

**Institut für Höhere Studien (IHS), Wien  
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**No. 26**

**SOURCES OF FINANCING PRIVATE  
INVESTMENT IN EAST EUROPEAN  
COUNTRIES**

**Dimitri Shemetilo**

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# **Sources of Financing Private Investment in East European Countries**

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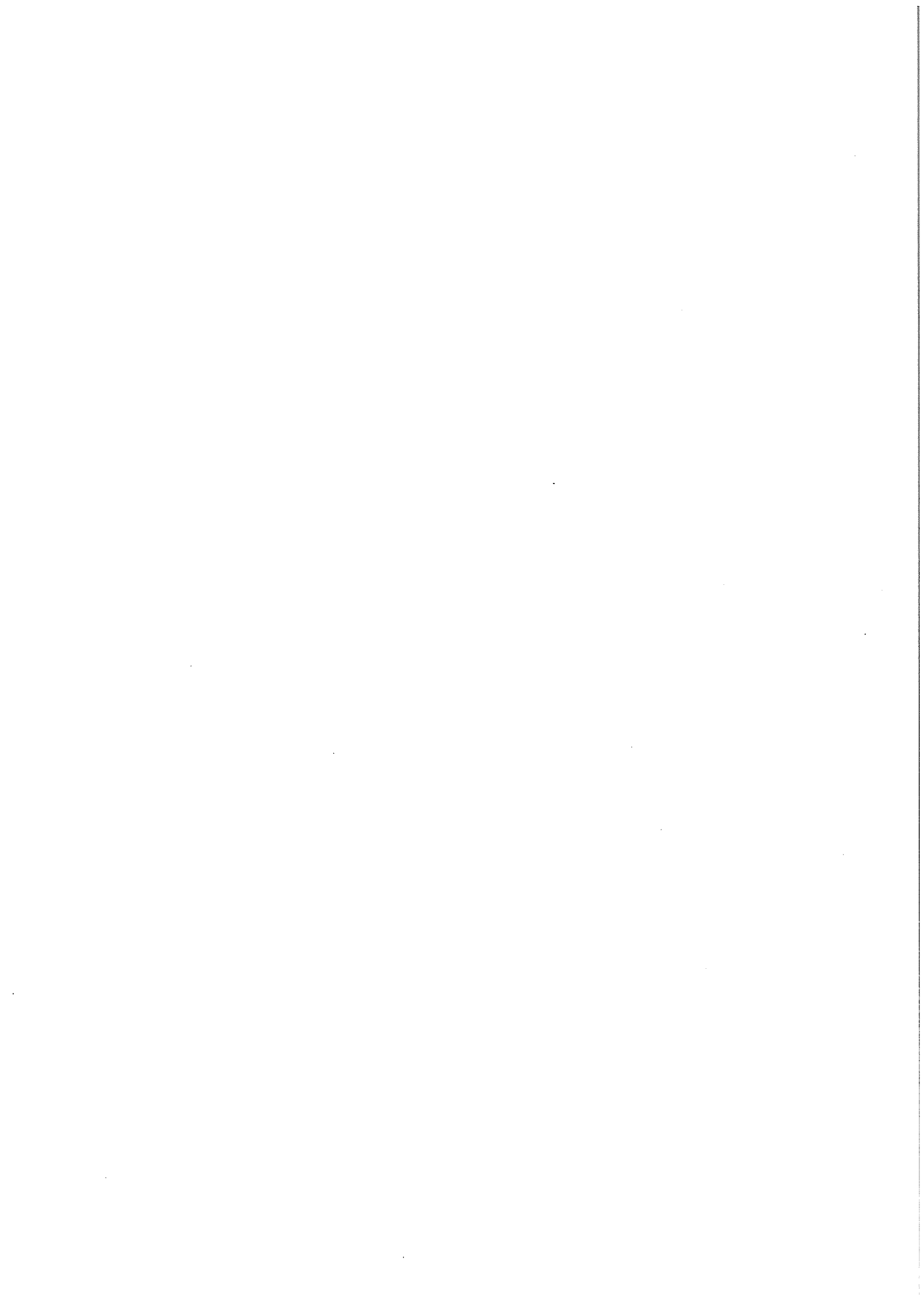
## **Abstract**

In the paper I look at the structure of financial sources of private investment in East European countries (Poland, Hungary, the Czech Republic and Slovakia).

While the savings of enterprises still represent the main source of investment capital, the relative share of this source is decreasing over time and the role of banking credit as a source of private investment is increasing in the case of the Czech Republic, Slovakia and Poland, (while in Hungary investment still rely on foreign sources and self-financing). One can conclude that the role of the banking system increases with the growing share of banking credit in private investments and consequently in these countries we can expect an increase of the banks' influence on industrial restructuring, since a growth of banking credits financing investment gives commercial banks more power to control and monitor enterprises.

## **Comments**

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## 1 Introduction

There are two schemes of the corporate governance most commonly discussed in literature: One with dispersed ownership and the second with concentrated ownership. The role of commercial banks in the second model, especially in East European countries, has been discussed in a number of papers. [Corbett, J. and Mayer, C. (1991), Dittus, P. (1993), Thorne, A. (1992)] The problem is how commercial banks could really affect the management decision making process. There are several possibilities: The first is through the monitoring of the credit issued to an enterprise. In the case of Eastern Europe we have a large amount of non-performing loans and it might also be the question when commercial banks roll over these loans and even issue new credit to the enterprises [Dittus, 1993]. This also can be stimulated by the weakly developed bankruptcy procedure.

The second possibility is through the ownership of shares. For this, banks should own the large stakes of the firms' shares or manage other legal entities, such as investment funds, which are the owners. This opportunity is dependent on the existence of a relatively well developed stock market. In Poland, there are quite few enterprises trading their shares and the control of equities by banks is limited by a level of 25 % [Drabek, 1993]. It is also possible for enterprises to organize debt equity swaps, which is partly taking place in the Czech Republic.

The third possibility is through the distribution of new credits [McKinnon, 1991]. This means that, to a large extent, the ability of commercial banks to influence the development of the economy or to provide a monitoring and screening function depends on the amount of investment credits issued by the banking system. If enterprises don't need long term credits it is doubtful that commercial banks can force them to do anything. Of course, the influence of commercial banks on the economic activity as a whole will still be very high, but if commercial banks do not provide investment credits, they will not have a real incentive to monitor enterprises in the long run. The main activity of the commercial banks will shift to short term operations.

Of course, there are a number of reasons explaining the small share of the investment credits: High political and economic risks, small return on long term investments compared with a return on short term operations, lack of the long term deposits, insufficient amount and qualification of personnel, etc.

The main sources of money for the long term credits are savings of the population. Traditionally savings of population in Eastern European countries were comparatively low compared to the savings in western countries. However, looking at the net financial position of different agents, we can find that population is a net lender and enterprises and government are mainly net borrowers. Under the monobank system all savings were located in one Saving Bank [Thorne, 1992] which was the source of cheap money for government use and investment. With the introduction of a two-tier banking system and interbank market, the first steps for the improvement of credit allocation were made. Thus use of the bank's credits for investment also reflects the use of the savings of the population.

What is the role of the banking system in the financing of new investment and what are the other financial sources of investments in Eastern European countries? If the role of banking credit was relatively insignificant before, can we expect an increase in its role now? These are the issues I am going to concentrate on in this paper.

I restrict myself to a very narrow analysis here: Looking at the structure of the financial sources of private investment, the self-financing ratio and the share of the banking credit in investments for Eastern European countries, I want to argue that one possible explanation for the weak role of the banking system in corporate governance is the low share of banking credits in investment. This can reflect both the high prices of money (high interest rates) and consequently the low ability of enterprises to get these funds or the presence of savings of enterprises which are enough for investments.

This paper is organized as follows: Section one presents a way of estimating private investment, section two analyzes the possible sources of private investment, section three deals with the difference between investment and its financing sources, section four discusses the results, and section five concludes.

## 2 Private Investment

To find out how much enterprises invest in a country, I used data from the system of national accounts (SNA) to estimate saving and investment flows<sup>1</sup>. Investment consists of two parts: private investment and public investment. I use the following definitions: gross investment is defined as gross fixed capital formation (GFCF) and change in stocks (CS).

$$\begin{aligned} \text{Gross Investment} &= \text{Gross Fixed Capital Formation} + \text{Change in Stocks} \\ &= \text{GFCF} + \text{CS} \end{aligned} \quad (1)$$

This definition includes housing and dwellings of households and other nonproductive investment. I could exclude individual spending on housing from investments by using the structure of the fixed investment. But since in former socialist countries most financing for housing was provided by centralized sources and were included in public investment, and for some countries the structure of fixed investment is not available, we exclude public investment (PuI) from gross fixed investment (GFI) and did not make an adjustment for housing.

$$\text{Private Investment} = \text{Gross Investment} - \text{Public Investment} = \text{PrI} = \text{GI} - \text{PuI} \quad (2)$$

The public investment is investment decided by the General Government.

Thus, we are looking at private investment, or investment decisions of firms and households.

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<sup>1</sup>More details on the SNA structure can be found in: Poul Høst-Madsen, *Macroeconomic Accounts, An Overview*, IMF Pamphlet Series, No.29, 1979.

### 3 Financial Sources of Private Investment

In theory, investment could be equal to gross domestic savings plus the net foreign investment. I assume that the main part of the net foreign investment is foreign direct investment (FDI). Since I cannot separate the inflow of capital by agents I only take FDI into consideration. This will increase the discrepancy but it is still appropriate for our purposes<sup>2</sup>.

As a result, I separated the financial sources of investments as follows: *self-financing* (savings of enterprises), *savings of households transferred through the financial system* (banking system) and *foreign direct investment* (FDI).

I took the data on foreign direct investment directly from the “Balance of Payment” accounts.

Self investment is assumed to be equal to enterprises’ savings. The latter are estimated as gross domestic savings (GDS), with subtracting government savings (GS) and household savings (HS).

Gross domestic savings (GDS) are defined as gross domestic product (GDP) minus total consumption (TC)<sup>3</sup>.

$$\text{GDS} = \text{GDP} - \text{TC} \quad (3)$$

Savings of enterprises are residual:

$$\text{Savings of Enterprises} = \text{GDS} - \text{GS} - \text{HS} \quad (4)$$

Relatively good information on the government savings (GS) as total revenue (TR) minus current expenditures (CE) from the consolidated government budget is available:

$$\text{Government Savings} = \text{TR} - \text{CE} \quad (5)$$

Household savings are defined here by using net financial savings of households.

$$\text{Household Savings} = \text{Net Financial Savings} \quad (6)$$

There are two more ways of channelling households’ savings into investment: buying shares and investment into noncorporate private firms. I ignore both of these factors. This should increase our errors with the developing of the stock markets and increasing the share of small enterprises in economies. In the case of Hungary savings in the form of “Other Securities” (securities of non-financial institutions) represents less than 5 % of total savings and their share is relatively constant [National Bank of Hungary, Monthly Report].

<sup>2</sup>We define discrepancy as a difference between private investment and the sum of its sources (FDI, Savings of Enterprises and using the banking credit).

<sup>3</sup>This definition includes government savings.

Thus for the calculation of investments of enterprises, “investment of households” is assumed to be zero, and therefore the investment of enterprises is equal to private investment and is a residual of the gross domestic investment and public investment.

As will be shown later, the discrepancy that appears with these assumptions is reasonable for almost all cases.

Thus main financial sources of investments are: *Savings of enterprises* (4), *foreign direct investment* (FDI), and *net borrowing from the banking system* (banking system).

$$\begin{aligned} \text{Financial Sources of Investment} &= \text{Savings of Enterprises} \\ &+ \text{FDI} + \text{Banking System} \end{aligned} \quad (7)$$

For the calculation of the households’ financial savings and net borrowing from the banking system, I used consolidated balance sheets of commercial banks. I aggregated all positions on the assets and liabilities sides for five agents: households, government, enterprises, foreign agents and others. Then the net financial position was calculated for all agents. Similar calculations were made by P. Dittus [1993].

In this approach, changes in the net financial positions of households are net financial savings of households and the net financial position of enterprises is equal to net borrowing of enterprises from domestic banks.

During estimation of changes in the net positions I also provide an adjustment for the changes of the exchange rate, since all accounting data are in national currency and thus changes in the valuation of accounts in foreign currency will give fictive capital gains and losses. The changes seem extremely important in the case of Hungary and Poland and much less important for the Czech and Slovak Republics.

## 4 Structure of Private Investment

I assume that investment is equal to financial sources available and finally I estimate investment as:

$$\text{Private Investment} = \text{Sources of the Private Investment} + \text{Discrepancy} \quad (8)$$

Using (7) and (8), I get the estimation of the discrepancy of the analysis. The resulting discrepancy (see also footnote 5) is shown in table 1.

**Table 1:**  
Discrepancy between Private Investment and Sources of Private Investment

	Discrepancy as a percent of GDP			
	1990	1991	1992	1993
<b>Czech Republic</b>	-2.21 %	-3.14 %		
<b>Slovakia</b>	-14.48 %	2.01 %		
<b>Czechoslovakia</b>	5.96 %	-0.01 %		
<b>Hungary</b>	1.63 %	0.94 %	-2.57 %	-6.49 %
<b>Poland</b>	70.43 %	5.89 %	1.02 %	-2.81 %

In graph 1 I plot the financing sources of investment as bars and investment as a solid line. Discrepancy in this case is the difference between them. Of course, as can be seen from table 1 and the graphs, the fit is not perfect, but is still acceptable taking into account the aggregated approach and simplification made to put data for different countries into a comparable format.

As we can see, the worst case is Poland in 1990. This is the result of the large unknown net position “others” in the consolidated balance sheet of commercial banks. I can make no conclusions concerning this year and therefore drop this observation. There is a large discrepancy in the case of Slovakia in 1992 and this is also due to the huge “others” position in the consolidated balance sheet. For other observations the average discrepancy is 2.21 % of GDP which is quite reasonable.

Summarizing the sources of discrepancy: **1.** Large unexplained position of “others” in the consolidated balance sheet of the banking system. **2.** Changes in the accounting system. The old accounting systems of Eastern European countries were different from Western standards and this led to an increase in missing accounting information. **3.** Changes in the exchange rate, **4.** The simplification of the analysis (skipping household’s investment and current account deficit, use of FDI as an approximation of net foreign investment).

In the case of the Czech and Slovak Republics I used data for Czechoslovakia for the years 1990 and 1992 for both of these countries.

## 5 Discussion of the Results

As mentioned above, in graph 1 I plot the structure of the financial sources of the private investment and the value of private investment as well. To make comparison simpler all results are in the same scale for all countries.

A decrease in the private investment for all countries can be observed. A more interesting observation is that the structure of the investment sources changes over time.

For all countries the share of enterprises' savings decreases and different sources, such as FDI and banking credits, play a more important role. However, in the case of Hungary enterprises do not rely on banking credit and even pay back some loans, or decrease the net financial position. The gap between the sources of the private investment and the private investment shows that there are other sources different from the ones used here. This is not surprising since we did not count households' investment. Therefore, this gap can be filled by the new private noncorporate firms organized by households and by counting corporate shares. However, this still does not change the conclusion concerning the decrease in the use of banks' credit. The same explanation is also valid for the case of Poland in 1993.

Surprisingly, the total sources of the private investment are higher than the actual investment in the case of Slovakia in 1992 and Poland in 1991. Particularly, in case of Slovakia in 1992, this means that enterprises, even those making huge financial savings, did not invest and even took additional money from the banking system which might be a consequence of the soft monetary policy and the availability of cheap investment money. One should remember that it was a period of price liberalization and enterprises showed large accounting profit since they were using old inventories. This is completely opposite to the Czech Republic, even if starting conditions were the same. In the Czech Republic in 1992, enterprises did not borrow from the banking system as a result of the tight monetary policy and even paid back some credits, these, of course, led to a decrease in investment. However, the following year, the structure of investments changed significantly and a large share of investments was covered through the use of banking credit. Nevertheless, enterprise savings still grow faster than savings of population. "In November 1993, the deposits of enterprises were only 21.1 % of total time and saving deposits, but the dynamic of the enterprise deposits growth were 8.64 compared to 1.1 for households." [Hanousek, Izak, Klokocnik (1994)]

However, at present, commercial banks play a very important role in the Czech Republic and can even replace the management in dependent companies.

Graph 2 summarizes the use of bank financing as a percentage of private investment in those countries.

On the other hand graphs 3 and 4 show the dynamics of self-financing ratios. Graph 3 reflects the share of enterprise savings in the total sources of private investment and graph 4, the share of enterprise savings in the private investment.

There is an obvious declining tendency in the use of self financing, from 90 % on average in 1990 to approximately 60 % in 1993 (graph 3). The average of the self-financing ratios compared to some other countries is given in table 2. In table 2, I present the average self-financial ratios for Hungary, Slovakia, the Czech Republic and Poland, and a some other for comparative purposes.

**Table 2:**  
Self-financing ratios

Country	Average Self Financing Ratio for Business sector	Alternative Self Financing Ratio**
Poland	1.27	0.74
Hungary	0.69	0.76
Slovakia	0.78	0.72
Czech Republic	0.80	0.78
Columbia*	0.53	
India*	0.62	
Turkey*	0.23	
United Kingdom*	0.89	
Japan*	0.7	
France*	0.56	

\* Last year is 1986

\*\* Self Financing Ratio = Savings of Enterprises/Private investment.  
Alternative Self Financing Ratio = Savings of Enterprises/Sources of investment.

Source: Honohan 1989 and author's calculations.

For other countries, the self-financing ratio is defined as “the ratio of gross sector savings to gross sector investment for each sector” [Honohan 1989].

As one can see, high self financial ratios for the business sector are typical for developed countries and Eastern European Countries are somewhere in between. This reflects the relatively well developed industrial structure.

There is a matter of interest to compare the financial sources with those for developed countries. Boms (1994) discusses the role of German banks in corporate governance and presents the data on the sources of net external funding of nonfinancial businesses for the U.S., Germany and Japan. These data support the characterization of the German system as an example of a bank-oriented system. The look on the external sources of finance tells us that banks provide about twice the funds than direct securities markets.

**Table 3:**  
The Ratio of Percent of Total Business Funds Raised through Bank Loans and Securities, 1965-89.

United States	United Kingdom	Germany	Japan	Japan
1965-69	0.96	2.27	5.4	6.5
1970-74	0.62	6.9	6.7	6.87
1975-79	0.31	16	7.37	4.5
1980-84	1.21	70	6.2	5
1985-89	4.00	3.5	2.9	3

Source: calculations based on the figures from Baums (1994).

This table shows the relative importance of the banking system as a source of external funds compared with the securities market. Nevertheless, the relative importance of the external financing in total sources of financing is significantly different. The next table presents estimates of gross financing proportions for the period 1983-1987 for the U.K., Japan, Germany.

**Table 4:**  
Gross Financing Proportions, 1983-87 in % of Total Sources.

	United Kingdom	Japan	Germany
Retained earnings	66	53	75
Shares and bonds issues	14	8	5
Direct investment	1	0	0
Total debt to financial institutions.*	18	35	12

\* except debt in securities.

Source: Borio, C. (1990), *Leverage and Financing of Non-Financial Companies: An International Perspective* (BIS Economic Papers No.27).

One can compare this data with a share of banking credit in total private investment (table 5).

**Table 5:**  
The Share of Banking Credit in Total Private Investment as a % of Total Investment.

	1990	1991	1992	1993
Poland		40.0	8.7	20.7
Hungary	5.5	7.8	0.0	0.0
Czech Republic	7.7	9.5	0.0	42.4
Slovakia	7.7	9.5	61.7	38.8

Source: author's calculation.

Based on the data for self financing ratios of the United Kingdom and Japan from table 2 and gross financing proportions from table 4, one can see that a significant part of the external debt to financial institutions is not going for investment purposes. (The self financing ratios for investment are 0.89 for U.K and 0.7 for Japan, and the shares of retained earnings in the total source of financing are 0.66 and 0.53 respectively.) This means that companies put more their own resources into investment and use external financing for other needs. The direct comparison of these date with data on eastern Europe is not possible, but some conclusions can be made.

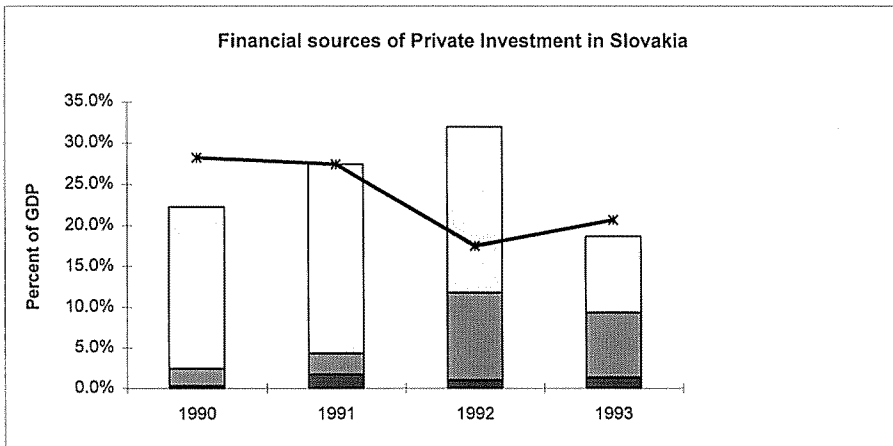
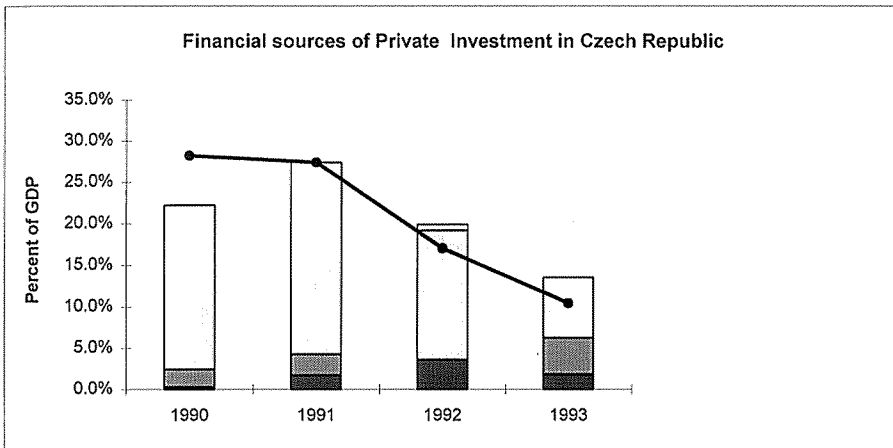
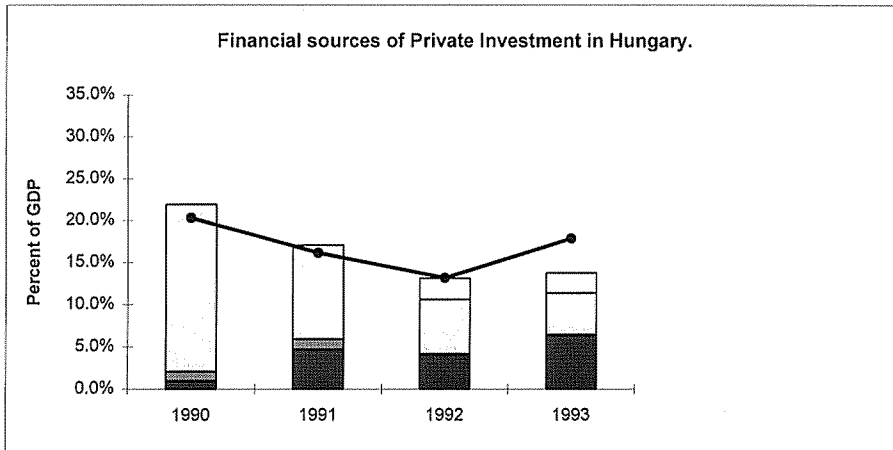
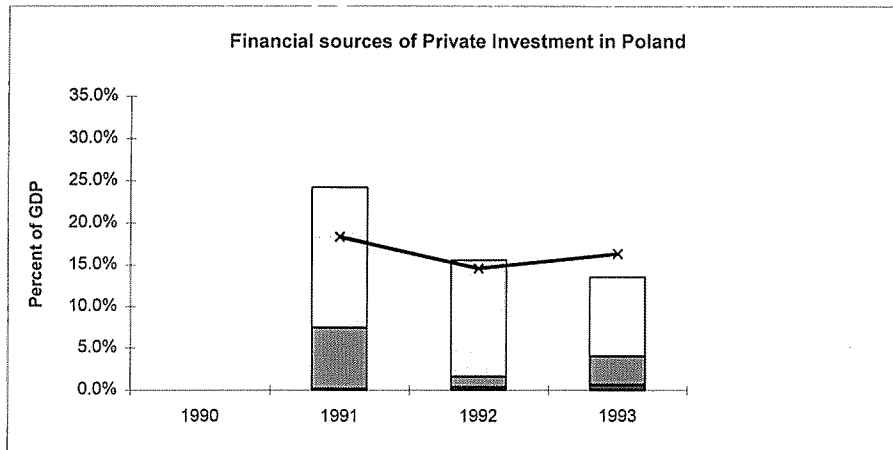
Tables 4 and 5 support our previous thoughts about the relative weakness of the banking role in the Czech and Slovak Republics before 1992 and Hungary. Their proportions of the use of banking credit are extremely small in proportion of the debt to financial institutions in the developed countries. On the other hand, a proportion of the banking credit as an investment source is extremely high in case of Poland, Slovakia (1992, 1993) and The Czech Republic (1993). In the absence of well developed market for corporate securities this can be seen as an evidence of high influence of the banking system.

## 6 Conclusions

1. Eastern European countries have a high proportion of self financing in private investment, which is more typical for developed countries. This can be one reason for the lack of monitoring on the commercial banks' side.
2. Increasing share of investments financing through the banking system is related to the improvement of the banking system and also to the improvement of an ability of the financial system to transfer the savings of the population to credit.
3. The growing share of banking credit in private investment can increase the importance of the banking system in Eastern European countries.
4. The high and increasing share of foreign direct investment reduces the local monopoly power of the domestic financial system and also is a barrier for the improvement of banking control of the industry.

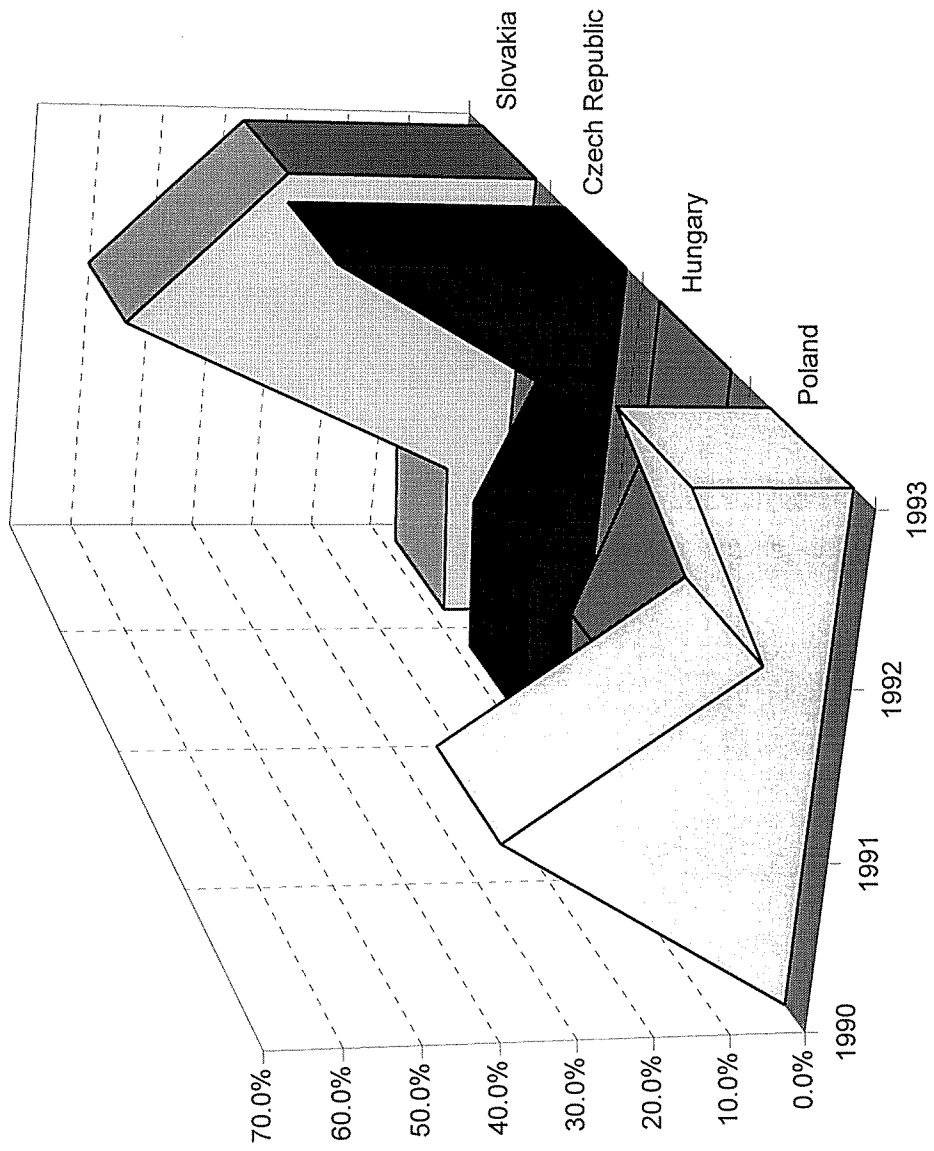
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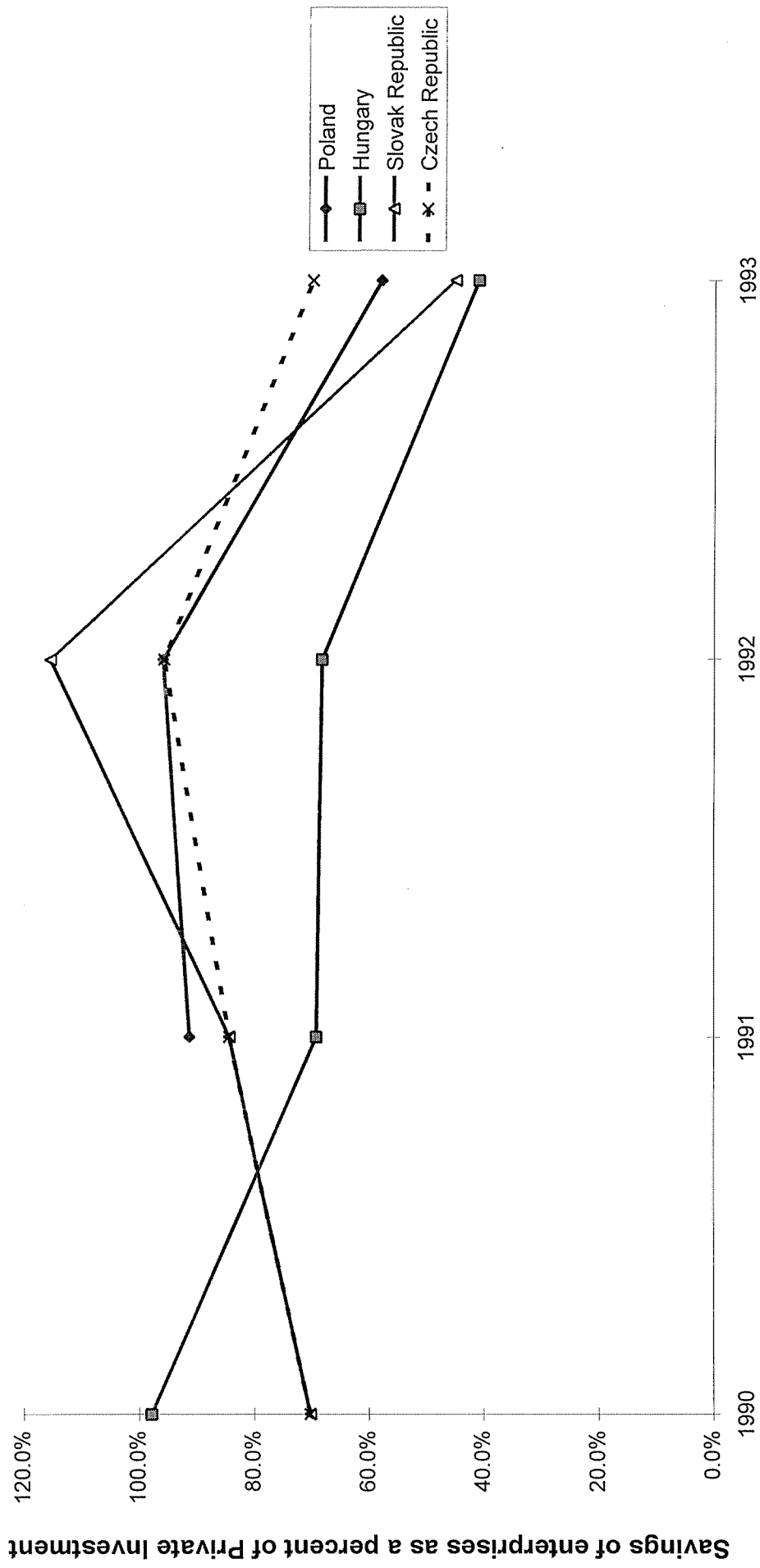
Graph 1.

The share of banking financing as a percent of total private investment



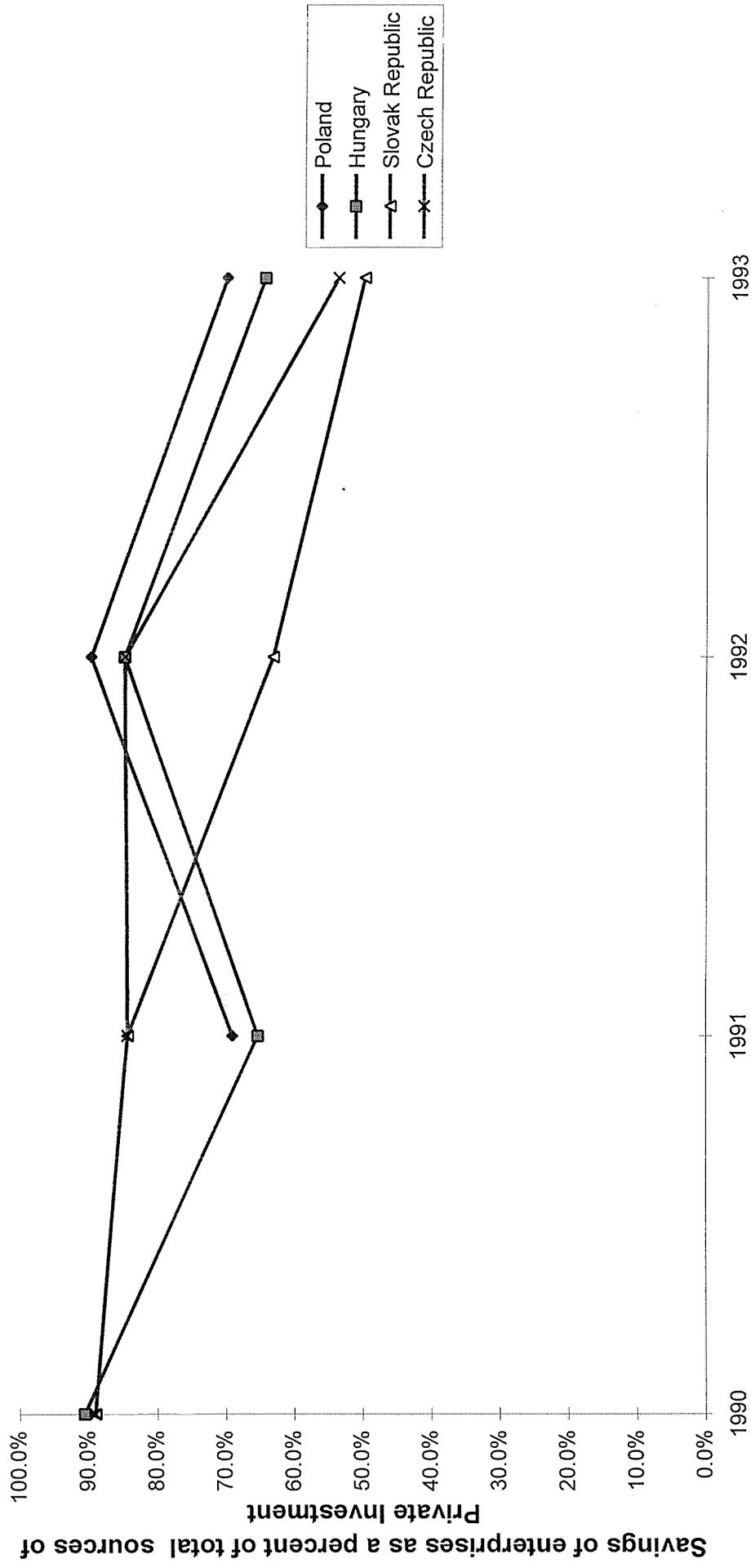
Graph 2.

Self-financing ratios for Eastern European countries

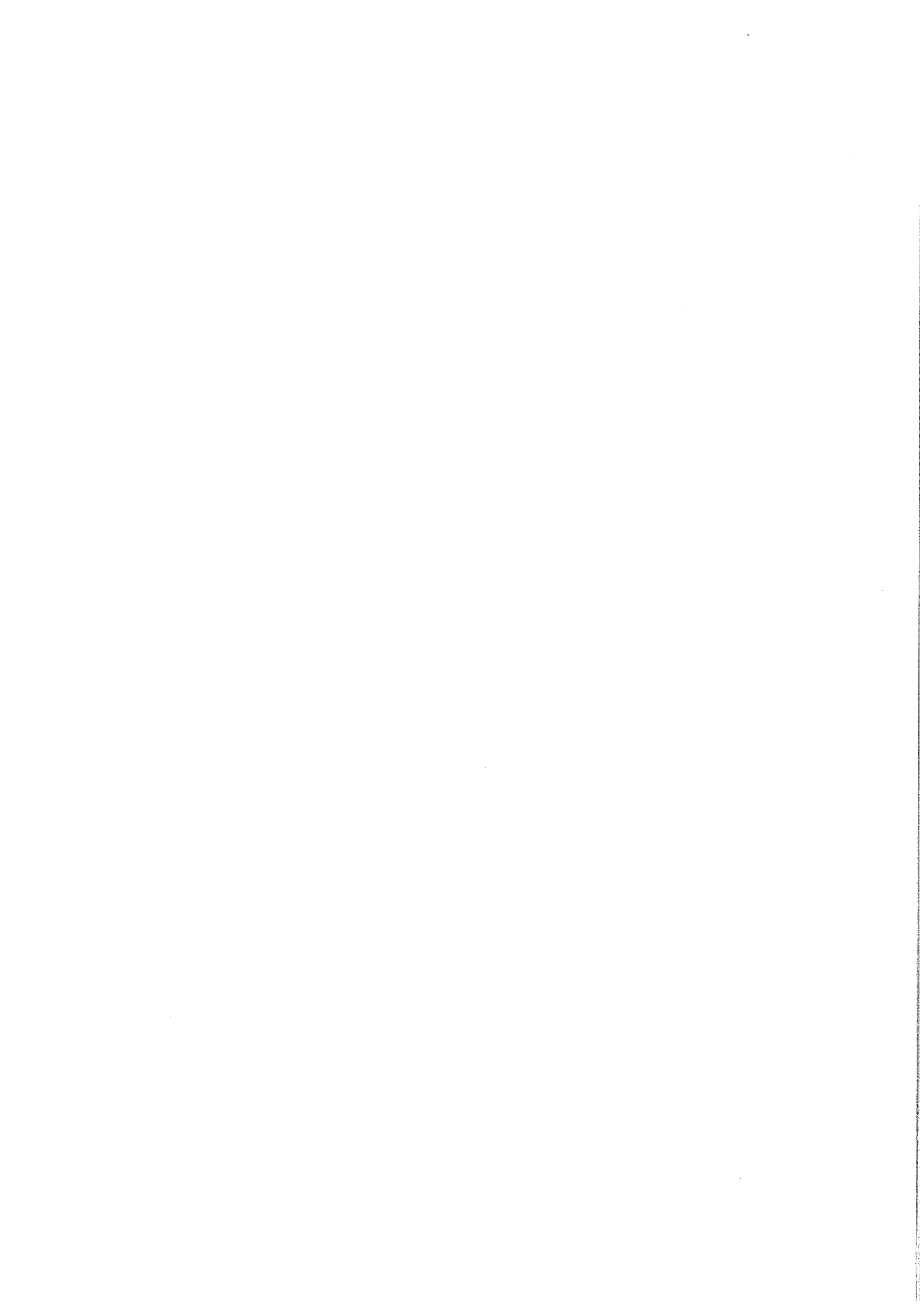


Graph 3.

Alternative self-financing ratios for East European Countries



Graph 4.



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