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**BANKS, FIRMS, BAD DEBTS AND BANKRUPTCY  
IN HUNGARY 1991-94**

J.P. BONIN and M.E. SCHAFFER

## ABSTRACT

The paper examines Hungary's experience with banking and bankruptcy reform in the period 1992-94. The first part of the paper uses enterprise-level data to show that in 1992, the same year in which the amount of classified loans in the state-owned commercial banks grew enormously, the proportion of total bank credit held by highly-unprofitable firms hardly changed. The inference from this is that the rapid growth of bad debt in 1992 was not the result of a "flow problem" (new bad lending) but rather represented the emergence of an inherited "stock problem" (pre-existing loans to inherited troubled clients). The paper then considers Hungary's 1992 bankruptcy reform, and in particular the novel "automatic trigger" which required firms to file for bankruptcy if they had a payable of any size, owed to anybody, overdue 90 days or more. The paper argues that the bankruptcy experiment was flawed on two counts. First, one of the key motivations for introducing the automatic trigger - a perceived problem with financial discipline and with interenterprise credit in particular - was largely unfounded. Second, the automatic trigger experiment was costly because the impact on firms which were forced to file for bankruptcy led to chains of disrupted trade relations which rippled through the economy. Evidence from a 1994 survey of 200 manufacturing firms shows that a majority of the surveyed firms had been involved in bankruptcies as creditors, and had lost not only sales but also suppliers as a result. The last part of the paper looks at the Hungarian government's bank recapitalization and enterprise bailout programs, arguing that they were poorly structured, overly bureaucratic, and susceptible to lobbying by firms looking to be "rescued". The paper concludes with a number of lessons: don't "shake things up" without being sure of the possible consequences; don't overestimate the capacities of bureaucratic procedures and undeveloped asset markets when designing debt workout programs; and don't underestimate the ability of market agents (banks and firms) to enforce financial discipline on each other if incentives are properly structured.

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**BANKS, FIRMS, BAD DEBTS AND BANKRUPTCY IN HUNGARY 1991-94**

**J.P. BONIN AND M.E. SCHAFFER**

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# **BANKS, FIRMS, BAD DEBTS AND BANKRUPTCY IN HUNGARY 1991-94**

John P. Bonin and Mark E. Schaffer

1

## **I. Introduction: Hungary's Legislative Shock**

Capital markets are the heart of a strong capitalist market economy. By their nature, capital markets are both transaction intensive (the payments settlement function) and highly dependent on information (the credit allocation function). For this reason, commercial banks are important pillars of capital markets in all developed market economies. However, Hungary's three largest commercial banks are financially weak, state-owned institutions burdened with non-performing loans, some portion of which are inherited from a discredited political regime. Hence, these banks are unable to play their proper role in capital markets at the present time. Therefore, the Hungarian economy is trapped in the bad equilibrium with a distressed financial sector coupled with a weak real sector. The challenge is to find the appropriate short-term policies to strengthen the Hungarian banking sector and, in so doing, put the economy on the road to a good equilibrium consisting of a healthy financial sector linked with a strong, vibrant, growing real sector.

The Hungarian case is of particular interest because the Hungarian authorities adopted a strategy of "legislative shock therapy" (Ábel and Bonin, 1994), a strategy sometimes advocated but rarely actually employed. Adding to the two real shocks experienced by all the Central European transitional economies - the transition-induced recession and the collapse of CMEA - the Hungarian government implemented a series of major financial legislation at the beginning of 1992. The new Banking Act introduced strict regulations for asset classification and imposed provisioning requirements on commercial banks, the largest of which are state-owned. The new Bankruptcy Act added a reorganization ("Chapter 11")



track to the already-existing liquidation ("Chapter 7") track, and imposed an automatic trigger that required the manager of any company with any payable of any size overdue to anyone for ninety days or more to file for bankruptcy (reorganization) or be subject to prosecution according to the Civil Code. Taken together, these two pieces of legislation delivered a self-induced shock to Hungary's financial and real sectors in 1992.

Using data from the National Bank of Hungary, from firm-level financial data for the entire medium and large enterprise sector, and from a survey of 200 Hungarian manufacturing firms, we assemble evidence that suggests that the draconian bankruptcy trigger was disruptive and unnecessary. By 1992, market-type forces were already providing sufficient payments discipline in both bank-firm and firm-firm relationships. A key motivation for the financial legislation was to counteract the perceived problem of bad lending, i.e. the creation of new bad debts. In reality, neither the banks nor the enterprises were continuing to perpetuate the soft budget constraint. Evidence indicates that suppliers had already learned how to control overdue receivables and to stop shipping to deadhead clients. The banks also learned not to throw good money after bad. Our results indicate clear unwillingness by the banks to inject new money to financially troubled clients. The observed bad bank debt problem is due to an inherited clientele, not to an ongoing payment discipline problem owing to bad bank management.

If the flow problem for banks and enterprises was already under control, was the new legislation successful in dealing with the stock problem of inherited bad debt? The objective for bankruptcy legislation is to assist creditors in sorting out bad debt and to induce banks to "mark to market" their assets, but during 1992, virtually no workout or write-down of the banks' bad debts occurred. The unanimity requirement on creditor agreement following the filing for bankruptcy made it difficult for the banks to take an active role in restructuring. Rather banks were provisioning rapidly against qualified assets using income earned from maintaining high spreads to all clients. Continuing into 1993, banks slowly and

strategically recognized their bad debt. Although market discipline was applied as early as 1992 in Hungary by the banks and the enterprises to the flow problem, the dynamics of the stock problem led to increasing accumulation of bad bank debt and to serious cash-flow problems for the banks. The government's response to the bad debt crisis was to engage in a series of hastily conceived rescues and recapitalizations of the banks and of firms as well, largely bypassing the legislated bankruptcy framework.

The paper is organized as follows. Section II describes the structure of the Hungarian banking system and outlines the "bad debt" problem. Section III uses firm-level financial data covering the entire medium and large enterprise sector to characterize the distribution and allocation of bank debt in 1992. We demonstrate that the banks were not injecting money into unprofitable firms and that the big increase in "bad debts" in that year was the result of recognizing an existing stock problem rather than of a "new bad debt" flow problem. In section IV we describe in detail the amended Hungarian Bankruptcy Act and conclude that the importance of the "payments discipline" problem, and of payments discipline between firms in particular, is essential to assessing its impact. Therefore, section V analyzes the data on interenterprise credit and concludes that enterprises were not a source of continuing lax payments discipline at the time the Bankruptcy Act was passed. Section VI considers evidence from several sources including a survey of manufacturing firms to assess the impact of the bankruptcy legislation following its implementation. Section VII describes government policy in 1992-93 to bank recapitalization and enterprise rescue and restructuring. Section VIII concludes with lessons from Hungary's experience.

## **II. The Hungarian Banking System and the Emergence of the "Bad Debt" Problem**

The origins of the financial distress of the banking system in Hungary lie in the legacies of the old system. In the planning/bargaining economy, the state was

involved directly in the allocation of a significant portion of investment. The liquidity necessary to finance this investment was provided through the fiscal budget often without full consideration of repayment possibilities. As the financial sector of the traditional economy was transformed, the state withdrew significantly from capital markets leaving behind a void to be filled by market-type relationships. Three commercial banks were created by dividing up the enterprise loan and deposit portfolios of the National Bank of Hungary (NBH). These nascent financial institutions with virtually no branches inherited concentrated loan portfolios of dubious quality with little opportunity in the short term to improve their situation. The banking sector was saddled with an underdeveloped technical infrastructure (a technologically backward payment settlements system) and underdeveloped human capital (weak corporate governance due to the drastic change in economic cultures).

The three largest Hungarian state-owned commercial banks (SOCBs), in descending order of asset size, are Magyar Hittel Bank (MHB), Kereskedelmi Bank (K&H), and Budapest Bank (BB). They were created in 1987 by dividing up the commercial credit division of the NBH. At their inception, these three SOCBs accounted for 87% of deposits and 76% of the gross assets of all financial institutions dealing with companies.<sup>1</sup> By far the largest Hungarian bank at the time and presently is the National Savings Bank (OTP) which holds the majority of the household deposits and, along with the small savings cooperatives, had serviced the household sector exclusively until 1989. On 1 January 1989, OTP was given a commercial charter and the SOCBs were allowed to service households.

The loan portfolios of the newly created SOCBs were legacies of past policies and the previous working relationships between bank officers and company clients were retained. Bank debt was concentrated sectorally with MHB servicing chemicals and machinery, K&H responsible mainly for agriculture and BB holding loans in the mining, food processing, and also machinery sectors. In 1988,

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<sup>1</sup> Székely (1990), pp. 107-23.

restrictions on commercial accounts were removed and many state-owned enterprises (SOEs) opened "second accounts" at other banks. However, the banking sector remained highly concentrated with no indication that competition was affecting behavior significantly. Immediately following bank devolution, pre-tax profit to asset ratios were between 3.2% and 3.8%.<sup>2</sup> By 1990, this measure was higher still for the three SOCBs leading to the conclusion (perhaps, erroneous because accrued interest was counted as income and the banks were not provisioning against non-performing debt) that Hungarian banks were among the most profitable in the world.<sup>3</sup>

The structure of the Hungarian banking sector still exhibits remnants of financial segmentation. Initially the SOCBs were heavily dependent on the NBH as refinancing credits made up 25% of total bank assets in 1987. By 1992, this measure had fallen to 11% due principally to the existence of an interbank market on which the savings deposits of households held predominantly at OTP and the rapidly growing PostaBank<sup>4</sup> are transferred to commercial banks to finance the enterprise sector. Despite their continuing attempts to secure a lower-cost source of funding, the SOCBs have not yet developed an adequate deposit base as OTP still holds about one-third of all household and corporate deposits.<sup>5</sup>

Designing current policy to strengthen these still weak SOCBs requires a consideration of the origin of non-performing loans and the competence of bank management. At the time of their creation, the qualified part of the loan portfolio of each SOCB was identified. In 1987, MHB held Ft. 5 bn., K&H held Ft. 2.5 bn.

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<sup>2</sup> Ibid., p. 113.

<sup>3</sup> Piper, Ábel and Király (1994), p. 29.

<sup>4</sup> Postabank (and Savings Bank Corporation) was founded in 1988 by the Hungarian Post Company; foreign financial institutions obtained a minority ownership position in 1990 by providing new capital. A subsequent capital increase in 1992 brought the foreign shareholding to 15.12%. Postabank currently has 31 branches based on the network of Hungarian post offices.

<sup>5</sup> Piper, Ábel and Király (1994), p. 29.

and BB held Ft. 1.9 bn. in qualified loans. In addition, BB agreed to take on Ft. 4.7 bn. in government-guaranteed long-term loans to the ailing coal mines bringing its total of qualified loans to Ft. 6.6 bn. Clearly this total of Ft. 14.1 bn. must be considered to be inherited bad debt over which bank management had little or no control. However, banks inherited bad customers along with the stock of bad loans outstanding to these enterprises. Due to restrictions and market segmentation, the banks were initially constrained in diversifying their activities. The inherited clientele had some influence on the flow of bad debt, i.e., the continuing addition of bad loans to the stock of bad debt. By the end of 1990 (before the CMEA shock), the stock of qualified loans had grown from Ft. 14.1 bn. in 1987 to Ft. 43 bn, of which Ft. 36.5 bn. was held by the three big SOCBs. From 1987 to 1990, the increase for each of the three SOCBs was MHB Ft. 11 bn. (16 bn. from 5 bn.), K&H Ft. 7.4 bn. (9.9 bn. from 2.5 bn.), and BB Ft. 4 bn. (10.6 bn. from 6.6 bn.). How much of these increases were newly created bad debt attributable to bad bank management, specifically the extension of new credit to non-paying customers in excess of accrued interest on non-performing loans, is unknown.

The New Banking Act (officially, Act No. LXIX of 1991 on Financial Institutions and Financial Institutional Activities) was promulgated on 1 December 1991. The act introduced three categories of qualified or "problematic" loans for rating the loan portfolios of the banks, mandated the accumulation of provisions (loan-loss reserves) against loans so qualified, and specified a schedule for meeting capital adequacy targets. Temporary regulations for loan classification were applied retroactively to the balance sheets of the banks for the full year of 1991.

According to a subsequent decree from the State Banking Supervision (SBS) in March 1992,<sup>6</sup> banks must classify assets in their portfolios as "bad" if the borrower is in default for more than one year or the claims are held against a company that is in liquidation proceedings. Provisions equal to 100% of total "bad"<sup>7</sup> debt had to

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<sup>6</sup> See Annex D for details about the classification schemes that were in effect from 1 December 1991 to 31 December 1993.

<sup>7</sup> We use "bad" to refer to the category in the Hungarian legislation to distinguish the term from the one used by some commentators to refer to bad (i.e., non-performing) loans

be accumulated by the end of a three-year period. The banking act legislates two other categories of qualified loans, namely "substandard" and "doubtful", with provisions equal to 20% of the former and 50% of the latter to be accumulated within the same time period.

The Banking Act made the banks recognize the drop in the real value of their assets over a relatively short period of time. For loans classified as problematic by the end of 1992, banks were required to hold one-third of the prescribed provisions leaving two-thirds of this amount as a deferred liability. Although these deferred provisions are not subtracted from bank capital by Hungarian accounting procedures, international accounting standards require such deductions. At the end of 1992, the aggregate stock of qualified loans reported by the banking sector was Ft. 262 bn. One estimate done in 1993 suggested full statutory provisions for the banking system to have increased from Ft. 83 bn. in 1991 to about Ft. 220 bn. in 1992. This increment exceeded 1992 profits before tax and provisions by almost 300%. The sum of equity plus total provisions for the banking system amounted to Ft. 267.9 bn. at the end of December 1992. Hence, the banking system itself was virtually insolvent by the end of 1992, with the bulk of the problem in the three large SOCBs, two of which (MHB and K&H) had negative capital adequacy ratios (CARs) estimated for the end of 1992.

The rapid emergence of the bad debt problem can be seen from the figures for problematic loans as reported by the banks (Table 1). At the end of 1991, total problematic loans (including interest arrears) as classified under temporary SBS regulations amounted to Ft. 88 bn, or (adjusting for comparable treatment of interest arrears) about 10% of total credit to the enterprise sector. By the end of 1992, total problematic loans had ballooned to Ft. 289 bn, almost two thirds of which - Ft. 186 bn. - was classified in the bottom "bad" category. In other words,

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in general.

we estimate (again adjusting for comparability and including interest arrears<sup>8</sup>) by the end of 1992, about one-third of total credit to the enterprise sector had been qualified by banks, and about 20% of total credit was classified as "bad". In early 1993 the government implemented a "loan consolidation program" (the "1992 LCP", more about which below) in which it removed Ft. 102.5 bn. of "bad" loans from the books of the banks, and then about Ft. 20 bn. more in a related operation. Loans classified by the banks as problematic then ballooned again in 1993. We estimate that at the end of 1993, including the bad loans taken from the banks as part of "loan consolidation" (and again including interest arrears), over half of credit to the enterprise sector had been classified as "problematic" in some way, and over one-third was in the bottom "bad" category.

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<sup>8</sup> About 1/3 of the "bad" category at end-1992 was composed of interest arrears; this proportion will be substantially smaller for the other two problematic categories.

**Table 1**

Loans of the Hungarian Banking Sector By Risk, 1990-93  
All figures are billion forints, end-period

	1990	1991	Before LCP		After LCP		1993.Q1	1993.Q2	1993.Q3	1993.Q4
			1992.Q3	1992.Q4	1992.Q3	1992.Q4				
Pass	951	1142	1367	1451	1451	1491	1504	1546	1662	
Problematic of which:	43	88	264	289	186	194	229	263	352	
Sub-standard			41	39	39	38	41	32	82	
Doubtful			97	63	63	68	79	89	84	
Bad			126	187	85	88	109	142	186	
Total rated	994	1230	1631	1740	1637	1686	1733	1809	2013	
Memo items:										
Credit to the enterprise sector of which, overdue	638 n.a.	767 67	768 159	772 154	704 n.a.	723 (est.) 131	733 128	751 143	764 164	
GDP (annual, current prices)	2089	2308		2886	2886				3503	

Before LCP: Before removal of Ft. 102.5 bn. of "bad" loans in the 1992 Loan Consolidation Programme.

After LCP: After removal of "bad" loans in the 1992 Loan Consolidation Programme; also the figure for credit to the enterprise sector reflects minor classification changes starting with the "After LCP" end-1992 figure.

Notes: Classified loans include interest arrears; credit to the enterprise sector does not. Overdue credit also excludes interest arrears and includes only scheduled repayments of principal which are past due for any length of time. "Total rated" includes all rated assets (not just loans to enterprises). Numbers may not sum due to rounding. Source: NBH.





To distinguish between "inherited" (stock of debt) and "newly created" (flow of lending) business is crucial to determine whether SOCBs are acting negligently by creating new bad debt through loans to customers known to be bad credit risks. The cross-ownership relationship between the SOCBs and their largest SOE clients is cited by many observers as leading banks "to throw good money after bad." Complicating the issue of attribution are two severe real shocks and the self-induced legislative financial shock. At the beginning of the 1990s, Hungary experienced a sharp drop in real output (from 1989 to 1992, real GDP measured by official statistics dropped 20%) due to a transition-induced recession and a collapse, by 1991, of the CMEA (traditional export) markets. A decline in real output of this magnitude would lead to a sharp decrease in the real value of the loan portfolios of financial institutions in any economy. In Hungary, the real shocks certainly caused new bad bank debt as companies that may have appeared to be healthy in the previous environment face serious financial difficulties and may become non-viable in the new situation. The extent to which bank management can be held responsible for clairvoyance is problematic.

A further complication to assessing the competence of any bank management involves "openly recognized" vs. "hidden" bad debt. Given that a bank has a bad debt, knows it, and has decided not to lend any more to the client (not "throw good money after bad"), management can choose to recognize the bad debt immediately (classify it and make the appropriate loss provision) or postpone the day of reckoning by capitalizing the interest as it comes due and hiding the fact that the loan is non-performing; intermediate reactions (collecting some interest and capitalizing the rest) are also possible. In the face of a significant shock to the real economy, some lag in "marking to market" the loan portfolio and realizing fully the decrease in asset values would be a natural response in any banking system. The liability side of the bank's balance sheet cannot usually be adjusted immediately to the drop in real value on the asset side because of the lack of sufficient equity capital. If a bank lacks the assets to provide loss reserves for all of its bad debt immediately, the fear of insolvency leads to a gradual recognition of the bad debt with the hope of partially growing out of the problem.

Whether the root of the solvency problem for any particular bank was bad management or a combination of inherited factors and real shocks is difficult to disentangle. The conventional position attributes the increase in the stock of non-performing loans during this period to bad bank management, at least in the two cases of MHB and K&H, but this is really an open empirical question for which hard evidence has been scarce. In the next section, we present some evidence from enterprise-level data to support the position that Hungarian SOCBs do not seem to extend significant amounts of new credit to clients who are not servicing their old loans. This leads us to conclude that the combination of real shocks, i.e., the transition-induced recession and the trade diversion shock from the dissolution of the CMEA in 1991, and the self-induced legislative financial shock account for the drastic increase in debt formally classified as bad by the Hungarian banks beginning in 1992.

### **III. The Distribution and Allocation of Bank Debt in "Bad" Firms: Evidence from Enterprise Data**

Consider again the bad debt "stock" vs. "flow" issue. The first question that needs to be addressed, in our view, is whether the bad debts which emerged starting in 1992 were "newly created bad debts" - a flow problem - or "newly recognized inherited bad debts" - a stock problem. The fact that debts classified as "bad" by the banks grew tremendously in the course of 1992 is consistent with either, and does not in itself tell us much about the lending practices of the Hungarian SOCBs. Our approach in this section is to employ data from the borrowers rather than the lenders to try to characterize how bank debt was being allocated.

The enterprise-level annual financial data we use cover all medium and large non-financial enterprises in the economy (about 4,400 firms employing roughly 1.6 million people) for 1992. A few remarks regarding the data and how we use them are in order. Bank debt is approximated by aggregating several balance sheet categories; our measure includes any bank debt originating with the banks but

subsequently transferred to another owner, but does not include any interest arrears on bank debt which has not been formally capitalized. Interest payments are accrued interest payments to all financial institutions (but the amount of interest paid to non-bank financial institutions will be very small.) Firms with incomplete data and missing values are excluded from the analysis, making for a sample of close to 3,000 firms employing a total of 1.3 million people. For more details and caveats regarding the data, see Annex E.

Our interest in this section is both in the distribution of bank debt and in how it is allocated, and with respect to the least profitable firms in particular. We investigate this by separating out the least profitable firms in the sample according to several different definitions of profitability, and then looking at how bank credit was allocated to these subgroups in the course of 1992 in comparison to the total sample.

"Profitability" is defined by one of the three following measures of profitability:

Trading profit margin = profit before financial costs and extraordinary charges, as a percentage of annual sales.

Profit/assets ratio = pre-tax profit as a percentage of start-year total assets.

Rate of return on equity = pre-tax profit as a percentage of start-year equity.

"The least profitable firms" means the least profitable 10%, but because the data set contains a large number of micro firms and paper firms, we weight each firm by its size as measured by its employment. That is, the "least profitable 10% by trading profit margin" means the firms with the lowest trading profit margins in the sample and accounting for 10% of total employment in the sample; the "least profitable 10% by profit/asset ratio" means the firms with the lowest profit/asset ratios in the sample and accounting for 10% of total employment in the sample,

etc. The fourth "low profit" category we use consists of the "largest lossmakers", defined as firms making more than Ft. 500 mn. (about US \$6 mn.) in losses in 1992. However, the railway sector is automatically excluded from all four low profit subgroups because it includes the state railway company, a firm which is not only the single largest Hungarian firm by far (over 100,000 employees) but is also very much a "special case".

One clear sign of a continuing "flow problem" would be if the banks were "throwing good money after bad", or injecting new money into bad firms. In addition to more usual indicators we will also calculate what we call the amount of "fresh credit" (FC) going to low profitability firms, defined as the change in nominal bank credit minus interest charges. Real growth of bank credit minus fresh credit as a percentage of bank credit is the burden of real interest payments (nominal interest payments minus the inflation component), expressed as a percentage of bank credit, or approximately the real interest rate. In 1992, both nominal and real interest rates on commercial loans were very high in Hungary, at about 33% and 12% respectively;<sup>9</sup> average fresh credit as a percentage of start-year debt in our 1992 sample is about 10%.

Our fresh credit measure is essentially a measure of (accrued) cash flow between the banks and the firms.  $FC > 0$  implies cash is flowing from the bank to the firm;  $FC < 0$  implies the bank is extracting cash from the firm (or, more properly, attempting to extract cash from the firm<sup>10</sup>). Because our fresh credit measure uses only scheduled or rescheduled bank debt (interest arrears are not included) and only accrued or scheduled interest payments to banks (penalty interest or late penalties are not included) it captures the degree to which bank credit is being

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<sup>9</sup> Nominal interest rate from the NBH Annual Report 1993, p. 240; real interest rate using the December-December producer price index (18.8%).

<sup>10</sup> This is because everything is being measured on an accruals basis.  $FC < 0$  means the bank is accumulating claims against the firm (via interest income and repayment of principal) which, if actually paid by the firm, would mean cash is flowing from it to the bank.

formally rolled over and rescheduled. If a firm were unable to meet any of its interest payments in the course of the year, and the bank capitalized the interest, rescheduled the loan, but injected no new money, our FC measure would be 0. If the bank injected new money on top of this, FC would be  $> 0$ . If the bank refused to capitalize interest and reschedule the loan and made no new loans either, FC would be negative<sup>11</sup> (zero change in scheduled nominal bank debt minus non-zero accrued interest).

Table 2 presents a number of indicators, including our fresh credit measure, for the four low profit subsamples and for the total sample of 2,871 firms. Small firms are numerous in the subsamples and in the total sample, but they account for relatively little economic activity. The bulk of employment in all the subgroups and in the total sample is in firms employing more than 300 persons; these larger firms have an average employment of about 900, except for the "largest lossmakers" which are significantly larger on average.<sup>12</sup> The four low-profit subgroups account for between 16% and 24% of all end-1992 bank debt in the sample. If interest arrears were to be included as well, the percentage of total bank debt held by these subgroups would be comparable to the percentages of total bank debt classified by the banks at end-1992 as "problematic" or "bad" (see p. 7 above); a useful benchmark.

Bank debt is therefore moderately concentrated in low profitability firms in Hungary at the end of 1992; these low profitability firms account for one-tenth of employment and roughly double that of bank debt. The full distribution of end-1992 bank debt according to the profit/assets ratio is given in Figure 1; it is fairly clearly unimodal. By contrast, Gomulka (1994) found a bimodal distribution of bank debt in Poland, with severely financially distressed firms accounting for a very large proportion of bank debt at end-1992. Gomulka, however, used a

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<sup>11</sup> Whether or not the accrued interest payment was actually paid. See note 10.

<sup>12</sup> This is of course because size (of losses) was the selection criterion for this group.

measure of indebtedness - net financial assets<sup>13</sup> as a proportion of revenue - rather than profitability, to rank firms. When we repeated his exercise using our Hungarian data set and used his indebtedness measure, we found that the concentration of bank debt in our Hungarian sample was much greater than when we used a profitability measure, but was still substantially lower than in Poland. Whereas Gomulka found that the most highly indebted Polish firms accounted for 11% of revenues but 62% of credits and loans, we found that the most highly indebted Hungarian firms accounting for the same fraction of revenues accounted for 41% of bank debt. The implications of this last finding depend on the interpretation of the scale of the total "bad debt" problem. Either the scale of the "bad debt problem" in Hungary is smaller than in Poland, or indebtedness problems in Hungary are more evenly spread among firms. If the latter is the case, the scale of debt workouts required will be substantial (a "benefit" of concentration is lost).

What is more striking about the distribution of bank debt in Table 2 is how little it changes in the course of 1992: the low-profit firms hold very nearly the same fraction of bank debt at the start of the year as they do at the end of the year. The table also shows the growth in real bank credit to these firms, defined as nominal bank credit growth deflated by the within-year<sup>14</sup> increase of the producer price index (18.8%). Real growth is -3.6% for the total sample, and as implied by the small changes in the distribution figures, real growth is similar in the low-profit subgroups as well. Furthermore, while nominal bank credit to these firms increases in the course of 1992, the increase is smaller than the interest payments on this debt. That is, "fresh credit" is negative, and markedly so; interest payments exceed increases in lending by the equivalent of 6-18% of start-year

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<sup>13</sup> Defined as (cash + bank deposits + receivables - credits and loans - payables).

<sup>14</sup> That is, December 1991-December 1992. We use, as does the NBH in its publications, the PPI compiled by the CSO under their old methodology. Other deflators for this period are the PPI using the new methodology (16.4%), the old and new methodology industrial sales price indices (16.9% and 14.4%, respectively), and the consumer price index (21.6%).

bank debt. Money is not flowing from the banks to low profitability firms; rather the banks are (attempting to) extract money from these firms. Finally, we note that the low-profit firms started the year with high debt/equity ratios, and their indebtedness increased substantially in the course of the year (compared to virtually no change for the sample as a whole).

This finding of "no fresh credit to lossmakers" still holds if we examine the data at the level of the individual firm. Figure 2 plots 1992 profitability (profit/assets ratio) vs. the amount of fresh credit received in 1992 (as a percentage of start-year bank debt) for firms with start-year bank debt in excess of Ft. 100 mn. (about US \$1.3) and which were not start-ups. Each circle in the scatterplot represents a firm, and the size of a circle represents the size of the firm's bank debt. There is no clear pattern of banks injecting new money into low profitability firms. One large low profitability debtor does receive an injection of "fresh credit", but for most low profitability firms, as for most of the sample as a whole, fresh credit is negative - interest payments to banks exceed increases in bank debt, usually by a wide margin.

It is also of interest to see whether firms which performed badly in 1991 received any fresh credit in 1992. This is shown in Figure 3, which plots 1992 fresh credit against 1991 profitability for the same set of firms. Here the pattern is still clearer. Nearly all firms which performed badly in 1991 not only failed to get any fresh credit, their interest payments were substantially in excess of any increases in bank debt. In 1992, it appears that the banks were attempting to withdraw from firms which had done badly in 1991 and/or which were doing badly in 1992.<sup>15</sup>

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<sup>15</sup> Note, by the way, that Figure 2 and Figure 3 show that the single large low profitability debtor which received a substantial injection of fresh credit in 1992 had actually performed reasonably well in 1991 - its 1991 profitability was about average.



**Table 2**

The Distribution and Allocation of Bank Credit to the Least Profitable Hungarian Firms in 1992					
	Firms accounting for appx. 10% of total employment which are the least profitable according to:			Largest lossmakers (profit < -500 thous. ft.)	Total Sample
	Trading profit margin	Profit /assets	Rate of return on equity		
Number of firms	454	339	338	86	2871
of which, with employment > 300	116	123	120	66	1122
Employment (thousand persons)	132	131	131	119	1318
of which, in firms with L > 300	90	100	104	116	1069
Volume and Growth of Bank Credit					
Start-year (billion forints)	81.3	59.5	78.7	104	431
End-year (bn. ft.)	93.4	76.7	89.5	117	494
Real growth <sup>1</sup> in %	-3.3%	8.6%	-4.3%	-5.5%	-3.6%
Change in bank credit (bn. ft.)	12.1	17.2	10.8	12.8	62.5
Interest payments to banks (bn. ft.)	20.6	20.8	25.0	29.4	122
Fresh credit <sup>2</sup>					
Billion forints	-8.5	-3.5	-14.2	-16.6	-59.9
As % of start-year bank debt	-10.4%	-5.9%	-18.1%	-15.9%	-13.9%
Distribution of Bank Credit					
Start-year (percent of sample)	18.9%	13.8%	18.3%	24.2%	100%
End-year (percent of sample)	18.9%	15.5%	18.1%	23.7%	100%
Change	+0.1	+1.7	-0.1	-0.5	.
Debt/equity ratio					
Start-year	0.82	1.15	1.59	0.77	0.46
End-year	1.00	2.31	3.12	1.04	0.48
Change	+0.17	+1.16	+1.53	+0.28	+0.02
Trading profit margin <sup>3</sup>	-55.6%	-35.3%	-31.8%	-20.3%	-1.5%
Profit/start-year assets, in %	-19.7%	-34.6%	-30.2%	-18.1%	-3.5%
Rate of return on equity <sup>4</sup>	-35.8%	-74.3%	-78.3%	-32.0%	-5.1%

<sup>1</sup>Real growth of bank credit = Nominal growth deflated by within-year 1992 increase in the producer price index (18.8%). Bank credit = scheduled bank lending only; unpaid and unrescheduled interest arrears not included in bank credit.

<sup>2</sup>Fresh credit = Change in bank credit minus accrued interest charges.

<sup>3</sup>Trading profit margin = Profit before financial costs and extraordinary charges, as a % of annual revenues.

<sup>4</sup>Rate of return on equity = Profit as a percentage of start-year equity.

Total sample is all medium and large non-financial Hungarian firms excluding firms with missing values, inconsistent data, etc. Least profitable and largest lossmaker subsamples exclude the railway sector. Figures may not sum due to rounding. For more details see text and Annex F.

These results inform us about the "newly created" vs. "inherited and newly recognized" bad debt question. The firms which performed very badly during 1992 in terms of profitability account for a substantial portion of bank debt, but the percentage of total bank debt held by these firms hardly changed in the course of the year, and in aggregate their bank debt either fell or increased moderately in real terms. They were, moreover, quite indebted at the start of the year, and substantially more so by the end of the year. This suggests that the "bad customers" of the banks in 1992, who accounted for a large portion of bank debt, were "inherited" bad customers. The banks started the year with large amounts of credit in these firms; but not only did they not increase their lending to these firms in real terms in the course of the year, they actually tried to extract resources from these firms - "fresh credit" typically was negative.

On this evidence, it seems that the banks did not engage in "bad lending" on a large scale in 1992; that is, the bad debts which emerged in the course of 1992 were not for the most part "newly created". Rather, at the beginning of 1992 the banks "inherited" commercial portfolios, substantial portions of which were in very indebted firms which then did very badly in the course of the year. The banks did not react by "throwing good money after bad" and injecting new funds into these firms, but they also didn't decrease their exposure to these firms. It is likely that a major reason why the banks did not decrease their exposure was that many or most of these firms were not in a position to repay loans in full when they matured or if they were called in. In the course of 1992, the banks also increased substantially how much of their portfolios they openly recognized as "bad" when they classified their loans, leading to the explosion of "bad debt" in 1992 which we saw earlier. A remaining question is how much of this open recognition of bad debt was strategic - the banks knew the debt was bad at some earlier date but only openly classified it as bad later - and how much was

genuinely learned to be "bad" in the course of 1992 and then classified as such. We do not address this problem here.<sup>16</sup>

The financial distress in which Hungarian banks found themselves did not lead to the "gambling" behavior that is frequently attributed to banks that have essentially lost their equity due to the liabilities of bad loans. Prior to "marking to market" the loan portfolio and realizing fully their losses, gambling banks take on still riskier loans (including possibly loans to their bad debtors) in an attempt to forestall insolvency; if these riskier loans don't pay off, the banks remain insolvent, but if they do, the banks regain their solvency.<sup>17</sup> Rather, our data indicate that the banks were acting "as if" they were "conservative" bankers trying to extract themselves from high-risk, deadbeat clients. Most likely, a primary concern of the bankers in the large SOCBs during 1992 was the collection of information required to satisfy the new banking regulations and the international auditors. Equally important was the daunting task of creating the internal management structure necessary both to monitor their loan portfolios and to rationalize lending activity in a market economy (see Annex C). Our evidence indicates that, while the bankers were scrambling around attempting to adjust, they were also trying to prevent their loan portfolios from deteriorating still further. This is not to say that the large Hungarian SOCBs were well-managed banks throughout 1992. Rather, at best, these banks were involved in damage control and, at worst, they were simply overwhelmed by the requirements of the new regulatory and market environments. The large Hungarian SOCBs were not taking large-scale active measures against their inherited bad debtors (e.g., loan workouts) probably because they both lacked the expertise and information to do so, because to do so would require openly recognizing their bad debt as "bad" and they lacked the equity to fully mark to market, and probably also because they were "playing for

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<sup>16</sup> Later in the paper, however, we cite some evidence that near the end of 1992 the banks may have been hiding (not openly classifying as "bad") some bad debt they knew to be "bad". See p. 53.

<sup>17</sup> A recent example of this is the behavior of the banks that created the Savings and Loan crisis in the US.

time" anticipating some government support. A full analysis of the incentives that generated this conservative behavior would take us too far afield. We note here only that the career prospects of a banker in a Hungarian SOCB who is seen to bear some responsibility for making bad loans suffer as a result, both because bad loans delay privatization (and subsequent expected salary increases) and because the likelihood of obtaining an attractive new job in alternative employment (e.g. joining a new or foreign-owned bank) declines.

How did the highly unprofitable clients of the banks finance their losses? This could be done in one of three ways: injections of equity; increases in debt; or decreases in assets. In Figure 4, Figure 5 and Figure 6 we plot, for firms with assets greater than Ft. 1 bn., 1992 profit as a percentage of start-1992 assets against, respectively, the change in total equity between start- and end-1992, the change in total debt, and the change in total assets. All values are measured in nominal terms. The size of a circle here indicates the size of the firm's total assets. The results are surprising. Equity changes almost one-for-one with profits for nearly all lossmakers (Figure 4); there is some indication that owners of profitmakers are withdrawing some of the profits, but most lossmakers are not having their losses cushioned by injections of equity. Nominal total debt actually falls in most lossmakers (Figure 5); and since inflation was about 20% during 1992, the decline in real debt is even more dramatic. Debt-holders as a group were withdrawing from low profitability firms, not injecting funds. Most losses were being financed by decreases in assets (Figure 6).

A more detailed breakdown of how the four low-profit subgroups of firms were generating their losses and how they were financing them is shown in Table 3. All values are nominal and are measured as a percentage of start-year assets. In all cases the low-profitability firms had, as a group, negative "operating profit", meaning that their direct costs exceeded their revenues even before depreciation and financial charges; they were, as a group, running unsustainable losses even before the costs of servicing their debts. Depreciation charges, finance costs (mostly interest charges) and extraordinary charges roughly doubled these losses.

**Table 3**

Income, Liabilities and Assets of the Least Profitable Hungarian Firms in 1992											
Balance-sheet shares are start-year (SY); profit and balance sheet changes are all measured as a percentage of total start-year assets.											
	Least profitable firms according to:						Largest lossmakers		Total sample		
	Trading profit margin		Profit/assets		Rate of return on equity		SY Share	Change	SY Share	Change	
<b>Income statement</b>											
Operating profit	-13.1		-18.6		-15.9		-8.0		2.4		
- Depreciation											
= Trading profit	-15.8		-22.5		-19.2		-11.4		-1.2		
- Financial costs											
= Entrepreneurial profit	-19.0		-30.5		-26.9		-16.7		-3.3		
- Extraordinary charges											
= Pre-tax (balance sheet) profit	-19.7		-34.6		-30.2		-18.1		-3.5		
<b>Balance sheet</b>											
Total liabilities & equity											
Equity	100.0		100.0		100.0		100.0		100.0		-0.8
Liabilities (debt)	54.9		46.5		38.6		56.6		68.7		-1.7
Bank debt	45.1		53.5		61.4		43.4		31.3		0.9
Commercial payables	14.9		19.0		21.2		17.8		9.9		1.4
Other liabilities	11.3		15.2		16.5		9.1		8.1		-1.0
	18.9		19.3		23.7		16.5		13.3		0.5
Total assets											
Fixed assets	100.0		100.0		100.0		100.0		100.0		-0.8
Inventories	33.0		32.6		29.2		40.8		49.9		1.0
Invested financial assets	13.8		23.6		22.9		15.8		14.1		-3.2
Total receivables	19.9		10.7		10.2		15.2		12.6		1.0
Commercial receivables	26.9		27.6		31.5		22.9		17.4		-1.4
Other receivables	13.2		17.7		17.8		11.5		10.7		-0.4
Cash and short-term deposits	13.7		9.9		13.7		11.4		6.7		-1.0
Other assets	4.7		2.9		3.6		3.6		4.6		0.5
	1.7		2.6		2.6		1.7		1.4		1.3

Figures may not sum due to rounding. For definitions of subsamples and variables see Table 2 and text.



Considering now the balance sheet figures, about two-third of these losses were on average reflected in a decrease in equity. Debt is not the main route for financing these losses; the change in total nominal debt for the low-profit subgroups is small, and in real terms would be negative for all four subgroups. The data unfortunately do not allow a good breakdown of debt by debtholder; we are able to identify only banks and trade creditors (commercial payables). As we saw earlier, banks are not major financiers of losses; increases in nominal bank credit are small, and in real terms are negative or near zero. Commercial payables fall in nominal terms in all groups; the decline in real terms is very large. We will discuss trade credit (inter-enterprise credit) in some depth later in the paper. The large category of "other liabilities" also contributes little to the financing of losses in 1992. "Other liabilities" includes, among other things, tax liabilities and tax arrears. Aggregate data on tax arrears suggest substantial real flow of tax arrears during this period, on the order of 2% of GDP per annum, and we would expect these tax arrears to be concentrated in our low profitability firms;<sup>18</sup> but whatever the flow of the tax arrears component, the total flow of debt was not a major contributor to the financing of losses.

Losses were, for the most part, financed by a decline in assets. Decreases in fixed assets were relatively unimportant in financing losses, as were decreases in cash and bank deposits and financial investments. The main routes by which losses were financed were via destocking (decreases in inventories), reducing trade credit extended to customers (decreases in commercial receivables), and reducing "other receivables" (a breakdown for which is not available).

This suggests that lossmakers were engaged in serious downsizing in 1992, and this view is supported by firm-level data in changes in employment, sales and wages. (We note in passing that the typically small changes in fixed assets noted above mean we are looking at firms which are consistent units over time.) We have retrospective 1991 data for most firms in the sample. Real log growth rates

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<sup>18</sup> The tax arrears estimate comes from Schaffer (1995), who also presents survey-based evidence for Hungary collected in 1994 that shows that tax arrears were indeed concentrated in low-profitability firms.

for three variables are plotted in Figure 7, Figure 8, and Figure 9, vs. firm profitability in 1992. Here we weight firms by employment in the figures, and only data for firms employing more than 300 persons are plotted. There is a clear positive correlation between profitability and both the change in employment and the change in real sales; low profitability firms have, not surprisingly, suffered large decreases in sales and are shedding large amounts of labor. Simple correlation coefficients between profitability according to all three measures we are using, and employment and sales for the total sample<sup>19</sup> confirm this - they range in value from 0.21 to 0.33, with significance levels in excess of 99.99%. There is a weaker positive correlation between profitability and the change in the real product wage (the nominal wage deflated by the producer price index); the correlation is about 0.07 and significant at the 99.8% level when we measure profitability using the profit/assets ratio and the rate of return on equity (but is insignificant if we use trading profit margin).

The picture is one in which very unprofitable firms are running unsustainable losses; they are downsizing fairly rapidly, and temporarily financing their losses mostly by decreasing their working capital assets ... but less, given the small contribution of the decline in fixed assets, by engaging in major restructuring.

Nevertheless, the figures for loans classified under the SBS rules, and supplementary data on overdue principal payments to the banks (Table 1) imply that during this period many firms in financial difficulties and owing money to the banks were not in a position to service their bank debt in full and/or to repay their bank debt as it matured. What were the banks' options in such cases? One route would be to take what payment could be extracted from the firm, roll over the rest, and play for time. A second option would be to try to collect on the collateral of the loan, but there would have been serious problems both with the legal framework<sup>20</sup> and with the likely low market value of the collateralized assets (more about this below). A third option would be to file for the liquidation of the

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<sup>19</sup> Excluding a few massive low and high profitability outliers.

<sup>20</sup> See Baer and Gray (1995).



debtor firm. Here again there would be problems both with the legal framework and with the value of the firm's assets. Two further problems with this option are that under the SBS loan classification rules, loans to a firm under liquidation must be rated automatically in the bottom "bad" category and so the bank must immediately provision accordingly (see Annex C); and that until the liquidation procedure is completed the debtor is freed from the obligation to repay or service his debts (see below). In the circumstances in which the banks found themselves in 1992-93, the first route must have looked relatively attractive. But the fact that the banks were reluctant to take legal action against their bad debtors does not mean the debtors had "soft budget constraints" or that there was a problem with "payments discipline" vis á vis the banks, since as we have seen the banks were trying to extract money from their financially-distressed clients.

This brings us to the Hungarian framework for bankruptcy and liquidation, and the question of "payments discipline" in general, to which we now turn.

#### **IV. The Hungarian Framework for Bankruptcy and Liquidation**

The 1992 Bankruptcy Act (formally, Act IL of 1991) was passed by Parliament on 24 September 1991 and came into effect on 1 January 1992, superseding the Law-Decree No. 11 of 1986 on liquidation and winding-up. The introduction of the 1992 Bankruptcy Act was motivated by a dissatisfaction with the 1986 Act and a perceived need for new measures. To begin with, the 1986 Act was a product of the socialist era and unsatisfactory in some respects (e.g. it was designed with state-owned legal entities in mind). The 1992 Act was meant to establish a uniform bankruptcy and liquidation procedure comparable to those found in Western countries.

More importantly, the 1986 Act was felt to "lack teeth". The 1986 Act allowed creditors to initiate liquidation procedures against debtors, but relatively few such procedures had actually taken place; that is, there was apparently a problem of "creditor passivity" (Mitchell 1993, 1994). The 1992 Act was intended to add

"financial discipline" to the economic environment and to counter this perceived creditor passivity.<sup>21</sup> A particular worry was the problem of interenterprise credit and nonpayments. Firms, it was believed, had regularly allowed other firms to pile up debts against them. As we shall see, the 1992 Act contained a measure aimed directly at improving "payments discipline".

The main features of the 1992 Bankruptcy Act were as follows. The Act applies to legal entities regardless of ownership (individual entrepreneurs are not covered). It allows for three types of procedures: bankruptcy proceedings affording the debtor firm temporary protection from its creditors; liquidation (or "winding-up") procedures, and "final accounting". The 1986 Act had introduced liquidation procedures which were broadly similar to those in the 1992 Act. The main innovation of the 1992 Act was the introduction of bankruptcy proceedings. "Final accounting" refers to the cessation of activity of an economic entity without a legal successor in cases not covered by liquidation. We will not discuss this last procedure here, and will instead concentrate only on bankruptcy and liquidation.

In the "bankruptcy" procedure outlined in the 1992 Act, a debtor firm renegotiates its debts with its creditors while temporarily protected from them. The debtor enjoys a 90-day period of protection from its creditors while negotiating (including protection from liquidation proceedings), extendable by another 30 days by the bankruptcy court upon the joint request of the debtor and the creditors. During the protection period the debtor remains in control of the firm; however, the creditors may request that a property supervisor is installed to represent the interests of the creditors and supervise the assets and financial activities of the firm. The settlement agreement between the debtor and the creditors requires the approval of all creditors present at the creditors' meeting (in this it differs from the liquidation proceedings; see below). The debtor and the creditors are allowed very substantial flexibility in the drawing up of the settlement agreement. If the debtor and the creditors are unable to come to an agreement by the time the deadline expires, the bankruptcy court declares an end to the bankruptcy

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<sup>21</sup> "The primary aim of the new [bankruptcy] law was to overcome the problem of creditor passivity." OECD (1993), p. 82.

procedure and begins liquidation proceedings ex officio (see below). The debtor is prohibited from filing for bankruptcy again for three years; if during this period the debtor is unable to meet the claims of its creditors, it enters the liquidation route directly.

The logic of the kind of bankruptcy procedure implemented in the 1992 Act is to give a debtor in financial difficulties a period of protection from creditors during which the debtor can formulate a restructuring plan (Chapter 11 of the US Bankruptcy Code is another example). Under the 1992 Act, therefore, it is the debtor who files for bankruptcy (either the debtor or the creditors can file for liquidation of the debtor; see below), and debtors may exercise their option to file if they foresee that they will be unable to meet claims on the firm maturing within a year, or if they have debts past due which they are unable to pay. The main innovation of the 1992 Act was to include as well an "automatic trigger" which requires a firm to file for bankruptcy. The condition for obligatory filing is if a firm has a debt it was unable to repay within 90 days of the debt becoming due. That is, if a firm has a payable of any size, owed to anybody, overdue 90 days or more, it must file for bankruptcy within eight days. If the firm does not file for bankruptcy when it is legally required to do so, the firm's managing director is held responsible according to the Civil Code for the failure to file. The only exception to this requirement to file occurs if the firm has separately filed for liquidation (see below).<sup>22</sup> The "automatic trigger" was the main mechanism by which the new Bankruptcy Act was to improve the state of "payments discipline" in Hungary.

A second key feature of the Bankruptcy Act is the approach, or more accurately, the non-approach, to debts acquired by the debtor firm while it is protected from its debtors. There is no distinction made in the Act between debts acquired prior to filing for bankruptcy and debts acquired during bankruptcy. In effect, any debts incurred by the debtor firm during the protection period - new lending by

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<sup>22</sup> In fact, under Section 26 of the Act, if the automatic trigger bites (the firm has a payable overdue over 90 days) and the firm files for liquidation instead of bankruptcy, then insolvency (a requirement for the liquidation to proceed) is automatically presumed.

banks, trade credit for goods being received from suppliers, or whatever - are thrown into the pot with prior debts and subject to renegotiation etc.

The "liquidation" (or "winding-up") procedure arises when an insolvent firm is unable to meet the claims of its creditors and is "wound-up" under court supervision. Liquidation proceedings may be initiated either by the debtor, or by a creditor with a debt past due, upon application to the court. In the latter case, the court may, upon the request of the debtor, grant a delay of up to 30 days for the settlement of the debt. Liquidation formally starts following the court's declaration that the debtor is insolvent,<sup>23</sup> at which point the court appoints an official liquidator. The mandate of the liquidator is to dispose of the assets of the firm in order to satisfy as best as possible the claims of the firm's creditors. This is seen as a gradual procedure in the 1992 Act. The liquidator has two years to do this; and in the meantime, the firm may continue to trade.

The prioritization of the settlement of the debts of a firm in liquidation is (simplifying somewhat) as follows:

1. Liquidation costs. The liquidator's fees are 2% of the revenues derived from the sales of assets and collected claims, but not less than H Ft. 250,000. The court may deviate from this payment schedule, however, in complex cases. Liquidation costs also include both wages and any costs arising from the continuation of the economic activity of the firm following the start of the liquidation procedure. Such costs include debts acquired since the start of the liquidation procedure.
2. Secured creditors.
3. Social security and tax debts. (Within this class, social security debts take priority over other tax and tax-like claims.)
4. Claims of other creditors.
5. Interest, late penalties on taxes, and the like.

If at the end of the liquidation, assets remain after satisfying the claims of the creditors, these are distributed among the equity holders of the firm.

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<sup>23</sup> Presumed if the automatic trigger had bitten; see note 22 above.

The creditors and the debtor may also reach a settlement at any time during the liquidation procedure. A settlement constitutes a program designed to restore the debtor's solvency and an agreement between the debtor and the creditors concerning the timing of debt repayments, write-downs of claims, and restructuring measures in general. Unlike the bankruptcy procedure, unanimous agreement of creditors is not necessary for the settlement to be approved by the court and implemented; agreement of half the creditors in each class (roughly corresponding to debt categories 2-5 above) is enough, provided they hold two-thirds of the total value of claims.

The treatment of wages and other current costs - including, notably, new borrowing - as priority claims, gives the liquidation procedure a strong bias in favor of the continuation of the firm's activity. This is in sharp contrast to the bankruptcy procedure, which has no special features allowing firms to raise capital while protected from existing creditors.

To summarize, the motivation behind the 1992 Bankruptcy Act was two-fold. First, the bankruptcy and liquidation procedures were meant to facilitate the restructuring or liquidation of troubled firms and bringing about the settlement of creditors' claims. In this sense, the Act was directed at a "stock problem", namely the liabilities of the debtor. The second motivation behind the Act, and one which distinguishes it from most other bankruptcy procedures, was the importance given to countering a perceived "flow problem", namely creditor passivity and the lack of payments discipline. The weight given to fighting the perceived "flow problem" is evident not only from the "90 day automatic trigger", but also from the treatment by the Act of the "stock problem". The Act did not contain, for example, any measures to promote fast-track workouts of the debts of insolvent firms; the requirement of 100% agreement of creditors on the restructuring plan in the bankruptcy procedure was unusually strict; and the Ministry of Finance did not increase funding of the bankruptcy court system despite the flood of bankruptcy filings which followed the introduction of the Act.<sup>24</sup>

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<sup>24</sup> On this last point, see Mizsei (1994).

The importance of the "flow problem" - the perceived problem of the lack of payments discipline between enterprises - is therefore crucial to assessing impact of the 1992 Hungarian Bankruptcy Act.

## **V. Interenterprise Credit in Hungary: Was It a Problem?**

There are two measures of interenterprise credit in Hungary commonly used: data on the so-called "queue" reported by the NBH and collected from the Hungarian commercial banks, and data on payables and receivables deriving from enterprise balance sheets. We consider these two data sources in turn.

The value of payables in the "queue" is the most commonly cited figure for interenterprise credit in Hungary. The rapid increase in the size of the queue in the period 1989-91 was a source of concern for policy-makers and observers alike, and was probably the main source of evidence for the assertion that there was a serious "payments discipline" problem in Hungary. But in fact the "queuing" data have been much misinterpreted.

The "queue" refers to payables of firms that have been sent to the firms' banks and are waiting to be paid because the firms have insufficient funds in their accounts to cover the payables. The payables wait in a "queue" for the funds to arrive, hence the name. The data are reported by the NBH, which collects them from the commercial banks. Under the pre-reform system, banks were legally required to operate queues, but starting in 1990 the queuing procedure became optional. This meant that firms and banks could decide for themselves if they wanted to arrange for their banks to queue payables in the cases when they had insufficient funds, or if the banks would return the payment requests to the originators. We have no information about the proportion of firms or transactions subject to queuing arrangements following this change, though we suspect that most medium and large firms kept them.

Table 4 presents some data on the "queue". Between the end of 1989 and the end of 1991 the queue did increase noticeably, from about 4% of GDP to about 7%, or from 15% of bank credit to 21%.

**Table 4**

The "Queue" in Hungary 1987-93				
Date (end-period)	Payables queued at banks and waiting for payment			
	Million forints	As a percentage of total bank credit:		As a percentage of GDP
		Before 1992 LCP reduction of bank credit stock	After 1992 LCP reduction of bank credit stock	
1987	14.0	3.6		1.0
1988	45.5	11.3		3.2
1989	72.8	14.7		4.3
1990.Q1	67.5	13.3		
1990.Q2	75.3	14.0		
1990.Q3	82.4	14.2		
1990.Q4	90.5	14.2		4.4
1991.Q1	119.3	18.1		
1991.Q2	130.8	18.7		
1991.Q3	139.8	19.6		
1991.Q4	158.6	20.7		6.8
1992.Q1	187.0	25.2		
1992.Q2	168.0	22.3		
1992.Q3	106.0	13.8		
1992.Q4	104.0	13.5	14.8	3.7
1993.Q1	94.0		13.0	
1993.Q2	90.0		12.3	
1993.Q3	103.0		13.7	

Note: Queued payables greater than 25 million forints.

Source: László and Szakadát (1992); NBH.

But the key fact about the "queue" is the identity of the queued payables. Three main kinds of payables appear in the queue: payables to other enterprises;

payables to banks; and tax, social security, and other tax-like payables. The NBH did a study in early 1990 of the identity of queued payables based on a survey of Budapest firms. They found that queued payables to other enterprises - "interenterprise arrears" - accounted for only perhaps 20% of the total of queued payables. Queued payables to banks accounted for a similar fraction. The largest component of the queue was tax and social security payables, at about one-half of total queued payables.

During our field trip in January 1994 we asked the staff of the commercial bank branches we visited about the composition of the payables in the "queues" of their customers as of early 1992. Their responses were, that as of that date, the composition of the queue was similar to what the NBH found in early 1990: less than a quarter for both payables to other enterprises and payables to banks, and about half in tax and social security payables.

We conclude that, given the relatively low importance of payables to other firms in the queue, the increase in the amount of "queued" payables in 1989-91 is less evidence of deteriorating payments discipline between firms than it is evidence of a deterioration of tax discipline, i.e. an increase in tax arrears.

Although the increase in queued payables in 1990-91 does not necessarily mean that payment discipline between firms was poor and/or declining, this may still have been the case. We address this question directly using the second source of aggregate data on interenterprise credit, payables and receivables as reported by firms to the CSO.

We begin with several international comparisons of aggregate trade credit. Table 5 shows receivables (trade credit extended) and payables (trade credit received) of the enterprise sector as a percentage of GDP in Hungary and several developed Western countries. Total trade credit in Hungary at the end of 1991 amounted to about 30-35% of GDP; less than in some developed Western countries and more than in others. Table 5 also shows that the scale of total interenterprise credit had been roughly flat in Hungary in the period 1988-91. Thus neither the scale of total



interenterprise credit, nor its movements over time, are indications that there was a serious payments discipline problem in Hungary at the end of 1991.

**Table 5**

Trade Credit Extended and Trade Credit Received: Hungary and Developed Western Economies Compared		
Country & date	End-year trade credit as a % of GDP	
	Trade credit extended (commercial receivables)	Trade credit received (commercial payables)
Hungary		
1988	37	28
1989	35	27
1990	36	29
1991	35	30
1992 (est.)	29	22
Canada 1990	16	14
US 1990	17	14
France 1990	38	35
Japan 1990	59	45
Finland 1990	20	23
Sweden 1990	21	20
UK 1990	20	19

Sources: Hungarian CSO, UK CSO, OECD, authors' calculations.

Nor was the percentage of trade credit overdue unusually high by Western standards. According to Hungarian CSO data, at the end of 1991, 47% (by value) of total receivables in the Hungarian enterprise sector were overdue ("overdue" as defined by the reporting enterprises). This is about the West European average, as can be seen from Table 6.

**Table 6**

Trade Credit and Overdue Trade Credit in Hungary and Selected West European Countries			
Country	Total trade credit in months	Overdue trade credit in months	Overdue trade credit as a % of total trade credit
Hungary (end-1991)	1.7	0.8	47
Denmark	1.6	0.7	40
Finland	1.8	0.8	45
France	3.5	1.6	44
Germany	1.6	0.6	38
Ireland	2.0	1.0	50
Italy	3.0	1.0	33
Netherlands	1.7	0.7	42
Norway	1.6	0.6	38
Sweden	1.6	0.6	38
Switzerland	2.0	1.0	50
UK	2.6	1.6	62
West European average	2.1	0.9	44

Notes: Trade credit is trade credit extended (commercial receivables). Western figures are survey-based; figures for Hungary are based on balance-sheet aggregates.

Sources: Intrum Justitia, reported in Chittenden et al. (1993), Hungarian CSO, Fan and Schaffer (1994), authors' calculations.

That said, it is likely that the scale of nonpayments had been increasing in Hungary. Unfortunately we do not have any earlier data on overdue trade credit, but there was probably an increase during 1990-91. This was a period with large negative demand and supply shocks and a large output drop; many Hungarian firms first got into serious trouble during this time. Just as these shocks were a key factor behind the creation of bad bank credit, they were likely also, behind the creation of bad trade credit. Firms which get into trouble often try to delay paying their bills, and often fail to catch up later.

But in our view, dealing with this problem by forcing late-paying firms to file for bankruptcy was misguided. In a market economy, payment discipline is enforced

primarily by market forces. When a customer persistently fails to pay a supplier, the supplier will typically learn the obvious lesson and stop shipping to the customer in the future, or ship only for cash or payment in advance. We note that the key prerequisite for this lesson to be learned is, very simply, the "hard budget constraint". A firm which doesn't learn this lesson is simply throwing money away; and if it throws enough away it will cease to be able to stay open. Our interpretation of the existing evidence from transition countries is that this lesson is indeed learned by most firms. Of course, an effective system for contract enforcement is an important component of a market economy, and an incentive promoting "payment discipline", especially with respect to deterring non-payment following "one-off" or "last-time" purchases by customers. In fact, such a system was put in place in Hungary in 1986 (the 1986 Liquidation Act, mentioned above), and the 1992 Act did not introduce major changes to this procedure; as before, a creditor could pursue a debtor through the courts, including filing for its liquidation.

That the liquidation procedure was not widely used prior to 1992 is the result of a number of factors: the expected low return to filing, problems with the legal and institutional framework for debt collection,<sup>25</sup> perhaps the relative novelty and the lack of experience with the procedure. Problems with collecting debts make credit both more expensive and more difficult to obtain, and impose real costs on the economy. But if problems lay in the incentives for creditors to pursue debtors through the courts, then it would seem logical that policy changes should have been directed at fixing these incentive problems by making it easier and more profitable for creditors to pursue their debtors. The approach adopted in Hungary

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<sup>25</sup> See Baer and Gray (1995).

- forcing debtors to pursue their creditors - does not obviously address these underlying incentive problems.

The role of bankruptcy and liquidation law in enforcing "payment discipline" between firms, we suggest, is not central and concerns primarily stock and not flow problems. As we just noted, late payment is endemic in developed Western countries; but in practice only a small fraction of late payments are pursued through the courts. Transactions costs are one important reason for this. Another is that supplier/customer relationships are typically repeated, long-term relationships. Suppliers are not likely to take customers to court in such circumstances; late payments will simply be reflected in the next round of negotiations over price and payment terms. In this sense the "flow problem" isn't a "problem" strictly speaking. The scale of late payment reflects in part the relative bargaining strength of the partners; customers can extract trade credit in this way from suppliers if their bargaining position is strong.

In our view, most overdue trade credit is therefore not "involuntary credit", as sometimes claimed; firms readily learn what kind of promptness of payment to expect from their customers, and if they continue to extend trade credit to customers that regularly pay late, then they do this voluntarily. If, however, a customer tries to extract more trade credit than the supplier is willing to offer, or if the customer decides not to pay at all - then the supplier will simply stop selling (and in this case we may reasonably describe the overdue debt as "involuntary"). Once this happens, bankruptcy law becomes relevant because the supplier has the option of pursuing his claim through the courts. Note that by the time this happens, the "flow problem" has already solved itself - the supplier has stopped shipping.

The results of a World Bank survey of 200 medium and large Hungarian manufacturing enterprises conducted in early 1994 provide strong evidence that in fact Hungarian firms did learn the lessons of what to do about customers who don't pay. Firms were asked what methods they used to control overdue

receivables, and how often they used them. The responses are summarized in Table 7.

**Table 7**

How Hungarian Manufacturing Firms Control Their Overdue Receivables: Results of a 1994 Survey of 200 Manufacturing Firms		
Method used to control overdue receivables	Always or frequently used?	In use?
Require payment in advance from new customers	42%	83%
Require payment in advance from traditional customers	13%	53%
Refuse to supply until the past debt is paid or renegotiated	40%	82%
Charge interest on overdue receivables	62%	87%
Informal methods (phone, letter, ...)	66%	87%
Legal action	17%	71%
Sell overdue receivables on debt market	0%	14%
Average number of methods always or frequently used	2.3	
Percentage of firms with at least one method always or frequently used	100%	
Response rate	189/200	

Source: World Bank Research Project on Enterprise Behavior and Economic Reform.

Every firm in the survey frequently used at least one method to control their overdue receivables. Payment in advance, charging interest on overdue receivables, refusing to supply until past debts are repaid or renegotiated, and "informal methods" are the most commonly mentioned methods. Note that payment in advance is required substantially less frequently from traditional customers, reflecting the fact that these customers are able to establish themselves as important or reliable customers. Particularly noteworthy for our purposes is the infrequency with which legal methods are used, just as in Western countries; only 17% of firms say they use them always or frequently.

## VI. The Impact of the 1992 Bankruptcy Act

The 90-day automatic trigger of the Bankruptcy Act started to bite in April 1992,<sup>26</sup> and starting that month the courts were flooded by bankruptcy petitions (see Table 8). Most of the overdue debts which caused the trigger to bite were probably overdue trade credits; while the volume of trade credit was comparable in scale to bank credit, much more of the former was overdue.<sup>27</sup> Between April 1992 and September 1993 (the period when the automatic trigger was in operation), there were about 4300 filings for bankruptcy. Over half of these - 2259 - took place in April 1992 alone. In May 1992 only 201 firms filed, and the rate then gradually declined from about 150 per month in mid-1992 to less than half that by September 1993. About 80% of filings in the period through September 1993 were compulsory filings, presumably required by the automatic trigger. Not all filed bankruptcies made it as far as the formal announcement by the court; about 30-40% of all filings terminated in an "administrative end", meaning withdrawal from or rejection by the court of the procedure for administrative reasons. The remaining filings went on to the next stage, formal initiation (announcement) of bankruptcy proceedings by the court.

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<sup>26</sup> 90 days from when the Act took effect on 1 January 1992, plus an 8-day deadline for filing.

<sup>27</sup> 47% of trade credit was overdue at end-1991 (see Table 6) compared to about 10% of end-1991 bank credit (Table 1).

**Table 8**

Bankruptcy in Hungary 1992-94																
	1992 Q1	April	Q2	Q3	Q4	1992 TOTAL	1993 Q1	Q2	Q3	Q4	1993 TOTAL	1994 Q1	Q2	Q3	Q4	1994 TOTAL
Ministry of Finance data:																
Fileings of which:	724	2259	2605	418	422	4169	372	332	195	88	987	57	49	45		
Voluntary						1016					137	30	40	32		
Compulsory						3153					850	27	9	13		
Court-announced	285	205	1152	473	590	2500	295	257	238	97	887	30	22	18		
Closed (including not announced) of which:						2703					1924	192	105	43		
Administrative end						1260					740	136	74	35		
Agreement with creditors						740					510	39	25	8		
Liquidation started						703					674	17	6	0		
In progress						1466					529	394	338	340		
Central Statistical Office data:																
Court-announced				451	506	2294	262	203	213	102	780	32	17	14	10	73
Finished (announced only) of which:						1041	359	323	325	334	1341	150	110	71	63	394
Agreement with creditors						672	176	152	129	122	579	45	24	14	11	94
Liquidation started						377	181	170	196	201	748	95	78	53	48	274
Other						37	2	1	0	11	14	10	8	4	4	26

The size distribution of firms where bankruptcy was formally initiated by the courts reflected that in the economy as a whole; most were relatively small firms, but a substantial number of large firms also filed, and these large firms accounted for the bulk of employment, sales and exports of all bankrupted firms (see Table 9). By the end of 1993, about 3-4% of all legal entities in the economy were in or had been through court-declared bankruptcy, but this underestimates the volume of economic activity in bankrupted firms because larger firms were more likely to have been bankrupted: for example, over 10% of all firms with employment over 300 filed for bankruptcy in 1992-93 (Table 10). We estimate that employment in all firms where bankruptcy was formally declared by the courts in 1992-93 amounted to about 12-13% of total enterprise sector employment. If the size distribution of filed bankruptcies which did not go on to formal court initiation is similar to that of those formally started by the court, employment in all firms which filed for bankruptcy during 1992-93 would come to about 20% of enterprise sector employment.

**Table 9**

Employment in Firms in Court-Announced Bankruptcy in 1992			
Size class by employment	Number of firms	1991 Employment	
		Thousands	As a % of total enterprise sector employment
All bankrupted firms	2294	273	9.7
of which, with employment			
> 300	233	167	
51-300	656	84	
< 50	1401	22	

Note: Employment in all entities with legal status was 2825 thousand in 1991.  
Source: Hungarian CSO.



**Table 10**

Court-Announced Bankruptcies 1992-93 by Size of Firm		
Size class by employment	Number of firms	As a % of all firms with legal status
All bankrupted firms	3074	3.6
of which, with employment		
> 300	174	10.7
51-300	738	12.2
21-50	604	7.9
< 20	1558	2.3

Source: Hungarian CSO.

We also have data collected by the NBH from the commercial banks on credit to enterprise in bankruptcy and liquidation; these are presented in Table 11. In the first few months after the automatic trigger started to bite, about 8% of all bank credit was to firms in bankruptcy; this gradually fell to about 2% by the end of 1993. Assuming that firms were on average in bankruptcy 90-120 days, these data suggest that the equivalent of about 20-30% of the total credit stock was in firms that went through bankruptcy in 1992-93.<sup>28</sup> There have been suggestions that the banks protected some customers from bankruptcy by extending credit to enable them to pay off overdue payables and thus avoid having to file; but even if so, the amount of outstanding credit to firms which were not so privileged was apparently substantial.

1991 data on the firms which filed for bankruptcy shows that they were financially less healthy than average (Table 12); indebted, loss-making, and with a relatively high portion of receivables overdue.<sup>29</sup> About half of bank credit to firms in

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<sup>28</sup> The scale of this figure suggests that banks were including credit to firms which had filed for bankruptcy, not just to firms where bankruptcy was eventually formally announced.

<sup>29</sup> The high percentage of receivables overdue suggests that these firms were relatively more indebted than their equity/debt ratio indicates; we would expect that if receivables of all firms were revalued at market values, then those of the bankrupt firms would be

bankruptcy in early 1993 was taken from the banks as part of the 1992 LCP, meaning it had been classified as "bad" as of September 1992 (before bankruptcy proceedings would have begun).

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marked down more.

**Table 11**

Bank Credit to Firms in Bankruptcy and Liquidation May 1992 - November 1993			
Date (end-month)	Total bank credit (billion ft.)	of which, % to firms in	
		Bankruptcy	Liquidation
Before 1992 LCP reduction of credit stock:			
1992.05	725.0	8.9%	4.3%
1992.06	727.2	8.4%	5.2%
1992.07	740.1	8.5%	5.7%
1992.08	746.3	7.7%	6.3%
1992.09	750.2	7.7%	6.9%
1992.10	755.3	6.1%	7.4%
1992.11	763.8	5.2%	7.6%
1992.12	763.3	4.3%	7.7%
1993.01	749.2	4.6%	8.2%
1993.02	775.9	4.4%	7.8%
1993.03	n.a.	n.a.	n.a.
After 1992 LCP reduction of credit stock:			
1993.04	711.2	2.7%	5.0%
1993.05	704.9	2.2%	4.4%
1993.06	711.8	2.2%	4.9%
1993.07	726.6	2.6%	5.0%
1993.08	716.6	2.6%	5.5%
1993.09	738.3	2.2%	6.4%
1993.10	740.1	1.8%	6.3%
1993.11	747.2	1.8%	6.7%

Source: NBH.

**Table 12**

1991 Indicators of Firms in Court-Announced Bankruptcy in 1992		
	Firms in Bankruptcy	Total enterprise sector
Debt/equity ratio	0.74	0.65
Profit/sales in %	-12.7%	0.5%
Exports/sales in %	16.3%	12.9%
% of receivables overdue	65%	47%

Source: Hungarian CSO.

What of the so-called "queue", the growth in which provided some of the impetus behind the introduction of the automatic trigger? The scale of queuing following the implementation of the Bankruptcy Act did indeed fall quite sharply (see Table 4). It has been suggested this indicates an improvement in payments discipline, but most of this is actually a statistical illusion. According to a study of the NBH, 70% of the drop in the queue was due to the debtor protection afforded by the Bankruptcy Act; when firms entered bankruptcy, their payables were automatically removed from the queue.

Most bankruptcy filings were apparently dealt with fairly promptly, as required by the law.<sup>30</sup> As noted above, the most common conclusion to a bankruptcy filing was an "administrative end". Anecdotal evidence suggests that sometimes debtor firms would deliberately misfile their bankruptcy applications in order to play for time, but we have no evidence of how common this practice was. Of the bankruptcy cases formally announced by the court and subsequently completed in 1992, termination via agreement with creditors was initially more common than continuation into liquidation, but in 1993 liquidation became the more common exit route (see Table 10). This reportedly in part because creditors, learning from their experiences in previous bankruptcy procedures, started to require better-formulated restructuring plans from the debtors.

In September 1993, after mounting dissatisfaction with the bankruptcy experiment, Parliament amended the 1992 Bankruptcy Act. The "automatic trigger" was removed, and the requirement of 100% creditor agreement was loosened. Since then the rate of bankruptcy announcements has slowed dramatically: from about 75 per month in late 1993, to fewer than 10 per month in 1994.

The number of liquidation procedures also increased dramatically following the implementation of the bankruptcy reform - indeed liquidations outnumbered

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<sup>30</sup> Gray (1994) suggests this was possible at least in part because judges had a minor role in the process; negotiating the reorganization plan is left to the debtor and the creditors.

bankruptcies by a substantial margin from the start - and unlike the bankruptcy track, liquidations have continued to be numerous (see Table 13). In 1992 there were almost 10,000 liquidation filings, and in 1993 there were a further 7,000; exits from bankruptcy to liquidation account for relatively few of total liquidations. There was moderate increase in the number of liquidation filings in April 1992, presumably by firms affected by the automatic trigger and choosing to avoid entering bankruptcy at all and filing directly for liquidation instead. The removal of the automatic trigger in late 1993 may similarly account for the subsequent moderate fall in liquidations; but 1994 should still see about 5,000 liquidation filings (compared to about 200 bankruptcy filings). As in the case of bankruptcy, a large number of liquidations never really get started and instead terminate in an "administrative end" - over 4,000 ended this way in 1992. The numbers of court-announced liquidations are still substantial, however, and in fact have proceeded at a fairly steady rate of about 2,000+ per year since 1992.

**Table 13**

Liquidation in Hungary 1989-94																	
	1989	1990	1991	1992 Q1	April	Q2	Q3	Q4	1992 TOTAL	1993 Q1	Q2	Q3	Q4	1993 TOTAL	1994 Q1	Q2	Q3
Filings of which, by initiator:				2436	1281	3033	2197	2225	9891	2180	2156	1633	1273	7242	1363	1292	1285
Debtor-initiated									1760	436	389	281	253	1359	271	240	211
Creditor-initiated									8131	1744	1767	1352	1020	5883	1092	1052	1074
State (tax and tax-like)									~900	146	165	152	145	608	156	161	222
Banks									~60	44	30	42	43	159	39	21	19
State enterprises									~1100	297	209	131	102	739	91	54	55
Other creditors									~6100	1257	1363	1027	730	4377	806	816	778
Court-announced									2227	591	683	639	680	2593	526	712	524
Closed (including not announced) of which:									4936	1206				5115	1195	1033	756
Administrative end									4401					3975	918	782	514
Completed liquidation	141	233	526	120	161	529	911	667	562					1140	277	251	242

Source: Ministry of Finance, except Kornai (1993) for 1989-91 and breakdown for creditor-initiated liquidation in 1992 deriving from somewhat different figures in Mitchell (1994).

As with bankruptcy, most firms in liquidation are small, but the bulk of economic activity in firms in liquidation is accounted for by larger firms. As of the end of 1993, about 7% of total bank credit was to firms in liquidation (and this figure was rising); allowing for credit to firms in liquidation taken from the banks in the 1992 LCP and for credit to firms in completed liquidations, we estimate that in excess of 10% of the total credit stock has been to firms in liquidation in 1992-93.

Table 13 also presents some information about the initiators of liquidation proceedings. About 15-20% of liquidations are initiated by the debtor itself; another 10% are initiated by state creditors (the tax collection, social security, and customs authorities). Hardly any are initiated by the banks (less than 1% in 1992 and only 2% in 1993). The bulk of liquidations (about 70% or so) are initiated by state enterprises and "other creditors"; in other words, by trade creditors. The introduction of the bankruptcy procedure in 1992 is unlikely to be the main reason for the large increase in the number of liquidations, since most liquidations are creditor-initiated and the number of liquidations resulting from bankruptcies is small relative to the total number of liquidations. We do not explore the possible reasons for the increase in liquidations here.

Termination of a liquidation via "administrative end" is apparently quick, but those liquidations which do proceed are, however, fairly time-consuming. Only about 600 liquidations were completed in 1992, and many or most of these probably started prior to 1992, under the old liquidation law. The rate of completions increased in 1993 and 1994 to about 1,000 per year, but this was still only about half the rate of court announcements, and so a backlog has been developing. As noted above, the law allows up to two years to complete a liquidation, and so we should have already seen a surge in the numbers of completions by mid-1994; one possibility is that some liquidations are missing the two-year deadline.

There are several reasons for the slow speed of the liquidation procedure. Liquidation is an inherently untidy and time-consuming process; it was not designed to be a fast-track procedure, and it isn't. It is the liquidator's duty as set



out in the Bankruptcy Act to try to recover as much as possible for the firm's creditors, which is an incentive for "slow-and-correct" rather than "quick-and-dirty" liquidations. Prices for the assets of firms were low (reportedly 20-30% of book value<sup>31</sup>), in part because of the large number of ongoing liquidations and the glut of assets being offered on the market, and liquidators/creditors were reluctant to accept these prices. (See Annex D for a detailed liquidation "case study".)

A major goal of the "automatic trigger" was to restore "payment discipline" in the economy, and indeed the scale of trade credit did decline substantially, but we have argued above that payment discipline was not actually a problem that demanded that sort of legislated solution. The "success" in decreasing the scale of "queuing" was in any case largely illusory, most of it an artefact resulting simply from the administrative protection afforded by the Bankruptcy Act. In the remainder of this section, we consider two other aspects: the contribution of the bankruptcy experiment to the "bad debt" problem, and the possible cost of the experiment via disruption of the credit market.

As noted above, the firms which filed for bankruptcy were, on average, financially ailing though not extraordinarily so. One may reasonably argue that the "automatic trigger" was a blunt instrument. On the one hand, it would also have captured firms with temporary liquidity problems which were not otherwise in serious trouble or in need of restructuring. On the other hand, the automatic trigger would not catch firms whose "bad debt" to banks was being rolled over by the banks instead of being recognized as "bad". The bankruptcy procedure was also circumvented in the cases of government rescue programs for "special cases" (more about which below).

It is not clear how much the creditor agreements generated genuine workouts of bad debts. The state creditors (tax authority, customs authority, social security administration) would rarely if ever forgive the principal owed to them, and

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<sup>31</sup> See OECD Economic Surveys: Hungary, 1993, p. 84. We were quoted a similar figure at the firm in liquidation we visited (see Annex B).

would consider only rescheduling the principal or forgiving interest penalties. Anecdotal evidence and aggregate data suggest that the banks behaved similarly, which is understandable given their capital adequacy; they would be unable to write-off debts on a significant scale just as they were unable to "recognize" bad debts. Micro evidence would be very helpful here.

According to the SBS rules for classification of bank debt, credit to firms in liquidation (but not to firms in bankruptcy) must be rated in the bottom category of "bad", and as noted above, during this period the banks were reluctant to openly recognize their bad debts. Moreover, while the liquidation process is going on, a debtor firm in liquidation is not required to service or repay inherited debts, including inherited bank debt. Finally, the bargaining power of banks relative to their firms is typically large compared to the bargaining power of trade creditors. While a highly-indebted firm is outside bankruptcy/liquidation procedures, banks have better prospects of extracting money from it than would trade creditors (and possibly even state creditors). For these three reasons, we would not expect to see the banks frequently file for the liquidation of the creditors, and this was indeed the case.

We suspect the bankruptcy experiment contributed to the cash flow problems of the banking sector in two ways. First, firms did not service or repay their bank debt while in the 90-day protection period offered by bankruptcy, thus contributing to the cash flow problems of the banking sector. In the World Bank survey of 200 manufacturing firms cited earlier, over half of those firms which filed for bankruptcy during the period of the automatic trigger had never failed to repay or service a bank loan during that time. Second, the bank debts of firms which left bankruptcy via the liquidation exit of the bankruptcy procedure would be non-performing for the entire length of the liquidation procedure. Thus by putting many firms in a position where they would not service their bank debt either temporarily (while the bankruptcy negotiations took place) or for a longer period (while liquidation took place), the bankruptcy experiment contributed to the cash flow and bad debt problems of the banking sector. Still, this did not in

itself necessarily add to the cost of the bankruptcy experiment; one could argue that it meant simply that the problems of the banks came into the open sooner.

In our view, the main cost of the bankruptcy experiment was not in the banking sector but in the enterprise sector, because the firms which were thrown into bankruptcy - even if they were in arrears on only one kind of credit or even to only one creditor - were cut off from access to all kinds of credit as a result. A supplier will obviously not want to extend trade credit to a firm about to enter bankruptcy, and the absence of any clause in the 1992 Bankruptcy Act giving priority status to debts incurred during bankruptcy was a powerful disincentive for suppliers to extend trade credit to firms in bankruptcy. The supplier, if it is to ship at all to a firm near or in bankruptcy, will demand payment in advance or on delivery. The bankrupt firm will not be able to solve this liquidity problem with the help of bank credit, because a bank will not lend for the same reasons - lending to a firm about to enter bankruptcy is clearly a mistake, and lending to a firm in bankruptcy is just as mistaken because of the lack of priority status for new lending.<sup>32</sup> A potential customer may be unwilling to start or remain in a long-term relationship with a firm in (or about to enter, or leaving) bankruptcy if it has doubts about whether this supplier will still exist as a going concern in a year's time. And the economy-wide and coordinated implementation of the "automatic trigger" had the effect of causing many firms to try to repay overdue trade credit in early 1992 so as to avoid having to file for bankruptcy. Both bank credit and trade credit fell substantially in real terms in 1992 (see Table 14), and the 1992 Bankruptcy Act may have been a major factor (in the case of trade credit, the major factor) behind this. This loss of liquidity could have depressed output, perhaps significantly.

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<sup>32</sup> When we enquired at the special division for loans to firms in bankruptcy or liquidation at one of the three major commercial banks, they said that in their experience they never saw any lending to firms in the middle of a bankruptcy procedure. They also said that for the bank to be willing to lend, special conditions would have to be attached to the loan (e.g. a repayment guarantee offered by a third party).

**Table 14**

The 1992 Credit Crunch in Hungary			
	1.1.92	31.12.92	% real change
Commercial receivables of medium and large enterprises			
Billion forints	466	449	-18.8
As % of GDP	20%	16%	
Commercial payables of medium and large enterprises			
Billion forints	353	311	-25.7
As % of GDP	15%	11%	
Bank credit to enterprises (small entrepreneurs excluded; effects of 1992 LCP excluded)			
Billion forints	705.4	695.5	-17.0
As % of GDP	30%	25%	

Notes:

(1) Data on trade credit derive from the enterprise dataset described in Annex F. About 10% of the sample (by value) is excluded because of data inconsistencies. The data are not directly comparable to those in Table 5 because of differences in data coverage and data definitions.

(2) % real change calculated using the producer price index (18.8% Dec. 1991-Dec. 1992).

(3) % of 1991 GDP for 1.1.92; % of 1992 GDP for 31.12.92.

We are able to report recent evidence on the impact of the 1992 Bankruptcy Act deriving from the World Bank survey of 200 Hungarian medium and large manufacturing enterprises conducted in early 1994. Firms were asked if, in the period April 1992 to August 1993 (when the automatic trigger was active) they were involved in a bankruptcy procedure as a debtor or as a creditor, and if so, whether they lost sales or suppliers as a consequence. The results are reported in Table 15.

**Table 15**

The Costs of Bankruptcy: Results of a 1994 Survey of Hungarian Manufacturing Firms

Were you involved in a bankruptcy procedure in the period April 1992 to August 1993:		
	as a debtor? (as a % of responding firms)	as a creditor? (as a % of responding firms)
Yes	19%	75%
If yes, did you lose		
sales	9%	58%
suppliers	8%	42%
(sales or suppliers) as a result?	(10%)	(63%)
Response rate	173/200	157/200

Source: World Bank Research Project on Enterprise Behavior and Economic Reform.

About one-fifth of the sample had actually filed for bankruptcy during this period, a figure consistent with the aggregate data cited above. About one-half of these, or 10% of the total sample, lost either sales or suppliers as a result (most lost both). What is surprising is how numerous are the firms affected by bankruptcy as creditors, and how costly they report the experience to be. Fully three-quarters of the entire sample were involved in bankruptcy procedures as creditors. About four-fifths of these, or 63% of the entire sample, report they lost either sales or suppliers as a result. As one would expect, nearly all of these creditor firms involved in "costly bankruptcies" say they lost sales as a result. Most surprising of all is the degree to which the demand shock of these lost sales was passed on by creditor firms to their suppliers: over half of creditor firms, or 42% of the entire sample, report they lost suppliers as a result of being involved in a bankruptcy as a creditor.

It is not clear why more creditors report bankruptcy to have been costly than do debtors. One reason may be selection bias; firms with severe difficulties which filed for bankruptcy firms may have subsequently entered liquidation (or even closed down) and hence may have been unwilling (or unable) to participate in the survey. But even if we take the lower figure (one-half) as the estimate for the proportion of "costly bankruptcies", the evidence suggests that the "automatic trigger" experiment was costly because of the propagation of trigger-induced liquidity problems originating in the debtor firms and then spreading to their creditors.

One final note: under the Bankruptcy Act firms could voluntarily file for reorganization under apparently broadly-defined criteria (see above); the fact that so many filings took place in April 1992, when the trigger started to bite, and that most filings during this period were compulsory, suggests that most managers would have preferred to avoid filing. The poor financial statistics for bankrupted firms supports the notion that more often it was the less-healthy firms which couldn't repay their overdue debts (in time) which were caught by the trigger. However, a firm which was caught by the automatic trigger could avoid the bankruptcy credit crunch by filing for liquidation instead, since a firm in liquidation was not cut off from new credit. In fact, most firms didn't take this route; liquidation filings were indeed higher than normal in April 1992, but not by very much compared to the surge in bankruptcy filings (about 400 above normal vs. over 2000, for liquidation and bankruptcy respectively). One possible explanation is that the liquidator has substantial powers, including the power to sack the management; the bankruptcy procedure allowed the managers much more autonomy (and security) and was therefore more attractive to management.

## **VII. Bank Recapitalization and Enterprise Rescue and Restructuring**

In principle, the bankruptcy reform could have played a role in the workout of bad bank debt held by firms. In practice, the bankruptcy act did not play a direct major role in dealing with these bad debts to the banks. Initially, the Antall

government pursued a two-track approach to bank recapitalization and enterprise rescue and restructuring (BRERR). Separate policies were designed to support financially the SOCBs and to cushion the transition shock for some large SOEs. The policymakers intended to encourage the latter to adjust gradually to market conditions and provide the former with the capital base and the liquidity necessary to allocate credit effectively. In this way, the government hoped to put in place the foundations for a quick recovery to the transition-induced recession and to nurture strong sustainable growth. The policies focused on reforming a malfunctioning credit market and weaning viable large enterprises from public support through financial and operational restructuring.

By the end of 1992, a credit market failure was evident. High spreads and an inefficient payments system had driven many good commercial customers away from the domestic banks to seek credit and services elsewhere.<sup>33</sup> Some companies used internal funds whereas others sought financing on international markets. Some companies floated their own issues of commercial paper to circumvent the credit gridlock. The banks found themselves caught in a squeeze having to generate sufficient income to accumulate rapidly the required loan-loss reserves but finding no small-risk creditworthy commercial clients. Having no better alternative, banks turned toward government securities which provided both a reasonable risk-return package and the necessary liquidity (Treasury Bills) to support the increased provisioning. Thus, the budget deficit was financed by household savings and the productive sector was crowded out of the credit market as bank intermediation between individual savers and business investors ceased.<sup>34</sup>

In December 1992, the government announced the guidelines of a program intended to address the financial weakness of the SOCBs and to facilitate the

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<sup>33</sup> By the second half of 1992, the difference between lending and deposit rates with less than one year maturity was around 12%. (NBH Monthly Report 1/1993, p.7)

<sup>34</sup> The net household savings rate remained high at 11.6% of disposable income in 1992 while the fiscal deficit as a ratio of estimated GDP was 7%. (NBH Monthly Report 1/1993, pp. 6 and 7)

financial restructuring of the indebted enterprises. The final terms of the loan consolidation program (LCP) for 1992, announced in February 1993 by the Ministry of Finance (MoF), focused on removing the bad-debt burden from the balance sheets of the SOCBs and replacing it with long-term (20-year maturity) government securities called credit consolidation bonds (CCBs) authorized by the 1993 fiscal budget law. Once removed from the balance sheets of the SOCBs, the bad loans were to be placed with a factoring agency, the Hungarian Investment and Development Rt. (HID), to manage their workout. The MoF determined eligibility for inclusion in the LCP based on a loan being classified according to Hungarian banking regulations as "bad" as of 1 October 1992. Fourteen banks and sixty savings cooperatives contributed Ft. 102.5 bn. in face value of bad loans (principal plus accrued interest) totalling over 4,000 accounts in exchange for Ft. 81.3 bn. of CCBs. At the beginning of 1993, an additional Ft. 18 bn. of bad debt was added to the program from the balance sheets of three troubled banks to bring the total to Ft. 120.5 in face value covering 2647 debtors against which Ft. 98.8 bn. in CCBs were issued. Excluded from this program were loans to small enterprises and loans with state guarantees. Furthermore, loans to the largest SOEs were excluded for the most part because the SOCBs were rolling them over to avoid recognizing them as a bad.

As the details of the LCP emerged in the press, the confusion surrounding the government program became evident. The government was mandated to prepare a bill on a credit consolidation fund that would finance the bank recapitalization by the end of January. In late January, it was reported that this fund was expected to be self-financing and comprise "... voluntary commitments of the banks, gains on the sale of debts, part of the income from the privatisation of banks, and part of the income from the privatization of companies boosted through financial restructuring" (underlining added by authors for emphasis).<sup>35</sup> HID was to issue the state consolidation bonds to cover the loans after making a minimal symbolic payment and to sell the bad loans with the proceeds returning

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<sup>35</sup> "Credit Consolidation Fund," Banks and Exchanges: Financial and Business Weekly, January 28, 1993, p. 15.



to the state budget.<sup>36</sup> Furthermore, there was confusion about whether the bank or the state was liable for payment at maturity. It was reported that auditors consider "... the accountancy procedure unacceptable whereby banks will have to pay back consolidation state bonds.... The only possible solution would be for the state to renounce its claim, and fix a user's cost, experts say."<sup>37</sup>

Two different financial instruments were created to replace the calculated values of removed "bad" loans. Series A bonds replaced the principal of the "bad" loans and paid interest twice annually at the average T-Bill rate of the last six months. Interest arrears were replaced by series B bonds that paid only 50% of this return. The bonds are to be redeemed by the government on maturity but the option of buying them back earlier at auction was included. However, the MoF retained the option of levying a special "stabilization" tax of 50% on total interest income earned from both types of CCBs (perhaps due to the auditors' earlier expressed concern). However, later in the year and in response to new criticism from international bank auditors, the MoF converted series B bonds to series A bonds and rescinded the stabilization tax option. By paying full market interest on all CCBs and removing the potential tax liability from the banks, the MoF added significantly to the auditors' calculated present value of the government securities provided as assets in the bank recapitalization.<sup>38</sup> Even with this change, the financial support provided by the LCP turned out to be insufficient to resolve the solvency problem of the banks.

Of the debts involved in the LCP, HID arranged to manage Ft. 41.2 bn., slightly more than one-third of the portfolio, leaving the remaining loans with the SOCBs for collection under contract with the MoF. Individual arrangements were

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<sup>36</sup> "Bad Debt Burden Eased?," Banks and Exchanges: Financial and Business Weekly, January 28, 1993, p. 15.

<sup>37</sup> "Debt Help Too Expensive?," Banks and Exchanges: Financial and Business Weekly, February 12, 1993, p. 13.

<sup>38</sup> By one calculation according to International Accounting Standards, the Ft. 81.3 bn. face value of the CCBs was written down to 32.5 bn. because of the below-market interest paid on series B bonds and the "stabilization" tax liability.

retained and no attempt was made to rationalize collection of a single company's debt by packaging all of its bad loans with a lead SOCB. The contracts stipulated that no payments were to be made to the SOCB until some sum was recovered at which point a progressive share, depending on the speed of recovery, was retained by the collector. Very small sums were recovered by the SOCBs; by mid-1993, HID recommended the sale of the remaining claims to factoring houses.

Of the fifty-six companies it has taken on, HID expects to restructure about ten or twelve. HID has a twelve person staff involved in these workouts and uses outside consultants. HID did take on the most valuable assets with an eye toward attracting equity from strategic investors using debt/equity swaps. The first public tender for one of these companies was announced on 10 January 1994. In the interim, HID is providing short-term bridge financing something the SOCBs were reluctant to do. Another twelve or so of its companies are considered to be non-viable; HID will force their liquidation and realize the collateral on the loan contracts. The fate of the other thirty-odd companies is not yet clear. HID carries these contracts on its balance sheet as "leased assets" and written-down from face value. It is evident that the workout procedure is longer, more costly, and provides less return than was initially expected by the government. Hence, the LCP did not achieve its expected financial restructuring objective either.

The LCP resulted in very little loan consolidation and workout and turned out to be "too little, too late" from the perspective of bank recapitalization. To support this evaluation, we use two sources of data on the bad debt problem in Hungary. The first, presented in Table 1, is the qualified portion of the loan portfolios of all commercial banks reported to the SBS. Included in these numbers are interest arrears as well as overdue principal. From April 1992 through December 1993, the requirements concerning loan and interest classification were unchanged (see Annex D) and the Bankruptcy Act was unchanged from January 1992 until September 1993 so that the numbers in the table for 1992-93 refer to a stable set of regulations. As Table 1 indicates, the aggregate amount of "bad" debt at the end of September 1992 was 126 bn. or the equivalent of 16% of total credit to the

enterprise sector.<sup>39</sup> Of this total, 102.5 bn. was included in the LCP. However, after accounting for the effects of the LCP, the amount of "bad" debt recognized by the banks at the end of 1992 was 85 bn. (Table 1). Does it then follow that the amount of "bad" debt at the end of 1992 would have been 187 bn. in the absence of the LCP?

The only loans eligible for inclusion in the LCP were those already classified as "bad" as of 30 September 1992 so that banks could not act strategically *ex ante* and dump other problematic loans (perhaps, some of those classified as "doubtful" or "substandard") into the program. However, the data in Table 1 suggests that the banks did react strategically *ex post* to the LCP by reclassifying some of their "doubtful" loans to the "bad" category for balance sheet purposes at the end of 1992 following the recapitalization from the LCP. The volume of loans classified as "doubtful" decreased sharply from the third to the fourth quarter 1992 (Ft. 34 bn.) and then grew mildly but steadily after that time. Furthermore, the volume of loans classified as "bad" grew during the same quarter by Ft. 64 bn. net of the Ft. 102.5 bn. included in the LCP. This appears quite large compared to the increase of Ft. 120 bn. in loans classified as "bad" (including the additional Ft. 18 bn. taken from the banks in the spring of 1993) over the whole of 1993.

With recapitalization, the banks may have been able to "afford" to classify more loans as "bad" and, thus, incur the 100% provisioning obligation. More importantly, the banks could not afford not to rate more loans as "bad" and, thus, reduce their 1992 tax liability. The LCP required that any excess provisions, i.e., provisions above the amount required by the Hungarian Accounting Procedures, created by the LCP recapitalization would become taxable income for the banks. At the time of its announcement and because of this regulation, the MoF expected to reap additional taxes as a result of the LCP. The sharp net increase in "bad" debt recorded in the final quarter of 1992 is most likely an increase in "recognition" due to tax incentives.

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<sup>39</sup> This last figure decreases slightly if interest arrears are added to the total credit stock.

During the first three quarters of 1993, problematic loans increased sharply so that by the end of September 1993 the total value of problematic loans was equivalent to its value a year before without any recapitalization, and as a percentage of enterprise credit, it actually increased. Of the problematic credit, the total value of "bad" credit was even higher at the end of September 1993 than a year before (Ft. 142 vs. Ft. 126) and, as a percentage of enterprise credit, "bad" increased from 16% to 19%. Although the government had touted the 1992 LCP as a once-only event hoping to dash any expectations of a subsequent bailout (moral hazard problem), the increased in "recognized" bad debt during 1993 made this a non-credible pronouncement.

Separately from financial sector reform, the government pursued an industrial policy consisting of the design and implementation of an enterprise rescue and restructuring program that actually began before bank recapitalization was construed. In June 1992, a state-asset management company (AVRt) was formed and given the government's ownership entitlement to the companies that were expected to remain wholly or partially state-owned. A list of 163 companies consisting of the usual infrastructure and public sector activities but also including companies with international trademarks (e.g., Herend, Pick) was published in the press. The newly formed AVRt was given the responsibility of managing the state's shares in these companies. Another government organization, the State Property Agency (AVU), had been established on 1 March 1990 initially to counter asset-stripping by insiders during the spontaneous privatization phase. However, the AVU's mandates were broadened to involve a pro-active role in privatization of SOEs and to act as a (temporary) holding company for privatizing and privatizable enterprises. Hence, state ownership shares in SOEs are currently held by either the AVU or the AVRt depending on the nature of the company.

In August 1992, a crisis management program was developed by the Ministry of Industry and Trade (MIT) in which twelve large SOEs with serious payment arrears problems, large employment, and perceived favorable long term prospects after restructuring were identified. Dubbed the "dirty dozen", half of these companies were in the AVRt's portfolio while the government's shares of the other

half were held by the AVU. Charged with overseeing the restructuring of all twelve companies, the AVRt hired consultants to prepare strategic business plans. In September 1992, Taurus Rubber Company was added to bring the list to a "baker's dozen". The program to date has been less than successful; debt rescheduling (forgiveness and debt/equity swaps) has gone slowly and few strong recovery plans have been prepared. In one case, that of Dunaferri (a subsidiary of the Danube Iron Works), parliament authorized the forgiveness of half of the debt. Meanwhile the obligations of the other companies to the banks have been placed in limbo.

At the time of the implementation of the LCP in March 1993, 159 agricultural cooperatives in financial difficulty because of a serious drought in the previous summer and 14 industrial firms were selected by the MoF for special treatment. The latter consisted of 10 SOEs from the original dirty dozen, 2 affiliated with Hungarloo (which had been included in the dirty dozen), TVK (chemicals), and a steelworks company. The program involved removing a total of Ft. 31.6 bn. (of which Ft. 5.6 bn. was accrued interest) from the balance sheets of both the debtor company and the creditor bank(s). The bulk of this sum came from the industrial companies as the total debt (principal plus accrued interest) purchased by the state on behalf of the agricultural cooperatives was only Ft. 4.6 bn.

This enterprise rescue program should be distinguished from the LCP on two important dimensions. First, not all credits removed from the banks' balance sheets were "bad"; some were classified as "substandard" or "doubtful" according to Hungarian banking regulations. Indeed, the fact that large SOEs like those in the dirty dozen did not have bank loans qualified as "bad" lends credence to the argument that the banks were protecting their large (inherited) clients by rolling over debts that were about to come due. Second, large loss-making SOEs with government-guaranteed loans were included. During 1993 MAV, the Hungarian railway, was added along with another industrial company so that the list expanded to the "sour sixteen" and encompassed a total stock of credit equal to Ft. 57.3 bn.

As the worsening state of the banks during 1993 became evident (see Table 1), a subsequent bank recapitalization scheme was discussed. As Table 16 indicates, the dynamics of overdue loans during 1993 differs significantly across banks. Prepared from data reported monthly by the banks to the NBH, this table records any overdue loan (regardless of the time period) but it includes principal only<sup>40</sup> (and thus excludes interest arrears) so that its coverage is different from that of Table 1. From May to November 1993, the "big four" (consisting of MHB, BB, K&H and the Foreign Trade Bank) added Ft. 29.7 bn. in overdue principal with one of these accounting for three-quarters of this amount. The "big six" (OTP and Postabank plus the above four) accounted for an increase of Ft. 33.2 bn. in overdue loans. As a percentage of the total overdue credit in the banking system, the big four accounted for 57.8% in May and 61.2% in November 1993. The analogous numbers for the big six were 71.9% in May and 73.7% in November. Clearly a case could be made for another recapitalization aimed once again at the ailing banks.

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<sup>40</sup> To be precise, scheduled principal payments only; payments which have not yet come due are not included.

**Table 16**

Overdue Credit of Hungarian Banks May-November 1993 (Commercial Portfolios)							
	No. of banks	Nov 1993 % of Total credit	May 1993 % of credit which is overdue	Nov 1993 % of credit which is overdue	Total Credit	May-November 1993 Growth rate of Overdue Credit	Non-Overdue Credit
Big Six	6	71	16	22	3	41	-5
All Hung. Banks (Foreign ownership <= 25%)	23	84	17	23	3	38	-5
Banks in Dec. 1993 Recapitalization Program	8	55	19	28	-3	43	-13
25-65% Foreign Ownership	5	5	14	20	21	45	16
65%-100% Foreign Ownership	12	11	2	1	32	-23	33
ALL BANKS	40	100	15	21	6	37	0

In December 1993, the MoF announced the details of an integrated Bank Recapitalization and Loan Consolidation Program (BRLCP) that initially included ten banks, namely MHB, K&H, BB, Mezobank, Takarekbank, Agrobank, Dunabank, Iparbankhaz, Konzumbank, and Realbank, certain savings cooperatives from the above program and the "sour sixteen". On the financial side, the BRLCP was intended to resolve the solvency and liquidity problems of Hungarian SOCBs by augmenting sufficiently their capital base. Its major objective was to provide positive cash flows to the largest three Hungarian SOCBs (MHB, K&H, BB) all of which had negative projected capital adequacy ratios (CARs) for 1993. The first tranche was applied to the banks' balance sheets at the end of 1993 with the intention of raising the CAR at the end of the year for each participating bank to a minimum of zero. The second tranche which was allocated in May 1994 in conjunction with the banks' annual general meetings (AGMs) was designed to bring each participating bank's CAR to

4%. This would result in every Hungarian SOCB having a CAR of 4% or higher by the end of May 1994. Finally, at the end of 1994 the participating banks with CARs below 8% issued subordinated debt (which according to BIS standards is counted as Tier II capital) to bring their CARs (including both Tier I and Tier II capital) to 8%.<sup>41</sup>

Loans eligible to be included by the banks in the BRLCP were those classified as "doubtful" or "bad" as of 31 December 1993. After this recapitalization, the participating banks were required to stay current in their accumulation of loss reserves (provisions) against qualified loans. Hence, the deferred provisioning liability included in the Banking Act was rescinded for these banks. Prior to the implementation of the BRLCP, two banks were removed from consideration. Realbank was subsequently "privatized" in a MEBO (management/employee buyout) and is attempting to negotiate an arrangement outside of the scheme. Konzumbank was declared ineligible by virtue of its having a CAR in excess of 8%.

Unlike the LCP, the BRLCP specifies conditions for bank participation in enterprise restructuring; hence the more integrated approach. In response to the AVU's argument for loan consolidation rather than bank recapitalization, fifty-five companies were designated in October 1993 as eligible to participate in an accelerated conciliation process in which the banks are intimately involved. Of these fifty-five, twenty-four are in agribusiness under the Ministry of Agriculture (MoA) and 31 are in industry under MIT. The companies were required to have a recovery plan completed by the end of January 1994. HID has signed a contract with the MoA to participate in workout and expects to do so with MIT. An additional forty companies were added to this fast track approach bringing the total number included on the list to ninety-five.

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<sup>41</sup> According to BIS standards, banks should maintain at least a 4% CAR when Tier I capital is used in the calculation and at least an 8% CAR when both Tier I and Tier II capital are used.



Under the supervision of the MoF, the involved commercial bank took the lead in organizing and convening a creditors' committee consisting of the relevant state asset management company, all state creditors (tax and customs), all bank creditors, the state social security authority, the relevant branch ministries and the MoF. The conciliation procedures were to be completed by 31 March 1994 although a 30-day extension was obtainable by mutual consent of the participants. Debtors having loans classified as "doubtful" or "bad" with a participating bank received a letter from the bank by 28 February 1994 notifying them of their eligibility to participate. The debtor was then required to prepare a reorganization plan and submit it to the bank which must then, within thirty days, begin the procedure described above. The committee had sixty days to come to an agreement with the same thirty-day extension obtainable.

Resolution was obtained if all creditors agreed with the debtor's reorganization plan and eased the debtor's financial overhang by any or a combination of the following: debt forgiveness, rescheduling or debt/equity swaps. The tax law was modified so that the customs and tax authorities could forgive accumulated arrears as well as the current interest and penalty charges. Furthermore, debt forgiveness arising in the settlement is not treated as taxable income. The banks are also allowed to hold equity stakes acquired in these settlements for up to three years. In the event that a bank is the sole creditor holding out, the relevant state management company has the option to purchase the bank's debt (including the collateral) at adjusted book value (face value minus provisions) from the bank. In such a case, the bank is also required to return the relevant portion of the government securities provided in the recapitalization scheme. If the state owner does not exercise its buy option within thirty days, it is considered void. The banks are required to have evaluated the reorganization plans of all eligible debtors by 31 December 1994 although the consolidation agreement is in force until 31 December 1995.

As Table 16 indicates, the eight banks remaining in the BRLCP accounted for 55% of the total commercial credit outstanding as of November 1993. Taken together, their performance in 1993 from May to November was well below that of other

Hungarian banks, a group that accounts for 84% of total commercial credit and 91% of long-term commercial credit. During this time, total credit allocated by the eight participating banks decreased by 3%, and this includes an increase of 43% in overdue credit (an amount well above the prevailing average interest rate on loans). The corresponding numbers for all Hungarian banks (including the above eight banks) are a 3% increase in total credit, which includes a 38% increase in overdue credit. Non-overdue (or "good") credit decreased by 13% in the group of eight and only 5% for all Hungarian banks. It follows that other Hungarian banks actually experienced an increase (substantial) in their non-overdue credit and a decrease in their overdue credit. Hence, the banks chosen for participation in the program make up not only the dominant core of commercial banking (more than 50% share) but also continue to suffer from (or bring upon themselves) a continuing deterioration of their commercial loan portfolios.

In the first tranche, total recapitalization of the eight banks amounted to Ft. 114.4 bn. and was provided by a new issue of long-term government securities, series C loan consolidation bonds (LCBs). These LCBs have similar characteristics to the old series A issue in that their maturity is twenty years and interest, paid twice yearly, is calculated as the average T-bill rate over the previous six months. To participate in this scheme, the bank management was required to sign a conciliation (recapitalization) agreement with the MoF that affords the state a "golden share" in the bank to insure its voting right. This agreement also prescribes certain bank restructuring procedures on an individual (bank-by-bank) basis. The MoF is charged with monitoring compliance with the agreement. The first tranche of bank recapitalization increased the equity of the participating banks (from a base of Ft. 43.8 bn.) by about 260%. Nonetheless, as Table 17 indicates, five of the eight banks still had negative CARs at the end of 1993 after taking account of this first tranche recapitalization. At the time of its decree, the BRLCP established a second tranche which was projected to cost another Ft. 40 bn. of additional money in 1994. The objective of the second tranche was to complete the elevation of the CARs of each bank to 4%. As Table 17 indicates, the total amount required to achieve this goal in May 1994 was only Ft. 17.2 bn.,

considerably less than initially expected. Total recapitalization in the two tranches amounted to Ft. 131.6 bn.

**Table 17**

Hungarian Bank Recapitalization								
Bank	A	BB	D	I	K&H	M	MHB	T
1. Equity (before)	1.5	7.6	1.0	1.1	13.5	2.4	15.3	1.4
2. Equity (1993)	4.2	12.6	5.3	2.1	47.3	8.5	70.1	10.2
3. CAR (1993)	(1.2)	(0.7)	(8.6)	11.6	0.02	(3.4)	1.2	(4.2)
4. Equity (1994)	5.0	17.2	5.8	2.1	52.3	9.4	74.1	11.6
5. Total ReCap	2.0	9.6	4.8	0.8	38.4	7.0	58.8	10.2
6. Assets (1993)	31.7	156.6	11	6.3	231.7	34.5	433	37.3
7. State Ownership	30.0	68.4	94.6	83.1	84.4	75.0	89.0	85.8
8. MoF Share	28.0	39.9	81.0	13.8	74.0	75.0	78.0	85.8
9. (Recap/Eq)%	40.0	55.8	82.6	38.1	73.4	74.5	79.4	87.9
10. Subordinated debt issues	n.a.	3.9	0.1	n.a.	4.7	0.3	5.9	0.5
Bank	A	BB	D	I	K&H	M	MHB	T
Total Recap:	Ft. 131.6 bn. (114.4 - first tranche + 17.2 to bring CARs to 4%)							
Total Equity (before):	Ft. 43.8 bn.							
Total Subordinated Debt Issued:	Ft. 15.4 bn.							
Explanation:								
1. Bank equity before recapitalization.								
2. Bank equity end-93 after first tranche of recap and including other capital increase (e.g., Agrobank had increase in equity of 1.5 bn. in addition to recap).								
3. Capital adequacy ratio after first tranche of recap. ( ) is negative.								
4. Equity after second tranche to raise CAR to 4%.								
5. Total injection of Treasury bonds.								
6. Total Assets (end 93).								
7. Consolidated government ownership in percent (AVU, AVRt, MoF).								
8. MoF share due to recap.								
9. Recap as percent of total equity (5/94).								
10. Subordinated debt issue (Tier II capital), end-1994.								
For bank names, see p. 56.								

In return for the recapitalization support, the consolidated ownership shares of the government in the eight participating banks increased substantially. In Table 17, the MoF share (row 8) records the percentage of state ownership attributable to the two tranches. For five of the eight banks, this share corresponds very closely to the percentage of equity in the bank due to the recapitalization scheme (row 9) with the exceptions being BB, Agrobank, and Iparbankhaz (which received no support in the second tranche due to its CAR of 11.6% after the first tranche allocation). Leaving aside Agrobank, the consolidated state ownership shares (row 7) range from 68.4% in BB to 94.6% with 89% for MHB and 84.4% for K&H. The state's "golden share" clause in the conciliation agreements seems rather superfluous given the concentration of government ownership.

The BRLCP creates a situation in which the Banking Act may require amendment. This act requires that no owner hold more than 25% of the registered capital of a financial institution. The state is granted an extension until 1 January 1997 to comply with this requirement. The act also stipulates that the state may hold more than 25% ownership in a financial institution "... to ensure the execution of a particular financial activity,..."<sup>42</sup> or it may hold a share greater than 25% for a transitional period of two years to avert "... the danger of bankruptcy of a financial institution significantly jeopardizing the economic interests of the country ... or the stability of the banking system as a whole,..."<sup>43</sup> Absenting either of the two conditions and if the state ownership share exceeds 25% in a financial institution after 1 January 1997, the state will be allowed only 25% of the voting rights at the AGM.<sup>44</sup> Perhaps it is this situation that dictates the "golden share" clause as it is difficult to imagine how the state will divest itself of sufficient shares in MHB and K&H to meet the New Banking Act's requirement by the end of 1996.

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<sup>42</sup> The New Banking Act (officially, Act No. LXIX of 1991 on Financial Institutions and Financial Institutional Activities), English translation published by the State Banking Supervision, p. 17.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid., p. 45.

The financial support given to banks in the two tranches of the 1993 BRLCP amounts to Ft. 131.6 bn. of series C bonds. Adding to this the value of Ft. 98.8 bn. of series A bonds issued in the 1992 LCP brings the total value of government securities created in the two Hungarian bank recapitalization schemes alone to Ft. 212.9 bn. Including the projected value of series C government securities to be provided directly to the "sour sixteen" and the agricultural cooperatives (projected to be Ft. 57.3 bn.) would bring the total to Ft. 287.7 or 7.85% of 1993 GDP.

However, the NBH reports that at the end of December the total value of CCBs generated by the government was Ft. 279 bn.,<sup>45</sup> a figure which includes the first but not the second tranche of the 1993 BRLCP. When we add the second tranche, the value becomes Ft. 296.2 bn. which is roughly speaking the Ft. 300 bn. projection of the final cost of recapitalization that had been tossed around loosely in the middle of 1993.

To estimate the cost of the BRLCP, we take the NBH number and add the second tranche to arrive at a total of Ft. 296.2 bn. in government-issued CCB bonds. In 1993, GDP was approximately Ft. 3,300 bn. so that the value of CCBs is about 9% of 1993 GDP. Over the last six months of 1993, the TBill interest rate averaged about 20% leading to an annualized interest payment in 1994 of Ft. 59.24 bn., which amounts to 1.8% of GDP and 30% of the central budget deficit in 1993. Calculating the real cost of the government's service of CCBs must take into account both inflation and the debt-to-GDP ratio. As nominal GDP increases over time due to inflation whereas the face value of the CCBs stays constant, some of the interest can be financed with new borrowing keeping the debt-to-GDP ratio constant. Estimating the rate of increase of the GDP deflator for the second half of 1993 to be 16% (compared with CPI inflation of 19.5%), we conclude that the real cost of service is only 3.5% per annum or approximately Ft. 11 bn. However, the CCBs added about Ft. 300 bn. to the stock of debt which, when amortized simply over their twenty-year life, would add another Ft. 15 bn. per annum of real service cost. Then after the CCBs are redeemed, the debt-to-GDP ratio would have been

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<sup>45</sup> NBH Monthly Report 3/1994, p. 48. Furthermore, at the end of 1993, Ft. 12.8 bn. of the Ft. 279 bn. was held by the NBH leaving Ft. 266.2 bn. in the hands of the commercial banks.

unaffected by the program. Measured in this fashion, the real cost of servicing the CCBs would amount to about Ft. 26 bn. or 0.8% of annual (1993) GDP over 20 years.

Although a more reasonable approach than the earlier two-pronged attack, the integrated BRLCP was also not without some serious conceptual problems. First and foremost, the enterprise rescue program for firms invites "frenzied feeding at the public trough." Once lists are started, companies seem to find reasons to get on them and thereby obtain preferential treatment. The evidence indicates that many firms were getting by for two years without any financing by downsizing significantly and adjusting (reducing) their product lines. The outgoing Antall government found many reasons to put companies on lists. Once on the list, companies have little incentive to wean themselves from public support (witness the unresolved situation of the dirty dozen which has been going on for some years now). The company component of the current program would be best left to the market. A secondary market for qualified debts is beginning to emerge as HID starts to sell assets. This activity is likely to attract other agents. If it makes sense for the banks to write down these debts or engage in debt/equity swaps, they should be given this flexibility and not penalized in the tax code. But we are doubtful about the wisdom of making further lists of companies eligible for special treatment.

Several potential problems also may arise within the conciliation procedure itself. First, the state management companies may be put in a position of wanting to purchase more bank debt to facilitate resolution than is feasible within the budget allotted to them. Second, the procedure has no provision for resolution if a creditor other than the bank does not approve of the reorganization plan (or if the state management agency allows its option to expire). Is the firm left in limbo? Does such a loophole encourage the companies to prepare serious reorganization plans? Evidence available so far suggests that indeed the conciliation procedures have not gone smoothly in practice: banks have been reluctant to accept companies' recovery plans; they are reluctant to write off debts and prefer rescheduling or selling them to the state owners - but budgetary pressures have

limited the amount of debt bought by the state asset management companies; the programs are in general running behind schedule and deadlines are being missed or postponed; and in the meantime the positions of many firms in the programs are unclear.<sup>46</sup> A full assessment of the conciliation procedures will be possible only after sufficient time has elapsed to accumulate the relevant information for further research.

Lastly and importantly, the argument for recapitalization to equate CARs of all participating SOCBs as of May 1994 and thus "level the playing field" is flawed. In such a program, SOCBs with poor records receive more support than banks with better records (see Table 17). Again the incentive signal is inappropriate. It would have been preferable to tie some portion of the recapitalization to privatization of the SOCBs on an individual basis. Then, the capital provided could have been used in a levered way to attract an injection of fresh equity from a strategic foreign investor. In this way, bank recapitalization could be promoted credibly as a final once-off event precluding recidivism. As it stands, the high consolidated state ownership shares of the big three SOCBs (ranging from 68.4% of BB to 89% of MHB) allocates clear responsibility for the financial condition of these banks prior to privatization to the government. In the case of at least two of these banks, privatization is in the distant-enough future to make another round of recapitalization a distinct possibility.

In our view, Hungarian BRERR policy appears to have been misguided. Since tax arrears are a major problem, better tax collection and discipline should have been a primary focus of the government's policy regarding enterprises. Moreover, tax forgiveness sends a very dangerous signal regarding tax discipline. It is crucial that this somehow be a credible once and for all policy. Given the scarce but growing resources being allocated to enterprise turnaround, a market-based approach without significant government intervention seems appropriate. The emergence of workout expertise at HID and within the SOCBs themselves is also indicative of the merits of a less-orchestrated more laissez-faire approach.

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<sup>46</sup> For a summary of the situation as of mid-1994, see Csáki (1994).



## VIII. Conclusions

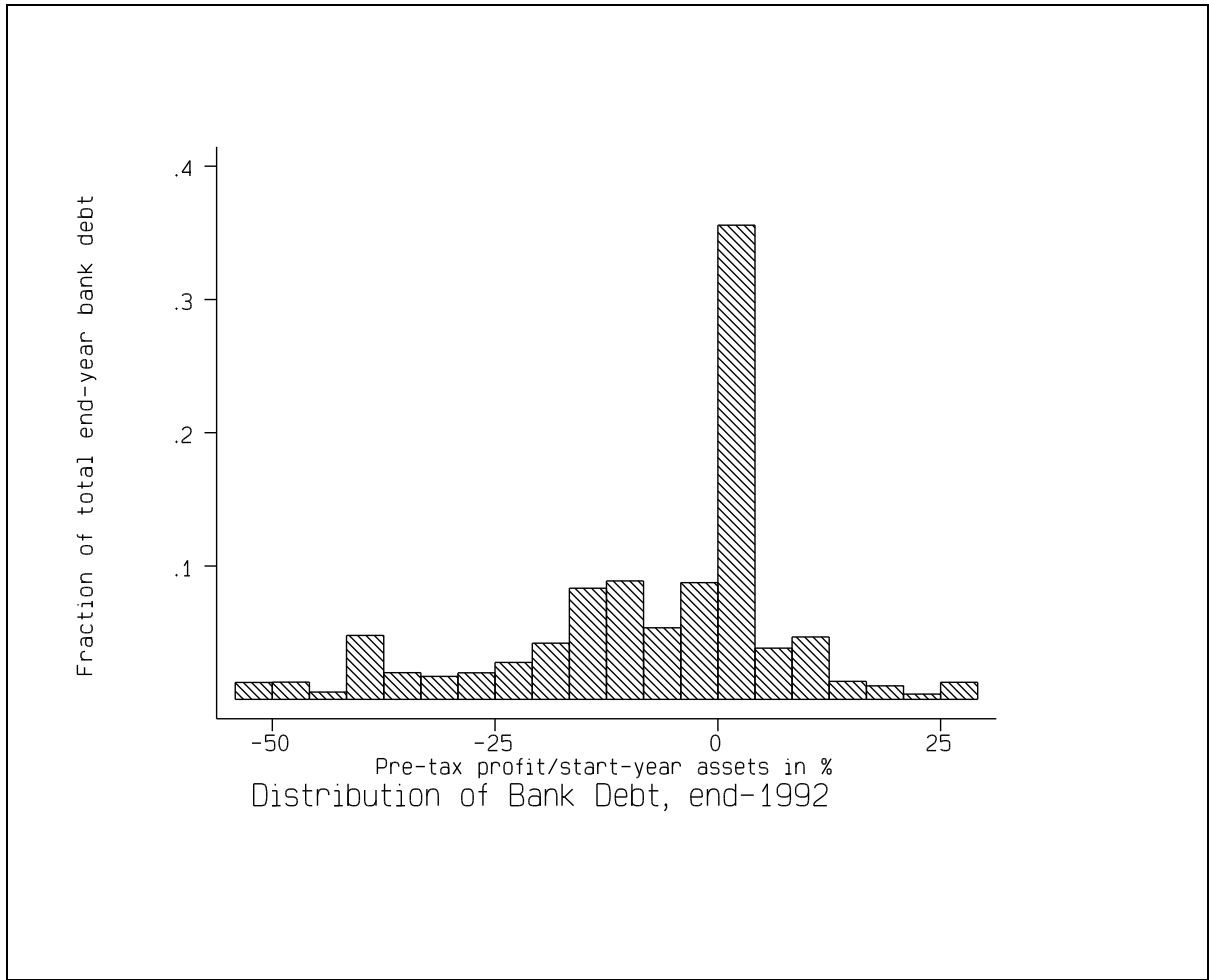
We find that Hungarian firms had financial discipline imposed on them by both banks and by other firms. Bank debt was moderately concentrated in firms that performed poorly in 1992, and the increase in concentration in 1992 was minimal. The dramatic increase in 1992 in qualified debts openly recognized and classified by the banks as bad was not the result of a flow problem (new loans to bad firms) but the recognition of a stock problem. The banks were not providing new credit to financially troubled firms; indeed, they were trying to extract themselves from these firms. The case of interenterprise credit is similar. As a percentage of GDP it was not abnormal by comparison with Western European countries and it remained relatively flat in Hungary from 1988 to 1991. Survey evidence suggests firms had learned to control their overdue receivables by a variety of means. In fact, we estimate that in 1992 tax (and other government obligations) arrears amounted to about one-half of all overdue payments in the so-called "queue" of arrears managed by the banks, with arrears to banks and to other enterprises accounting for less than a quarter each. The growth in the "queue", taken by some as evidence of payment indiscipline between firms and used to justify the "automatic trigger" of the bankruptcy act, was actually a sign of tax payment indiscipline. Market discipline was applied as early as 1992 in Hungary by the banks and the enterprises; the government is the only possible remaining culprit supporting ongoing non-economic activity.

The motivation behind the automatic trigger in the bankruptcy reform was therefore misguided, since firms had financial discipline imposed on them by the banks and their suppliers already. In this light, the automatic trigger was counterproductive, since it appears to have contributed to a substantial credit crunch, and especially a trade credit crunch, in 1992. Our survey results suggest that the bankruptcy process touched a large number of firms directly, and most of the economy indirectly. Over half of all firms in the survey reported involvement in bankruptcy procedures as a creditor. Most of these creditor firms not only lost sales as the result of a debtor (customer) filing for bankruptcy, they also lost

suppliers - because, we suggest, of cash flow problems caused by the lost sales. Clearly the trigger produced a ripple effect throughout the manufacturing sector leaving in its wake a trail of induced disruption. Meanwhile, the government's series of *ad hoc* measures addressed at bank recapitalization and enterprise restructuring was flawed in a number of respects, sending the wrong signals towards bank management and slowing down actual restructuring of firms by implementing a bureaucratic, centralized scheme that encouraged firms to lobby to be "rescued".

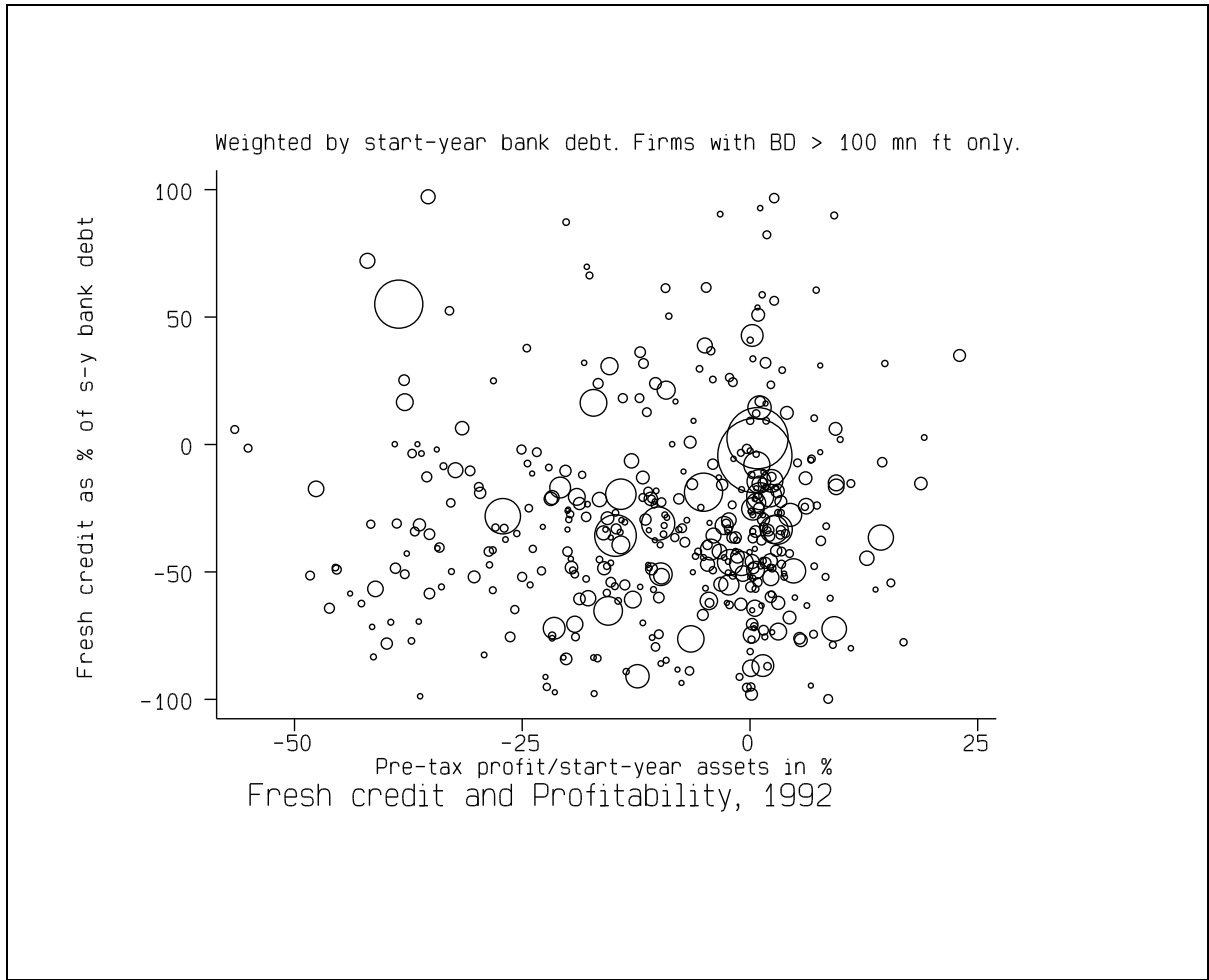
The lessons for policymakers from Hungary's experience with its legislative shock can be summarized by these "don'ts".

- Don't thwart meaningful legislation by "shaking things up without understanding fully the consequences."
- Don't overestimate the potential for success of centralized procedures with too few resources (bureaucratic "crisis management" programmes to rescue enterprises) or the capacity of nascent secondary markets to absorb quickly a barrage of sellers (liquidation).
- Don't underestimate the ability of decentralized economic agents (banks and firms) to adjust quickly to the market way and impose their own market discipline if incentives are properly structured.

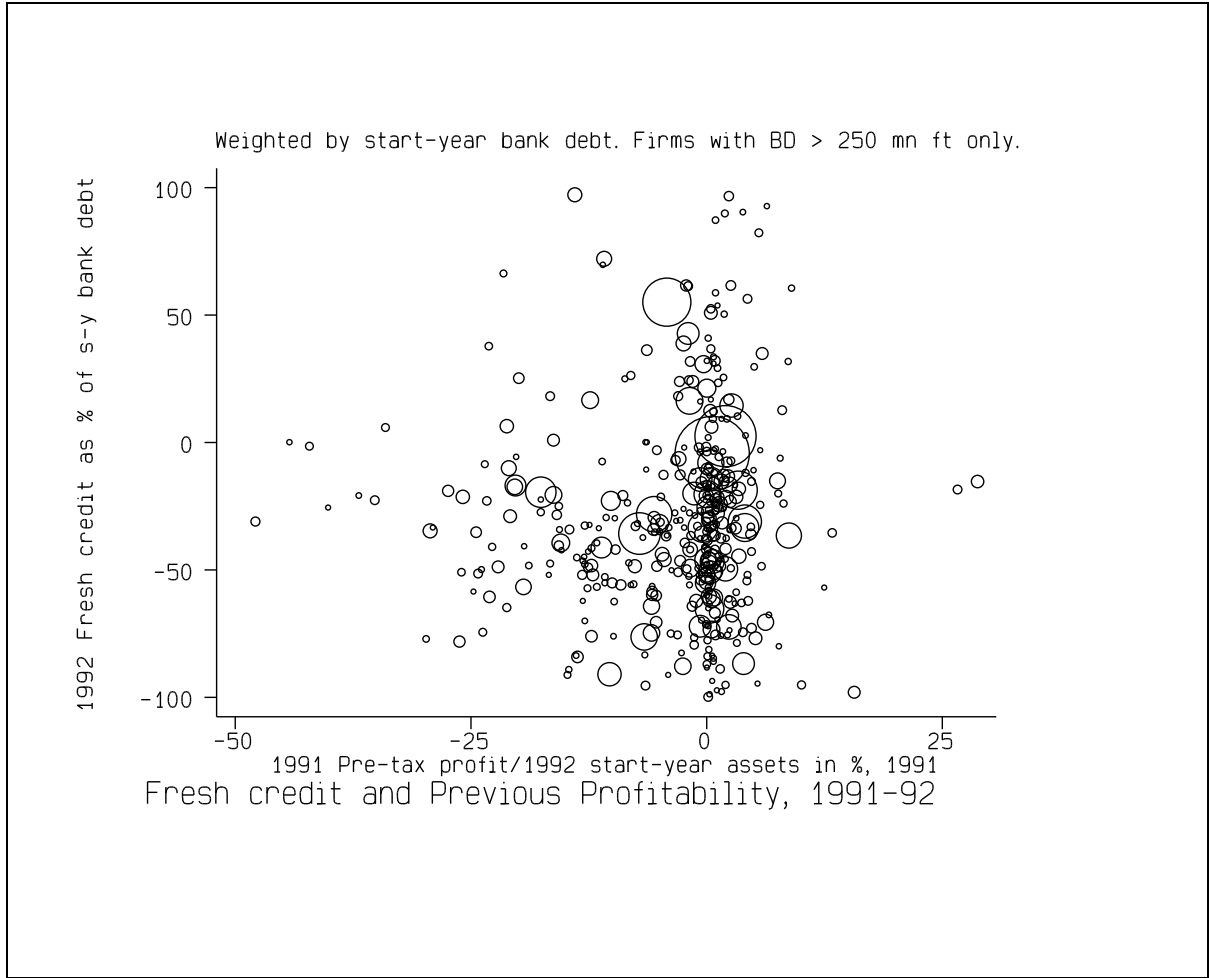


**Figure 1**

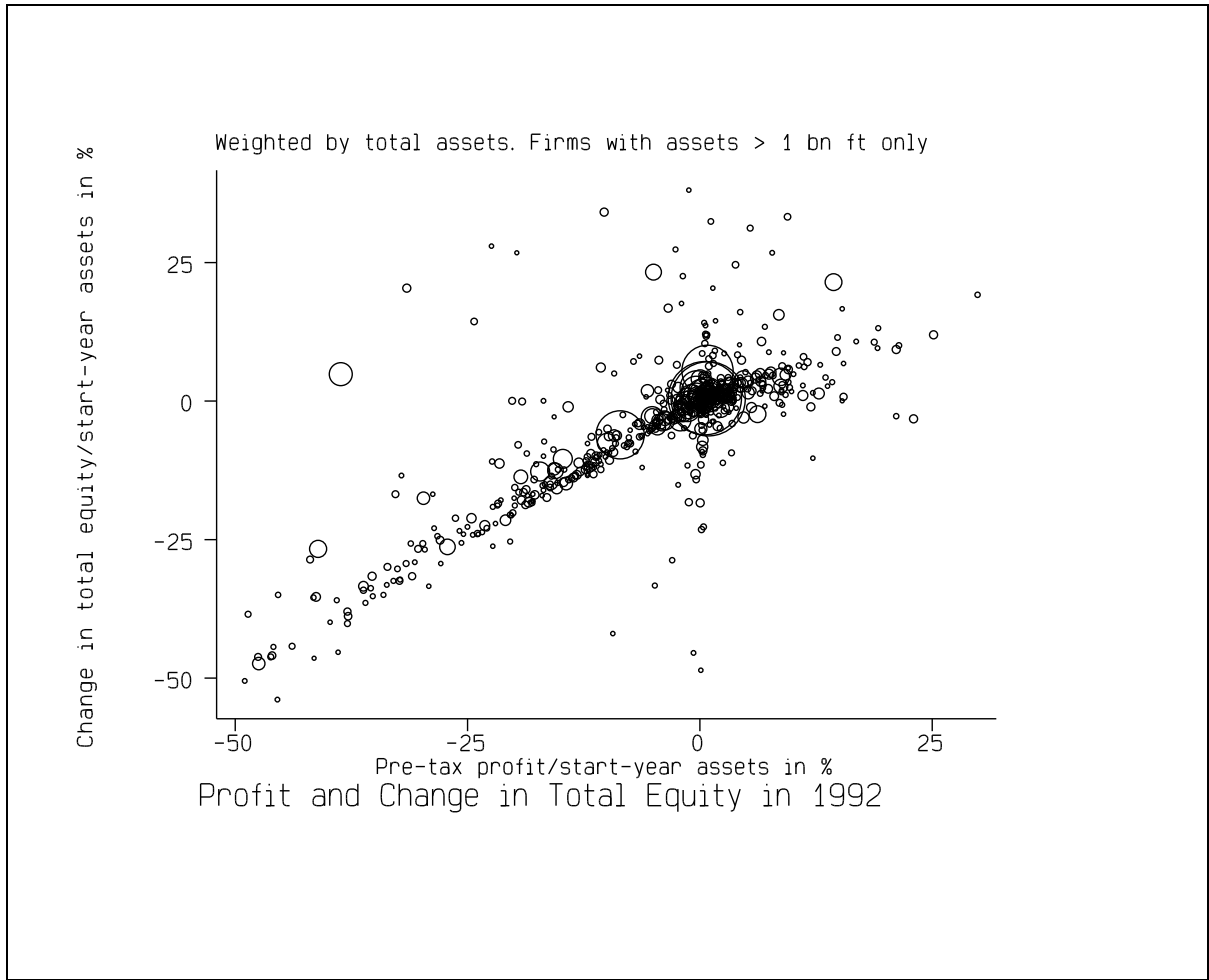
Note: The extreme tails of the distribution are for "profitability < -50%" and "profitability > 25%".



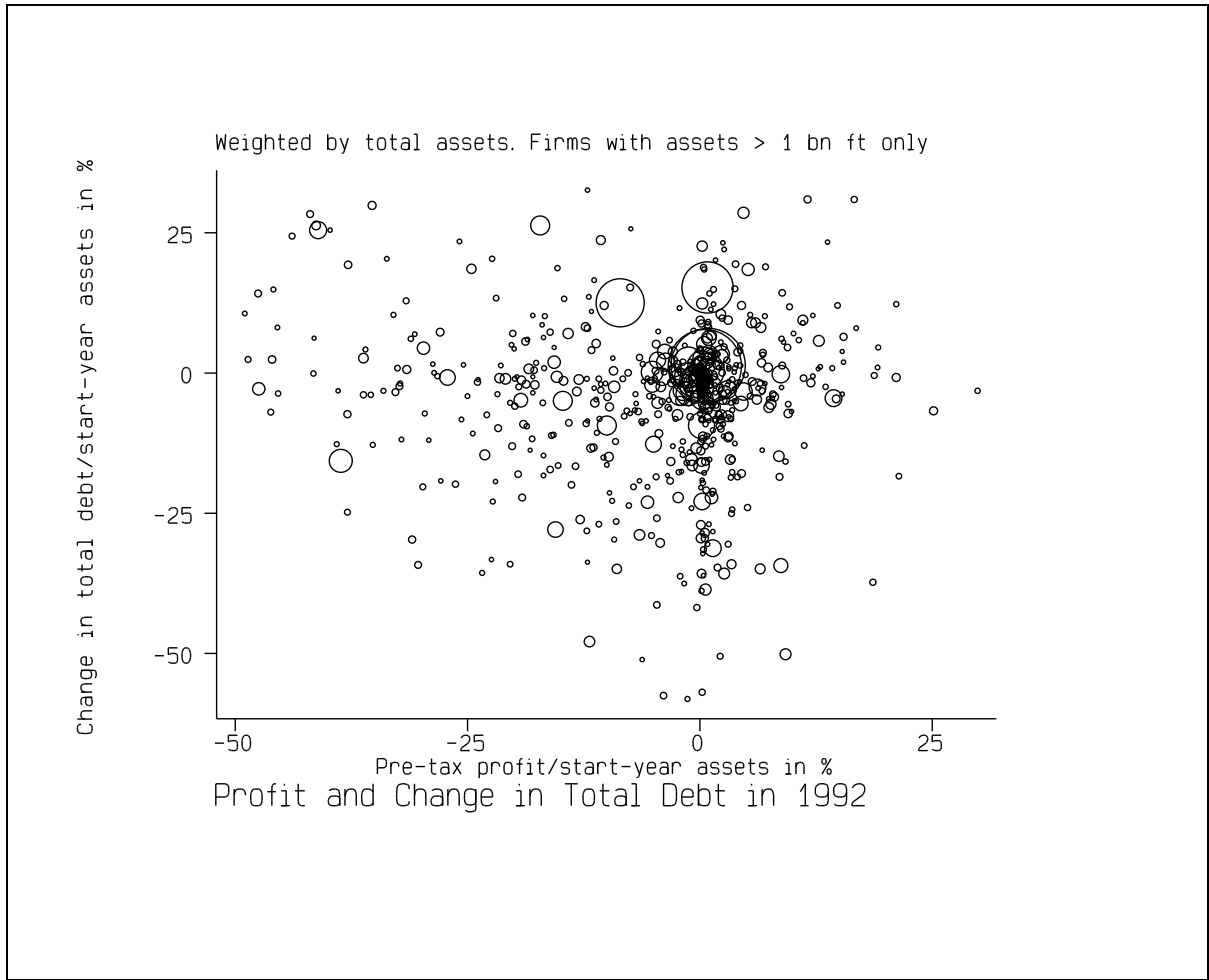
**Figure 2**



**Figure 3**



**Figure 4**



**Figure 5**

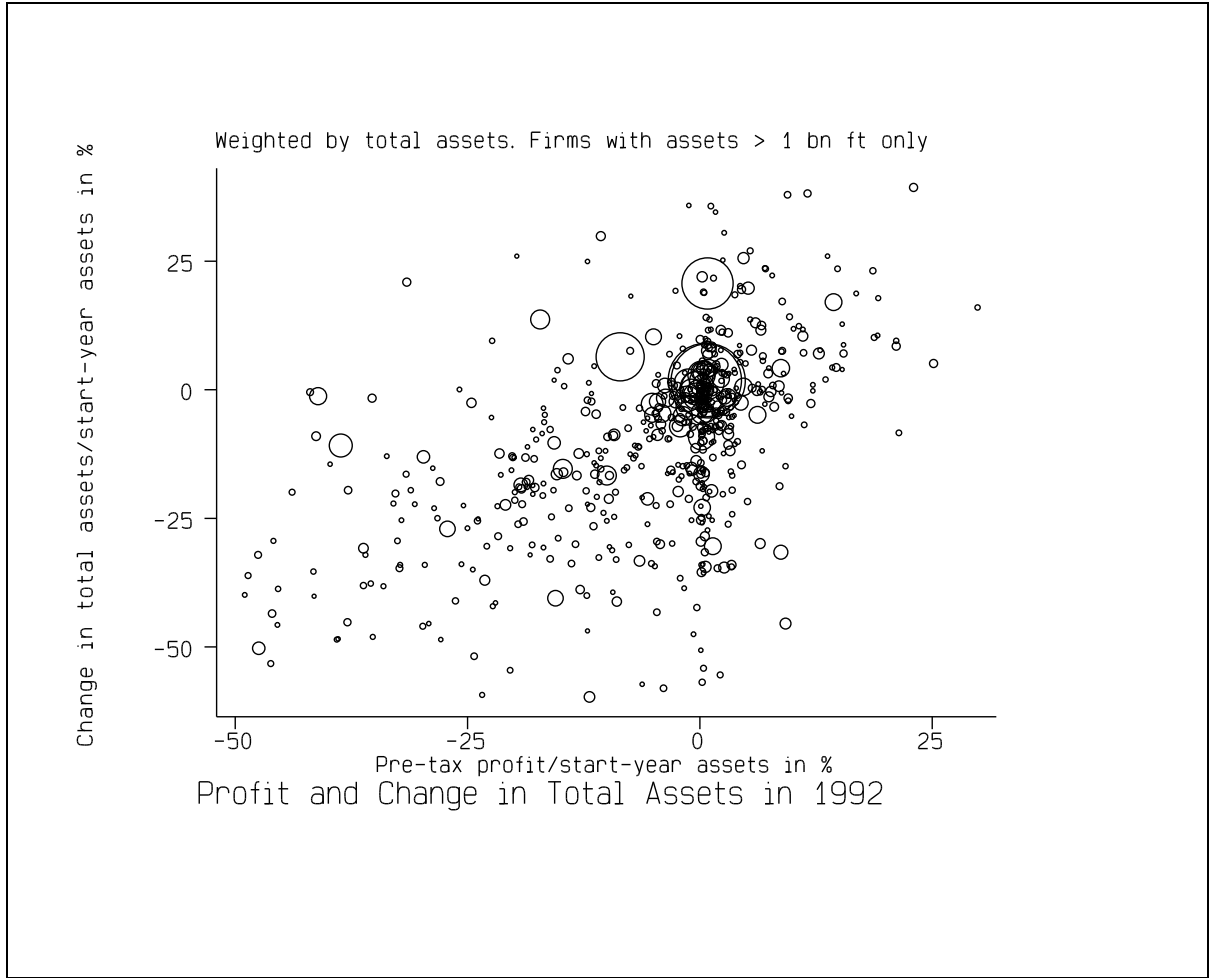
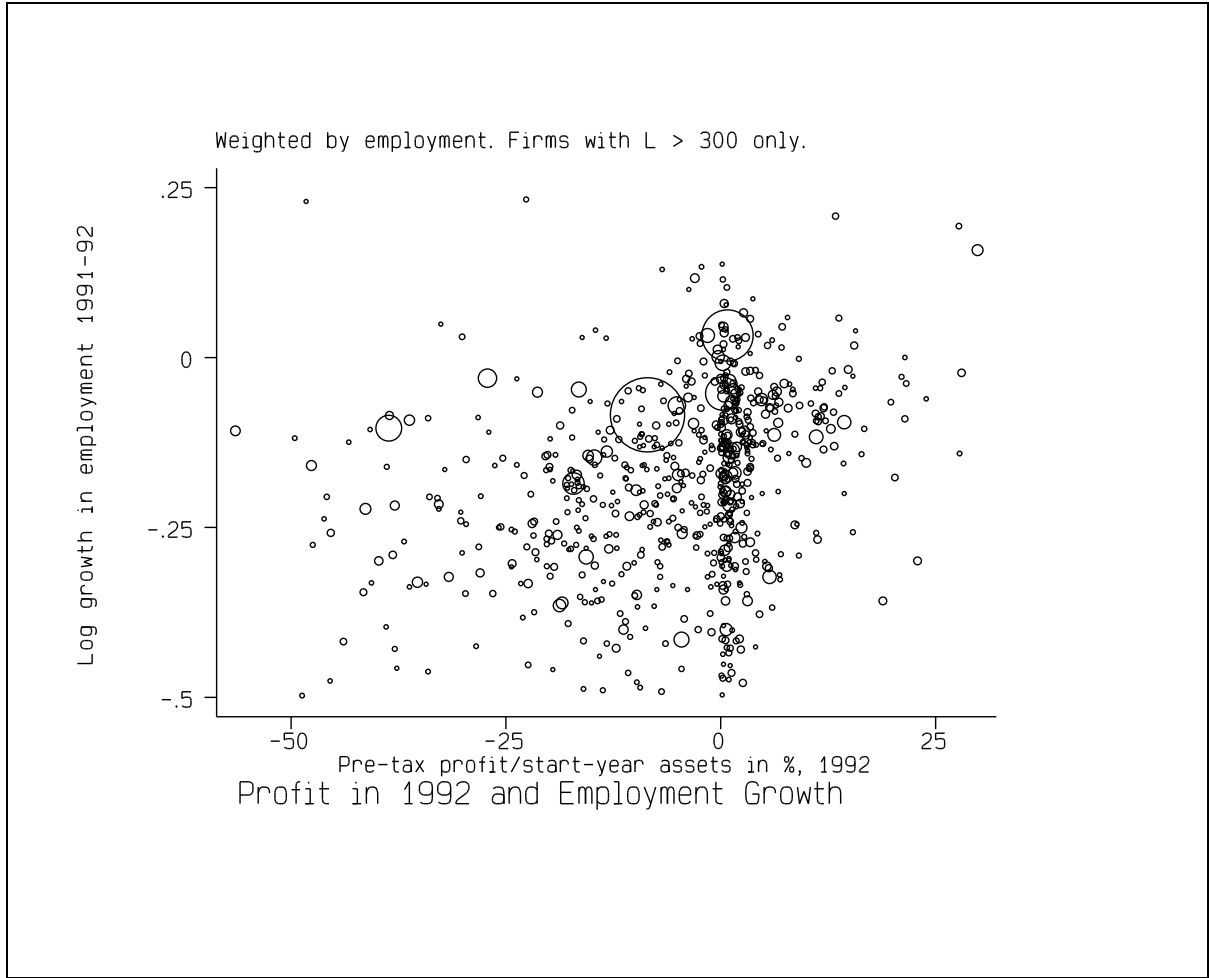
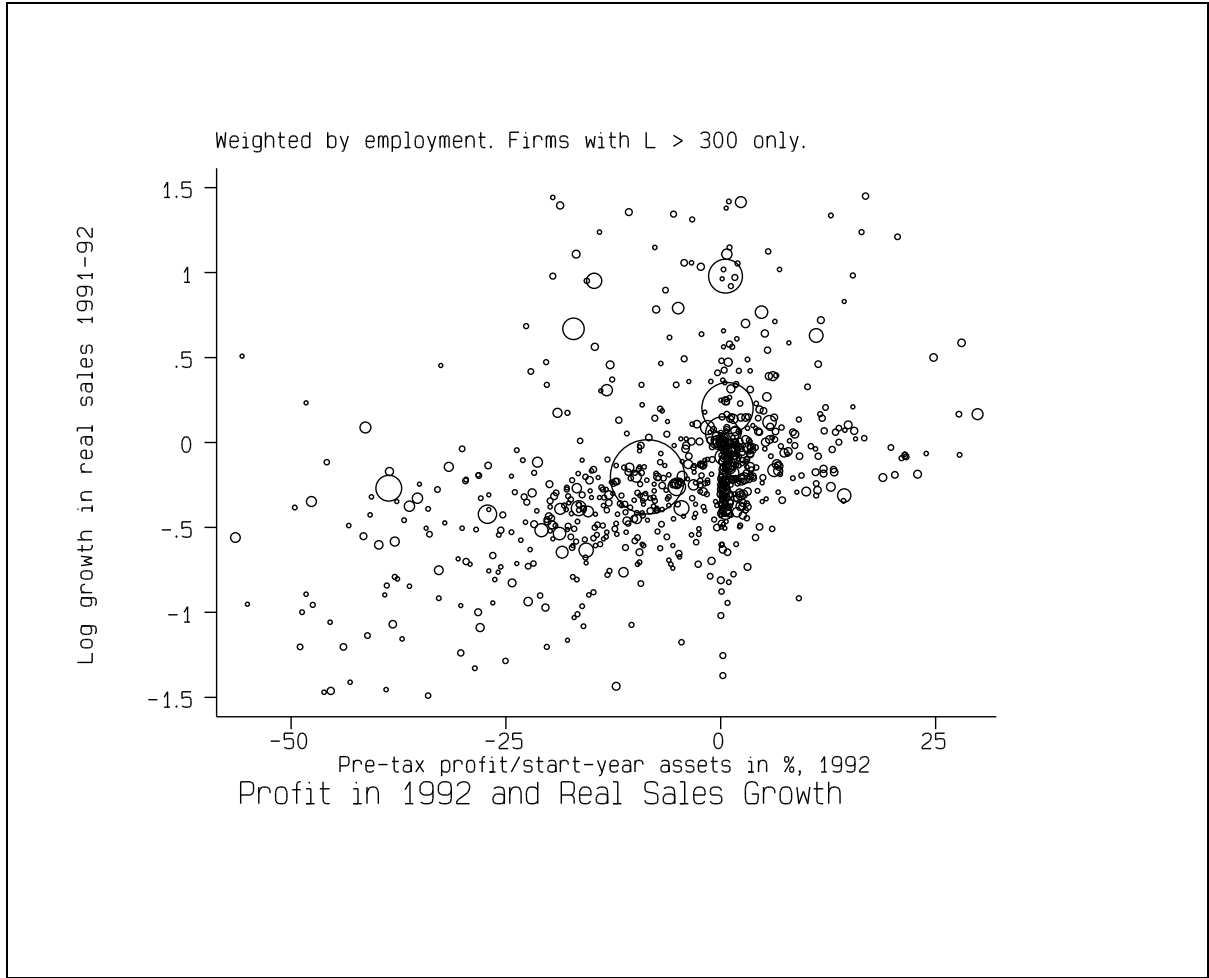


Figure 6

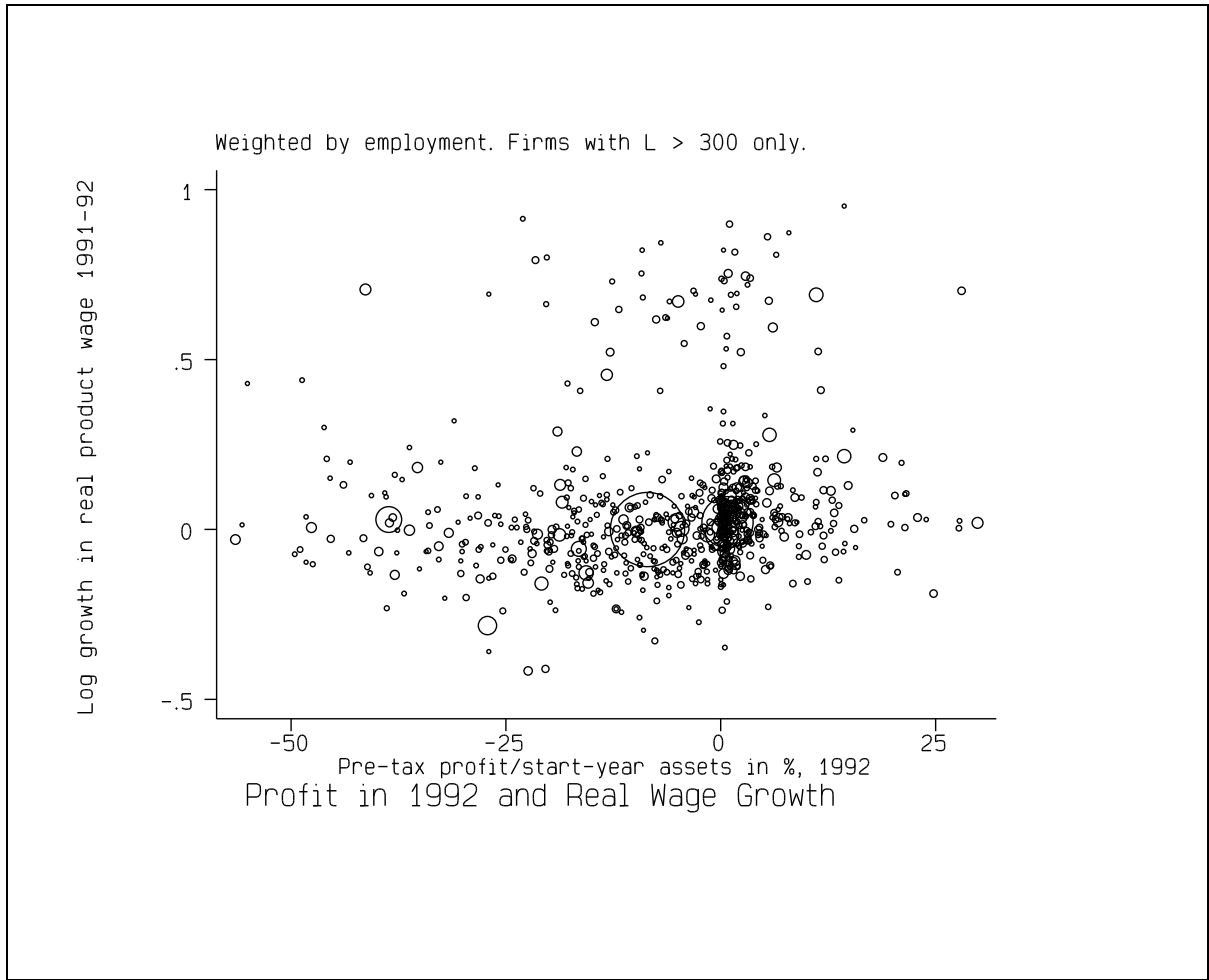




**Figure 7**



**Figure 8**



**Figure 9**

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## **Annex A: Internal Organization of Banks**

The Hungarian SOCBs participating in the debtor consolidation program have signed a conciliation agreement with the MoF. As part of this agreement, the banks must revamp their internal procedures regarding credit evaluation and monitoring of their customers. Both MHB and K&H are in the process of creating a second-tier of management by setting up regional offices that will oversee the branch offices. Regional offices will administer the guidelines for credit evaluation within the branches and will have a central role to play in risk-management. The lines of authority are being rationalized and the interaction between the branch and regional office rationalized. We visited two regional offices, one for each bank, and two branches, one attached to each regional office, in the North-West region of Hungary. Both branches were new "greenfield-type" operations as each was created after 1987 when the SOCBs were hived off from the national bank. What follows is a compilation of the procedures in the two banks.

The branch offices are kept on a tight string regarding credit allocation. Upper limits are placed on the amount of a loan that a branch office can extend to a client without prior approval from the regional office. The regional office also has limited discretion; it must pass on for approval larger loans and any proposed loans to clients with credit outstanding which is qualified or overdue to the central office in Budapest. The specific credit limits depend on the size of both the branch and the region. For long-term credit, limits at the branch level do not exceed Ft. 100 m.; for total credit to a client, branch limits are in the Ft. 300 m. to Ft. 500 m. range. Regional limits are around three times higher.

Branch offices are responsible for loan application and evaluation. The application procedure is now standardized. Larger on-going companies present a business and financial plan, provide historic data on their financials and information about any collateral, and undertake or assist the bank in a market analysis. Evaluation is also standardized; a scoring system to be applied to the financial data is contained in the procedural manual. A more subjective evaluation is applied to the various plans. The overall ranking of a client combines the scoring calculation

and the evaluation of the plans. The branch is allowed to approve only the applications of clients in the top several classification categories. The procedure is significantly different for smaller companies and new entrepreneurs.

The branch offices are responsible for risk-management even for those loans that were passed on for approval by higher authorities, at least until a crisis situation arises. The payments are monitored on a continuous, at least monthly, basis. In one bank, branch offices have the authority to engage in bridge financing to ease liquidity problems if interest payments are met but a principal payment is missed. If the interest payment is missed also, the branch must obtain approval from a higher authority. Short-term loans to bridge liquidity problems and support internal restructuring of companies prior to the initiation of bankruptcy proceedings can, in principle, be arranged. However, the indebtedness of such companies usually exceeds the limits placed on branch offices for lending to any one client. Hence, such decisions must be made by higher authorities. In all cases of bridge financing, the bank begins special monitoring procedures that require the client to report its financial situation more frequently.

The regional office has significant responsibility for crisis management. In one bank, once a client has payments overdue for more than 60 days, a risk-manager who performs on-site evaluations is assigned to the case. In one bank, the regional office takes a pro-active role in crisis management. Sectoral problems are identified; the bank works with the clients in selling assets to pay back liabilities and downsizing the operations. In the process, the bank often engages in debt/equity swaps. In practice, the regional office plays a large role in bridge financing when this is used to avoid bankruptcy proceedings against a client.

Since both branch offices were founded after 1987 without a significant inherited client base, competition for new clients is an important part of their business strategies. Price competition is limited; a branch office is given a range of interest rates within in which it has discretion to set deposit rates. One branch wanted to offer preferential credit terms to keep a good client and was required to seek approval of the central office. More normally, branches compete on services

offered. One branch provided telecommunications free of charge to attract both small entrepreneurs and the "second accounts" of larger SOEs.

Small-scale businesses and new entrepreneurs pose special problems for banks when they apply for credit. The standard procedures apply only to those companies with audited financial records for a period of time. Many small-scale and emerging companies are not eligible for corporate bank accounts because they do not appear on the statistical register. Loan evaluation requires a more careful scrutiny of these companies and a detailed assessment of their collateral. One branch reports that the vast majority of its qualified loans is with small-scale companies. For new entrepreneurs, a significant part of the collateral involves a private house and household-related assets. Due to market conditions and the relative uselessness of these assets to the bank, such collateral is not very valuable. Furthermore, even when machinery and business vehicles are offered as collateral, asset stripping makes recovery difficult. Several clients of one branch reported the collateral as stolen when the bank looked for recovery.

For these reasons, the government instituted special facilities, E-loans and start loans, to support new entrepreneurs and those who have become unemployed. Due to the risky nature of these activities, one bank requires regional authorization for any E-loan regardless of size. Because the business plans submitted by recently-unemployed people for start loans are usually quite rudimentary, one bank claims that at least 50% of these loans are in default. Such is not an unexpected outcome given the riskiness of the underlying ventures and the current depressed business climate.

In summary, we found much encouraging information from our very limited sample. The loan application and evaluation procedures are standardized and codified. Information is being collected regularly and in a standardized way across branches and regions. The two branches we visited seem to be well-managed. Each is trying to find its own niche to attract good clients and management seems attuned to risk evaluation. The hierarchical internal organization of the banks is in its infancy. Both regional offices were in the



process of routinizing procedures. The eventual effectiveness of this more decentralized management of the large SOCBs will depend crucially on training a sufficient cadre of skilled personnel.

## **Annex B: DELTA**

Incorporated in 1920, Delta<sup>47</sup> was a well-known Hungarian company producing fine optical equipment. After the war, its product profile was changed by government orders. Its six product lines included nuclear equipment for medical and environmental purposes, process control, special engines, quartz crystal, and light military equipment. In the 1980s, Delta employed around 2,000 people and realized sales revenues of around Ft. 1.6 bn. About one-half of its sales were within CMEA, 40% on domestic markets and the remaining 10% with the West.

At the beginning of the 1990s, the change in the political climate led to a reduction in military orders by 80%. At the time that settlements within CMEA were revised (1 January 1991), Delta had an order for \$10 m. for medical equipment from the former Soviet Union. It delivered \$3.5 m. in the first half of the year accruing receivables of \$2.5 m. Further shipments were stopped because of non-payment but Delta produced for inventory. A Ft. 43 m. loan to finance inventory was refused by a major Hungarian SOCB. At the same time, import liberalization destroyed its domestic market. Delta couldn't compete in price with products from South-East Asia as its input costs were higher than its competitors prices. During the first half of 1991, Delta met its payroll costs only. Hence, a small creditor initiated liquidation procedures. In 1991, Delta made a loss of Ft. 260 m on revenues of Ft. 1.02 bn.

On 13 June 1992, the court launched the liquidation of Delta as a representative case. At this time, employment had fallen to 660 people, plants had been closed in the countryside (only the Budapest plant had been producing since mid-1991), and only two products remained from a product line of six, namely nuclear equipment and process control. According to the 1986 regulation on bankruptcy, a liquidation manager was appointed and creditors with overdue receivables were given one month to submit claims. Total claims on the firm plus liabilities amounted to Ft. 1.1 bn. Of the arrears, about 50% were overdue tax, social

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<sup>47</sup> We have changed the name of the company.

security, and customs payments plus penalties, 20% were bank credit plus interest, and 30% were payables. The company held fixed assets with a book value of Ft. 300 m., inventory worth Ft. 100 m. and receivables of Ft. 160 m. (of which it managed to collect only Ft. 80 m.).

In August 1992, Delta received a loan of Ft. 30 m. to finance continuation activities with the proviso that products would be delivered to customers only for cash payment or with bank guarantees. Every expenditure required the signature of the liquidation manager. By January 1993, the loan was paid back. Employment had fallen again to around 300 people. The assets of the company consisted of social assets (e.g., the football field), the two product lines with their specific machinery and equipment, the plants and fixed assets not specific to a product line, and a joint-venture (49% German). With the exception of the joint-venture, all assets were sold by announced public tender.

The product lines with their associated machinery and equipment and one-half of the real estate of the company were sold on 1 December 1993 to a consortium consisting of a 30% stake held by the American Fund as an institutional investor, a 60% stake held by three private Hungarian investors, and a 10% stake distributed to the employees. The new owners supplied Ft. 60 m. to finance the short term operations of the company (it would cover about three months' costs). The "new firm" has 230 employees and expected to realize Ft. 360 m. in sales and Ft. 40 m. in profit in 1993. While 60% of its business is expected to be export, the firm will ship to Russia only with guarantees. The two product lines are diversified in the sense that process control yields a modest profit rate on sales which are relatively stable whereas the nuclear equipment promises a higher profit rate (estimated to be about 40%) on more variable sales. The average profit rate on total sales is expected to be about 16%. The new firm's business plan includes strong cost containment measures. The domestic market for inputs, both materials and labor, is soft. Energy conservation measures (e.g., insulation) will be undertaken and high energy consumption activities will be discontinued. Excess capacity will be rented. The prospects for viability look good.

The law requires that liquidation proceedings be completed within two years. The remaining one-half of the real estate and other buildings has been offered in public tender and a serious buyer is expected by mid-March. The social assets have been sold at 50% face value. At the end of the two-year period, liquidation expenses will be deducted from revenues and the remainder will be available to meet creditors' claims. This is estimated to be about Ft. 250 m. and individual claims are met according to their pro-rated percentage of total claims.

On balance, the liquidation of Delta is a success story. A new significantly downsized firm was created having both private core investors and a financial investor. Its viability looks promising. However, the return to creditors is expected to be less than 25% of payments due. The liquidation manager suggested several reasons for this low yield. According to Hungarian law, preferential credit facilities, e.g., E-loans, can not be used for purchasing assets in liquidation proceedings. The lack of investment banks in Hungary mean the absence of agents facilitating long-term credit financing. The high number of firms currently in bankruptcy and liquidation spoils an already thin market. Finally, the fact that three different regulations apply to these proceedings depending on the time of court acceptance adds confusion to the process.

## **Annex C: Shared Turf: Hungary's Banking Regulators**

In Hungary, the primary responsibility for overseeing the prudential operation of the banking sector is shared by the State Banking Supervision (SBS) and the National Bank of Hungary (NBH).<sup>48</sup> The SBS was founded as part of the Ministry of Finance (MoF) in 1987 at the time the two-tier banking system was created. Its original mandate was to license new banks and control the legality of their operations. Since the promulgation of the New Banking Act (Act on Financial Institutions), the SBS has been operating as a public institution under the direct supervision of the government. The president of the SBS is appointed by the prime minister on the recommendation of the minister in charge of supervision and after consultation with the president of the NBH for a six-year term. The legal responsibilities of the SBS are set out in the act. The SBS has the authority to issue decrees. In March 1992, the SBS issued a decree on the criteria for classifying receivables which dictated the manner of classifying bank loans according to the three qualified categories of substandard, doubtful, and bad. This decree was in force until the end of December 1993 when a new classification scheme was adopted. These two schemes will be compared in Annex E.

The SBS is mandated to protect the interest of bank depositors and to promote the stability of financial institutions. To carry out this dictum; the SBS monitors regularly the performance of banks with both on-site visits and off-site data collection. Financial institutions report to the SBS their assets and liabilities along with off-balance sheet items on a monthly basis. Quarterly reports contain more detailed data including the profit and loss statement, a portfolio analysis, data on the largest debtors and depositors, as well as credits and investments to insiders, major shareholders and non-consolidated debtors. In addition to its monitoring function, the SBS plays an important role in crisis management. However, and somewhat curiously, although the SBS bears sole legal responsibility for decisions taken in emergency situations, it must obtain the consent of the Banking Supervisory Committee (BSC) for any action taken.

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<sup>48</sup> The historical material is taken from "Prudential Supervision of Banks in Hungary", National Bank of Hungary Monthly Report, 8-9/1993, pp. 131 - 138.

The BSC consists of representatives from the SBS, the NBH and the MoF. It has wide-ranging oversight according to the Banking Act. The SBS can issue regulations and standards only with the consent of the BSC. For example, if the SBS wishes to discharge any executives from financial institutions, limit licenses held or voting rights of any owner, or withdraw the license of a financial institution, it must first obtain consent of the BSC.

The NBH has a parallel monitoring system in place using a data base which registers daily monetary flows. On 1 January 1993, the NBH created a separate Banking Supervision Department (BSD) to monitor the liquidity of financial institutions with an eye toward identifying in advance liquidity problems. The BSD monitoring system focuses on risk factors using the standard "CAMEL" (Capital, Assets, Management, Earnings, Liquidity) signals. Although the NBH is charged primarily with administering and monitoring monetary policy and foreign exchange transactions, the BSD monitors the prudent behavior of financial institutions independently from the SBS. Therefore, regular surveillance of banks falls under the jurisdiction of both the NBH and the SBS while decisions at the highest level require the consent of a tri-partite body made up of representatives from the SBS, the NBH, and the MoF.

## Annex D: A Comparison of Loan Classification Schemes

The New Banking Act (officially, Act No. LXIX of 1991 on Financial Institutions and Financial Institutional Activities) prescribed a system for classifying assets for the purpose of generating risk reserves. Three classes, namely, substandard, doubtful, and bad, were specified. The financial institution was given the authority to classify an asset in any category so long as it adhered to the following restrictions. An asset must be classified as "substandard" if it has large branch risks associated with it but is otherwise performing. An asset must be classified as "doubtful" if the borrower is in default in servicing the principal and interest for more than 60 days or the borrower has incurred balance sheet losses in each of the two preceding years. An asset must be classified as "bad" if the borrower is in default for more than 360 days or restructuring and liquidation procedures have been initiated against the borrower.<sup>49</sup>

In March 1992, the SBS promulgated the 3/1992 (PK 9) ABF Decree on the Criteria of Classifying Receivables which amended the classification in the New Banking Act as authorized in that act. This classification provided more detailed instructions on classifying overdue receivables, gave financial institutions less discretion in determining non-taxable provisions, and included the treatment of loan collateral. The category "pass" was added for receivables with no known obstacle (which would include debtor default) to prevent collection on maturity. The details for classifying overdue receivables follow.

Past due receivables are considered "substandard" if they satisfy either of the following conditions:

- they are expected to be recovered and the delay in payment or repayment is not expected to exceed 60 days,
- the proceeds from the sale of collateral covers the outstanding receivables and the sale can be realized within 180 days following the due date.

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<sup>49</sup> English Translation published by the State Banking Supervision, p. 45.

Receivables can not be considered "substandard" if their maturity exceeds 12 months and the debtor has defaulted on payments several times during the payment period. Rather such receivables must be allocated to one of the next two categories.

Past due receivables are considered "doubtful" if they satisfy any of the following conditions:

- it is clear beyond doubt that they will cause losses on uncertain magnitude to the financial institution,
- the time of expected recovery is between 60 and 360 days and the proceeds from the sale of collateral will cover the outstanding amount and this sale is expected to be realizable within 360 days of the due date,
- previously classified as substandard but the debtor failed to make payment within the required 60 days regardless of whether or not collateral is expected to be realizable within 180 days,
- it had been classified as substandard and less than 60 days have elapsed but there has been a significant reduction in the value of the collateral.

Past due receivables are considered "bad" if they satisfy any of the following conditions:

- the period of recovery is expected to exceed 360 days,
- the period of recovery is not expected to exceed 360 days but the probable loss will exceed 50% of the value of the receivables,
- liquidation proceedings have been initiated against the debtor (excluding any receivables extended during the liquidation proceedings),
- previously classified as doubtful but the debtor failed to make payment within the required 360 days regardless of the existence and value of collateral,
- the default period does not exceed 360 days but a significant reduction has occurred in the value of the collateral.



Regarding debtors involved in bankruptcy proceedings, the decree allows the financial institution to call in the receivables. Receivables made overdue by this action must be classified according to the above conditions. However, if a new agreement is reached or new collateral is forthcoming during the proceedings, the receivables must be reclassified according to the above criteria. These requirements were in place until 31 December 1993.

Beginning on 1 January 1994, a new set of criteria for loan classification was put in place. Financial institutions are now allowed more discretion in classifying loan portfolios. A new category for overdue loans, "special attention" has been added to the other three qualified categories, i.e., "substandard", "doubtful" and "bad". In essence, overdue loans are not now automatically classified into one of the three qualified categories. Thus, risk reserves need not be accumulated against all overdue loans. Restrictions are imposed on the monitoring of collateral; it must be classified and evaluated continuously. Finally more discretion is allowed in accumulating risk reserves against loans considered to be qualified by the bank.

Each commercial bank must have an internal debtor classification scheme listing procedural measures, aspects considered when determining classification of a loan, and the recommended criteria. Regarding collateral evaluation, each bank must have a scheme prepared and designed in consultation with an independent auditing firm and approved by that firm. Risk reserves must be accumulated according to the following guidelines:

Classification	Range
special attention	0% - 10%
substandard	11% - 30%
doubtful	31% - 70%
bad	71% - 100%

However, all overdue interest must be provisioned at 100%. Effectively, this means that accrued interest is not considered as taxable income since the accumulation of loss reserves is made from pre-tax earnings.

## **Annex E: Enterprise Data**

The enterprise data used derive from the annual reports filed by firms with the Central Statistical Office and the tax authority. The data were made available to us in non-firm-identifiable form. The data cover approximate 5000 medium and large firms employing 1.5-2 million people for the year 1991 and 1992, or about 3/4 of the (non-financial) Hungarian enterprise sector. State-owned, private and other forms of ownership are included. The balance sheet data include both opening and closing stocks, enabling us to calculate differences and growth rates for most variables. We focus almost exclusively on the 1992 data. During this period many Hungarian enterprises changed legal form, were split up, etc.; a large number of mostly small enterprises do not appear in one or the other dataset, but about 3/4 of employment in the 1992 dataset is in firms which also appear in the 1991 dataset. The 1991 data are used to calculate growth rates for sales, employment, and wages. The accounting system was also overhauled in this period, and the datasets use different data definitions.

Bank debt is not separately identified as such in the data. To approximate bank debt in 1992, we use lines 22 ("credits for capital formation"), 23 ("other long-term credits"), and 32 ("short-term credits") from the balance sheet. Unpaid interest on bank debt which has not been formally rescheduled is not included; this appears in a different balance sheet line and is not separately identifiable. We use income statement line 39 ("Interest paid to financial institutions") as our measure of interest payments to banks; other bank charges are not included.