamentally, to become a region inside a wider geographical entity. Furthermore, it was felt that the small size of the country would make developing a full set of markets impracticable. Indeed, as a consequence of borrowing and deep integration, Estonia has a broad set of institutions in use, but few genuinely Estonian institutions.

Becoming a region rather than a full-fledged national economy implied that, like most regions in most countries, Estonia quickly abolished practically all barriers of movement of factors of production, which included the liberalization of both the current and the capital account. Liberalization took just a couple of years and was one of the most complete in the world. Neither did Estonia develop an independent, "national" set of property rights. Most important property was sold to foreign strategic investors at prices that did not maximize fiscal revenue. Instead, more emphasis was put on investment plans, access to markets, and inflow of managerial skills. After a couple visible banking crises, the banking and other financial industries were sold to foreign owners (mostly Swedish but also Finnish).

Estonia did not develop large financial markets. In fact, equity markets are moribund, and the stock exchange has been taken over by a foreign strategic partner. The existing public debt, which accounts for about 5 percent of GDP, is owned by development banks and is not marketable; therefore, there are no markets for government debt. Estonia inherited zero Soviet debt and has followed highly prudent fiscal policies. A market for the Estonian kroon exists in principle, but few potential speculators would have even an investment limit for such a small currency of a highly successful country. Sunk entry costs would be meaningful, and thus a barrier to speculation. Also, there is no interbank market, as free entry of Estonian banks to deutsche mark markets (to which the kroon was tied before the euro) was legislated early on. Few speculators would ever have placed their monies with Estonian banks, and the banking crises experienced proved them right. After macroeconomic and institutional stabilization and as banks have been sold to foreigners, Estonian banks are secure institutions, but interest rates are also low.

In current macroeconomic vocabulary, Estonia has been successful because fundamentals have been sound and policies credible. To put it otherwise and perhaps somewhat provocatively, Estonia (and Latvia and Lithuania) has succeeded in combining the three incompatibles—fixed exchange rates, full liberalization, and large current account deficits—because it has abolished financial markets. There is very little room for speculation as there are hardly any assets that a speculator could use. This is partially due to design, as explained above, but it is also partially by default (for instance, the banking crises were hardly planned). In fact, in 1997 Estonia seemed to be in danger of entering a more normal transition economy path. There was the beginning of an asset bubble, but the authorities and finally the Russian crisis of 1998 succeeded in preventing its growth.

The small size of the domestic financial market has not prevented the growth, opening up, and modernization of the economy. To the contrary, highly suitable conditions have been created for foreign direct and other investment. Most foreign investment was never directly privatization-related, as the method chosen did not maximize fiscal revenue, but privatization to foreigners did create a long-term bond between Estonian entities and foreign owners. This is now visible in the rapid growth of "other investment" in the capital account, which is basically bank credit, more often extended by foreign owners to their Estonian entities. Though this is recorded as short-term capital in statistics, there is really little reason to think that such investment would be any less volatile than foreign direct investment.

Estonian financial markets are small, but are they efficient? Obviously, the very small Tallinn stock exchange is not technically efficient, but people have access to other, efficient markets (aided by computer and Internet access). The foreign-owned banking sector is efficient, and has brought the interest rate margin down from 8.7 percentage points in 1994 to 2.1 percentage points in 2000.

Like other development paths, this one is not without its risks. Southern Italy took a somewhat similar path almost one and a half centuries ago. For reasons still not quite understood, the problem of the *mezzogiorno* has remained ever since.⁶ Germany took a similar path with re-unification, but the problem of the Eastern Länder was created immediately, as pay rises in the East failed to take any account of productivity differences.⁷ Obviously, regions do not really face a balance of payments constraint, but they do have a competitiveness constraint. As long as Estonia still has a sovereign currency, speculation remains possible. Lack of markets abolishes the grounds for some kinds of speculation, but the classical case of domestic exporters not repatriating export revenue always remains possible. Also, lacking the possibility of very large inward transfers, regions have a fiscal constraint and they do face the possibility of a two-tier financial system. In transition economies as elsewhere, small- and medium-sized companies perceive a financing constraint [Klapper, Sarria-Allende, and Sulla, 2002]. Foreign-owned banks may well be particularly apt to cream-skimming and be passive in serving the needs of poorer households and small upstart companies, especially away from capital cities. The possible damage to the domestic savings ratio may not be fatal, if foreign savings are indeed available, but the risk of insufficient small enterprise finance may be more serious. Opinion diverges on whether this is a true problem in the Baltic countries. Furthermore, foreign-owned banks, if raising their finance from abroad, may well end up having currency mismatches that are difficult to manage. This proved a major problem in Argentina. Finally, as long as, say, pension funds have formal or informal constraints on their choice of portfolio, undersupply of domestic assets may be a major problem. In countries like the Baltics, however, such constraints should be difficult to justify.

RUSSIA AND THE BALTIC PATH

We can characterize a Baltic Development Path thus. It is based on such deep integration that a country does not aim at developing a full set of markets and institutions, but instead creates, by full liberalization, access to markets and institutions available in geographical proximity. In this way a country does not so much create institutions as borrow them. Obviously, this path was not available to all transition economies. This may have been the case for a number of reasons, including nationalist thinking, misplaced advice, and a lack of suitable neighbors to join. It seems inconceivable, therefore, that a country like Russia would engage in deep integration. Some aspects of it, like the adoption of a currency board, have been proposed especially in crisis situations, but with scant prospects of political acceptability. Judging the extreme case of the Baltic Development Path as being unavailable to Russia, we may still ask whether, in light of the discussion above, Russia should aim at a large or an efficient financial system. Or is Russia still in a phase in which no choice between these goals

is available, as the threshold size of potentially efficient markets has not yet been passed?

Russia's market economy has a number of specific characteristics [Komulainen et al., 2003]. The ownership of key companies is largely concentrated in a small number of multibranch conglomerates dominated by the so-called oligarchs. In 2000, government-controlled enterprises (mainly gas and electricity), accounted for 43 percent of total sales of the 64 largest Russian companies, with combined sales of about 42 percent of the Russian GDP [Barnard and Thomsen, 2002]. Eighty-five percent of private sales were by enterprises controlled by only eight conglomerates, all based in the primary commodities sector. As one would expect in such an oligarchic society, economic and political decision making remain closely connected, especially in the regions. Enterprise success is often more dependent on building relational capital with the authorities than on investing in efficiency [Gaddy and Ickes, 2002]. Finance is reallocated inside the conglomerates, perhaps even more so after the 1998 crisis than before it [Perotti and Gelfer, 2002], but that tends to constrain even further the availability of finance for non-oligarchic companies. There is little reason to think that financial reallocation inside conglomerates would be as rational as that intermediated by efficient markets.

Structurally, the Russian economy remains dependent on oil and other raw material production [Rautava, 2002]. Most initial GDP growth since 1998 was in the energy sector, including related transport and trading activities. Though consumption growth has accounted for about two-thirds of GDP growth since 2000, most investment growth has still been in the oils and metals sectors. Elsewhere, investment has stagnated or even declined. Exports, excluding oil and metals, have not only remained very low but have actually declined.

This connects with an underdeveloped financial system in which there is relatively little monetization. In 2001, the M2/GDP ratio was 24 percent in Russia, 71 percent in the Czech Republic and 43 percent in Poland. There is no system for channeling domestic and foreign savings into investment, no risk-management instruments, and few ways for new private enterprises to raise capital. The existing banking sector is inefficient. Although the margin between lending and deposit rates has dropped significantly since 1995, it was still 11 percentage points in 2001. This means that bank credits are expensive. As a result, nearly all investment is financed from retained earnings. Only 3 to 4 percent of financing comes in the form of bank loans, and almost nothing from initial public offerings. The ratio of bonds outstanding to GDP was just 3 percent in 2001, compared with 15 percent in the Czech Republic and 20 percent in Poland. Dependence on retained earnings is typical of transition economies [Krkoska, 2002], but the Russian case is extreme. Higher growth requires more investment, and investment requires financial intermediation.⁸ Recently, the Russian investment ratio has fluctuated around 17 percent of GDP. High-growth scenarios assume a ratio of 25 to 30 percent [Komulainen et al., 2003]. The constraint is not in low savings. Actually, though saving-investment statistics cannot be reliable in a dollarized, largely cash-based economy, Russia has been a high-savings economy with a savings ratio of 25 to 30 percent of GDP. Of this, roughly 10 percent of GDP has been channeled abroad.

Most telling, perhaps, is the relative scarcity of small- and medium-sized enterprises (SMEs). A major World Bank [2002a] study concludes that SMEs must reach a

threshold of 40 percent of total employment to become the engine of national economic growth. In Russia, this share has stagnated at 20 percent or less. The expansion of new enterprises would increase if bank loans were available.⁹ Given this situation, it is indeed strange that until very recently a strong block of Russian opinion held that post-1999 growth proved that Russia does not really need financial intermediation, because investment financed from retained earnings or transfers inside major multi-industry conglomerates was sufficient. Of course, this view neatly ignores the corollary that most of Russia's industrial investment is either in, or adjunct to, the energy sector, which tends, therefore, to freeze Russia's traditional production structure.

The Russian banking sector remains small and affords little potential for financial intermediation. Total sector assets amount to just \$103 billion, or about 35 percent of GDP. Corresponding figures are over 100 percent for the Czech Republic, over 70 percent for Estonia, and about 60 percent for Poland. Lending to the private sector is also modest: about 15 percent of GDP. Moreover, the short maturities of most bank liabilities limit credit expansion.

One reason why Russian banks offer little credit is the maturity mismatch between their liabilities and potential assets. With the exception of Sberbank, banks have liabilities of very short maturities, often corporate currency savings with a maturity of just a month or so. This may change slowly, as deposit insurance is gradually widened, but it emphasizes the need to develop new financial instruments—new markets—so that even banks could engage in meaningful amounts of financial intermediation.

Thus, while other economic reforms have moved ahead recently, there is a conspicuous absence of banking reform. Russian banks can still use accounting standards that do not accurately portray asset quality. Because of low minimum capital requirements, Russia still has over 1,300 banks, which hinders efficient banking supervision. In addition, the Central Bank of Russia (CBR) operates both as banking supervisor and owner of major banks. For example, Sberbank holds almost 70 percent of household deposits, is majority owned by the CBR, and deposits are state guaranteed. There is little foreign investment in the sector.

Most observers generally agree on the list of needed reforms,¹⁰ including the implementation of higher minimum capital requirements, the use of internationally accepted accounting standards and practices, improvements in banking supervision, clarification of the role of state banks, and introduction of a guarantee for retail deposits. Opinions differ on the possible speed of progress. The CBR has embraced banking reform, while emphasizing that excessive speed might endanger financial stability. More stringent banking supervision, international accounting standards, and a higher minimum capital requirement should be in place by 2004, as well as a deposit guarantee by 2005. Meanwhile, markets will closely follow the handling of state banks' ownership.

Russian banks have recently begun to show improved performance. Total banking assets, aggregate bank capital, and lending to the private sector now exceed pre-crisis levels. At the end of the third quarter of 2002, household bank deposits were in real terms a third bigger than a year earlier. Enterprise deposits declined, however, possibly reflecting declining enterprise profitability. At the same time, the stock of credit extended to households increased by 40 percent, and enterprise credits by a quarter. As the number of Russian banks remains excessive, and given the dangers of fast

credit expansion, the worry of the CBR on deficient supervision is fully understandable.

Russian equity and bond markets have also shown clear signs of recovery. Between January 2001 and May 2002, equity markets rose 180 percent (then declined somewhat). During the post-crisis period (specifically, since December 2000), 14 large enterprises and banks, the city of Moscow, and Yamalo-Nenetsk region successfully issued new international bonds [Troika Dialog, 2002]. Although these developments do not represent large-scale capital inflows, they demonstrate improvements in investor sentiment and greater functionality of Russian financial markets.

Financial markets not only enable enterprises to acquire capital, they also create possibilities to diversify ownership of Russian enterprises. This is particularly important since many Russian enterprises are still owned by their managers and employees, that is, there is no participation of outside capital or know-how. Access to financial markets is no longer limited to the very largest raw materials and energy companies. The next echelon of enterprises can now get access, as shown by the NYSE listing of a foodstuff enterprise, Wimm Bill Dann, in February 2002, which resulted in 23 percent of the enterprise being sold to foreign investors. This represents a continuation of a trend of listing and selling partial stakes in Russian enterprises to outside investors that began in 1996-97, but was interrupted by the 1998 crisis.

In the end, growth is generated by enterprises, where corporate control plays a key role. How keen Russian managers and owners really are to opening up enterprise ownership remains to be seen. Russia has experienced several instances of abuse of minority shareholder rights. If continued, such practices will threaten both efficient corporate control and development of financial markets. Here, the Russian authorities have a role in strengthening laws, supervision, and the court system. As Johnson, MacMillan, and Woodruff [2002] conclude from a survey covering a number of transition countries, weak property rights discourage firms from reinvesting their profits even when bank credits are available.

Given the political fact that the Baltic Development Path is not open to Russia, the conclusion must be that Russia still badly needs to increase the number and size of its financial markets. It is not yet beyond the threshold. New markets are needed for creating an environment for bank-based financial intermediation, but also for giving firms a better possibility of market-based financing. Such need is particularly felt by those SMEs that cannot realistically raise finance abroad. Additional markets are also needed for additional monetary policy instruments, in particular for sterilization of currency inflows that will tend to be unstable given Russia's export structure and expected increase of inward capital flows from very low current levels. Finally, additional markets are needed for underpinning necessary structural reform, ranging from pension reform to mortgage markets and development of insurance. But at the same time and perhaps even more so, there is a sore need to improve banking and financial supervision, which together with improved property rights will be keys to enhancing the efficiency of financial intermediation.

CONCLUSIONS

This paper examined the link between the banking sector and real GDP growth in transition economies. We used a fixed-effects panel model and data from 25 transition countries for the period 1993-2000. We used two variables to measure the level of financial sector development. As the size of the financial sector in itself is not necessarily a valid measure for financial sector development, we selected the interest rate margin, which is closely linked to the theoretical models.

As expected, the interest rate margin is negatively and significantly associated with economic growth. This result is consistent with theoretical models that find banking sector efficiency important for economic growth. The outcome is the same for both CEE and CIS countries. This has important policy implications: the interest rate margin tends to shrink as reform in the financial sector advances.

Our second variable, the amount of bank credit allocated to the private sector, apparently does not speed up economic growth in transition countries. Its lagged value is even negatively related to economic growth and the causality between the growth of credit and real GDP growth is unclear. This result contradicts many earlier results and probably reflects the characteristics typical to transition economies, where the growth of domestic credit was often unsustainable.

The results suggest two reasons that financial sector efficiency should not be measured by sector size in the case of transition economies. First, the soft budget constraints prevalent in many transition countries and credit to enterprises applying soft budget constraints may lead to considerable losses in the economy when investments turn out to be counterproductive. Second, the negative link between the lagged amount of credit and growth may reflect banking crises that many transition economies experienced during the research period. The increase in credit imposed considerable costs in the wake of the crises in many banking sectors. Thus, the amount of credit is probably not a valid measure of financial sector development in transition countries.

Apparently, when the financial sector or the business environment is not ready for growth in the amount of finance, growth in the amount of finance may be unsustainable and do nothing to accelerate economic growth. In the worst case, such growth in the amount of available finance may precipitate financial crises and harm economic development.

Nevertheless, our results are in line with the theoretical models that indicate that qualitative financial sector development accelerates economic growth. It would be valuable, though, to test empirically the channels through which financial development affects economic growth. Under the theoretical models we presented, these channels might be growth in investments, productivity improvement, or an increase in the savings rate. It would also be useful to clarify the relationship between foreign direct investment and domestic debt. According to Krkoska [2001], foreign direct investment in transition countries supplements inadequate domestic resources in financing ownership change and capital formation. One might ask if this is an efficient means of finance or whether an efficient domestic financial market might after all be more conducive to economic growth.

Another useful extension of this study would be to include the equity markets into the model. Although the equity and debt markets in transition economies are far from developed and their role in financing limited, it would be interesting to clarify their role in economic development. The number of countries might also be increased. As mentioned above, the interest rate margin has not been used as a variable for financial development, so it might be interesting to see results for a larger group of countries. By doing so, we would supplement earlier papers that have largely ignored the ways in which qualitative development of the financial sector influences economic growth. From there, policy recommendations could be extended beyond transition countries.

The Estonian case may seem a small and irrelevant one. However, to us it seems to function as a useful reality check. Clearly, there are circumstances where not only is small beautiful, but the lack of markets may permit making things that would otherwise be (at least almost) impossible. One has, however, to be very careful in making generalizations and, as the late Chinese Prime Minister once said, the time may never come for us mortals to make final judgments.

APPENDIX 1. LIST OF THE COUNTRIES

Albania	Georgia	Romania
Armenia	Hungary	Russia
Azerbaijan	Kazakhstan	Slovak Rep
Belarus	Kyrgyzstan	Slovenia
Bulgaria	Latvia	Tajikistan*
Croatia	Lithuania	Turkmenistan*
Czech Rep.	Moldova	Ukraine
Estonia	Poland	Uzbekistan*
FYR Macedonia		

*Due to a lack of data, Tajikistan, Turkmenistan, and Uzbekistan are not included in the regressions using the amount of credit.

APPENDIX 2. VARIABLES AND SOURCES

Variable	Definition	Source
Growth rate of GDP	Real GDP	EBRD Transition reports
Interest rate margin, <i>INT</i>	Margin between deposit and lending rate	EBRD Transition reports
Credit to private sector, <i>CREDIT</i>	Credit to private sector from deposit banks as a share of production of private sector (line 22d/GDP)	IFS, EBRD Transition reports

Appendix 2—Continued

Variable	Definition	Source
Reform index, <i>RI</i>	Arithmetic average of EBRD transition indices (index of price liberalization, index of forex and trade liberalization, indices of small- and large-scale privatization, index of competition policy)	EBRD Transition reports
Inflation, <i>INF</i>	Consumer price index	EBRD Transition reports
Investments	Gross domestic investment as a share of GDP	IFS
Exports	Exports as a share of GDP	IFS
Government Expenditure	Government expenditure as a share of GDP	EBRD Transition reports
Growth rate of GDP in OECD countries	Real GDP	IFS

NOTES

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1. The first is Koivu [2002], upon which this paper partially draws. The empirical section on Estonia is based on Sutela [2002], and the discussion on Russia benefits from Komulainen et al. [2003].
2. The correlation rate between the banking reform index of the European Bank for Reconstruction and Development (EBRD) and interest rate margin is -0.57 .
3. Deposit and lending rates are unavailable for identical periods for each country. The overall size of the margin, however, should not be affected significantly by lending/deposit periods. Moreover, the differences in margins between and within countries are large, so a small error in the margins should not disturb the results. The IMF has reported lending and deposit rates, but this information is not available for all transition countries. Using the IMF data where possible, the results correspond to the ones obtained with the EBRD data.
4. Actually, the discussion could easily be extended also to Latvia and Lithuania [Sutela, 2001] and very probably to a comparison between Hungary and the Czech Republic.
5. This does not necessarily mean Sweden and Finland, the closest geographical neighbors, whose welfare states were found to be beyond economic possibilities and probably faulty in their foundations. The Baltics also did not try to develop independent defense capabilities like Sweden and Finland, but aimed at becoming NATO members with a minimal amount of their own forces. It is sometimes thought in Estonia that the time for debate on what kind of a market democracy the country should become will only come after deep integration with Western Europe—naturally constrained by the choices already made.
6. Some historians argue that the old Romans had something to do with this, as the property arrangements of land were different in Northern and Southern Italy.
7. But again, some historians would point out that the river Elbe, separating Western and Eastern Germany for decades, was also the Western border of serfdom in Europe.

8. The recent growth in Russia has been based primarily on higher capacity utilization ratios, but such growth can hardly continue. The average age of equipment in industry is reaching 20 years. Capacity utilization ratios are already quite high in many industries [World Bank, 2002b].
9. A recent enterprise survey shows that, while barriers created by the public sector are the foremost hindrance to SME development in Russia, capital access also remains a major problem. See Center for Economic and Financial Research [2003].
10. For the IMF view see Barnard and Thomsen [2002] and for the Russian government view see Ministry for Economic Development and Trade of the Russian Federation [2003].

REFERENCES

- Arestis, P. and Demetriades, P.** Financial Development and Economic Growth. *Economic Journal*, May 1997, 783-99.
- Barnard, G. and Thomsen, O. M.** Financial Sector Reform in Russia: Recent Experience, Priorities, and Impact on Economic Growth and Stability. 2002. Available at www.imf.org/external/country/rus/rr/index.html.
- Berg, A., Borensztein, E., Sahay, R., and Zettelmeyer, J.** The Evolution of Output in Transition Economies: Explaining the Differences. IMF Working Paper 99/73, 1999.
- Berglöf, E. and Bolton, P.** The Great Divide and Beyond – Financial Architecture in Transition. *Journal of Economic Perspectives*, Winter 2002, 77-100.
- Berglöf, E. and Roland, G.** Bank Restructuring and Soft Budget Constraints in Financial Transition. CEPR Discussion Paper 1250, 1995.
- Blackburn, K. and Hung, V. T. Y.** A Theory of Growth, Financial Development and Trade. *Economica*, February 1998, 107-24.
- Center for Economic and Financial Research.** Monitoring the Administrative Barriers to Small Business Development in Russia: Second Round, 2003. Available at: www.cefir.org/.
- De Melo, M., Denizer, C., and Gelb, A.** From Plan to Market: Patterns of Transition. World Bank Policy Research Working Paper 1564, 1996.
- Demetriades, P. and Hussein, K. A.** Does Financial Development Cause Economic Growth? *Journal of Development Economics*, December 1996, 387-411.
- de Soto, H.** *The Mystery of Capital*. New York: Basic Books, 2000.
- Drakos, K.** Assessing the Success of Reform in Transition Banking 10 Years Later: An Interest Margins Analysis. *Journal of Policy Modeling*, April 2003, 209-317.
- Easterly, W.** *The Elusive Quest for Growth*. Cambridge, Mass.: MIT Press, 2001.
- Gaddy, C. and Ickes, B. W.** *Russia's Virtual Economy*. Washington, D.C.: Brookings Institution Press, 2002.
- Grogan, L. and Moers, L.** Growth Empirics with Institutional Measures for Transition Countries. *Economic Systems*, December 2001, 323-44.
- Havrylyshyn, O.** Recovery and Growth in Transition: A Decade of Evidence. IMF Staff Papers, vol. 48, 2001.
- Havrylyshyn, O., Izvorkski, I., and van Rooden, R.** Recovery and Growth in Transition Economies 1990-1997: A Stylized Regression Analysis. IMF Working Paper 98/141, 1998.
- Havrylyshyn, O. and van Rooden, R.** Institutions Matter in Transition, but So Do Policies. IMF Working Paper 00/70, 2000.
- Johnson, S., MacMillan, J., and Woodruff, C.** Property Rights and Finance. *American Economic Review*, December 2002, 1335-56.
- Klapper, L. F., Sarria-Allende, V., and Sulla, V.** Small- and Medium-Size Enterprise Financing in Eastern Europe. World Bank Policy Research Working Paper 2933, December 2002.
- Koivu, T.** Does Efficient Banking Sector Accelerate Economic Growth in Transition Economies? BOFIT Discussion Paper, No. 14, 2002.
- Komulainen, T., Korhonen, I., Korhonen, V., Rautava, J., and Sutela, P.** Russia: Growth Prospects and Policy Debates. BOFIT Online No. 3, 2003. Available at: www.bof.fi/bofit.
- Krkoska, L.** Foreign Direct Investment Financing of Capital Formation in Central and Eastern Europe. EBRD Working paper No. 67, 2001.
- Levine, R.** Financial Development and Economic Growth: Views and Agenda. *Journal of Economic Literature*, June 1997, 688-726.

- McKinnon, R. I.** *The Order of Economic Liberalisation*. Baltimore and London: The Johns Hopkins University Press, 1991.
- Ministry for Economic Development and Trade of the Russian Federation.** Programma Sotsialno-Ekonomicheskogo Razvitiya Rossiiskoi Federatsii na Srednesrochnuyu Perspektivu (2003-2005 gody). Proekt, 20 February 2003. Available at: www.economy.gov.ru/document.html.
- Mitchell, J.** 2001. Banks' Bad Debts: Policies, Creditor Passivity, and Soft Budget Constraints. In *Designing Financial Systems in Transition Economies*, edited by A. Meyendorff and A. V. Thakor. Cambridge, Mass.: The MIT Press, 2002.
- Pagano, M.** Financial Markets and Growth: An Overview. *European Economic Review*, April 1993, 613-22.
- Perotti, E. C. and Gelfer, S.** Financial Reallocation in Russian Groups. In *Designing Financial Systems in Transition Economies*, edited by A. Meyendorff and A. V. Thakor. Cambridge, Mass.: The MIT Press, 2002.
- Rautava, J.** The Role of Oil Prices and the Real Exchange Rate in Russia's Economy. BOFIT Discussion Paper No. 3, 2002.
- Rogoff, K.** The IMF Strikes Back. *Foreign Policy*, January/February, 2003. Available at: www.imf.org/external/np/vc/2003/021003.htm.
- Shan, J. Z., Morris, A. G., and Sun, F.** Financial Development and Economic Growth: An Egg-and-Chicken Problem? *Review of International Economics*, August 2001, 443-54.
- Stiglitz, J.** *Globalization and Its Discontents*. New York and London: W.W. Norton, 2002.
- Sutela, P.** Managing Capital Flows in Estonia, Latvia and Lithuania. *WIIW Monthly Report*, February 2001, 17-28.
- _____. Combining the Incompatibles: Fixed Exchange Rate, Liberalisation and Financial Development in Estonia. In *Alternative Monetary Regimes in Entry to EMU*, edited by U. Sepp and M. Randveer. Tallinn: Bank of Estonia, 2002.
- Tang, H., Zoli, E., and Klytchnikova, I.** Banking Crises in Transition Countries: Fiscal Costs and Related Issues. World Bank Policy Research Working Paper 2484, 2000.
- Thiel, M.** *Finance and Economic Growth—A Review of Theory and the Available Evidence*. Brussels: European Commission, 2001.
- Troika Dialog.** Corporate Bonds: Russia's New Revolution. Moscow, December 2002.
- Wachtel, P.** 2001. Growth and Finance: What Do We Know and How Do We Know It? *International Finance*, Winter 2001, 335-62.
- World Bank.** *Transition—The First Ten Years*. Washington, D.C., 2002a.
- _____. Russian Economic Report, May 2002b. Available at: www.worldbank.org/eng/group/ereports/05_02/.

