

Old Debts and New Beginnings: A Policy Choice in Transitional Socialist Economies

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Summary. — In transitional socialist economies, loans by state banks to state enterprises are impeding the transition to a market economy by slowing the privatization of enterprises and banks, hindering efficient operation of firms and banks, encouraging *ad hoc* government intervention, and reducing government credibility.

We build a framework for assessing alternative policies regarding the definition of the assets and liabilities of enterprises and banks when the government privatizes these entities. We conclude that replacing bank claims on enterprises with claims on the government at the time of privatization will produce important efficiency gains and may not add much extra fiscal burden.

1. INTRODUCTION

Transitional socialist economies (TSEs) in Europe do not yet have financial systems that efficiently allocate resources to new, private sector firms and assist sufficiently in the privatization and revitalization of existing enterprises. Observers increasingly argue that the large stock of loans issued by banks to enterprises under socialism is impeding the transition of many countries to thriving market economies by slowing the privatization of enterprises and banks, hindering the efficient operation of firms and the financial sector, encouraging *ad hoc* government intervention, and reducing government credibility. In light of these concerns, this paper examines a key question: how should governments define the asset and liability structure of enterprises and banks at the time the government privatizes these entities so as to maximize efficiency benefits and minimize adjustment costs?

We outline a framework for assessing the benefits and costs of alternative policy choices regarding the definition of the assets and liabilities of enterprises and banks. The criteria we use to evaluate alternative policies include enterprise and financial sector performance, government credibility, and fiscal stability. Using these criteria, we assess two alternative policy options in detail. The first option assumes that the government privatizes enterprises and banks with historic claims intact, i.e., enterprises that received bank loans under socialism retain these

liabilities when the government privatizes them. The second policy option assumes that the government takes responsibility for each enterprise's obligations to state-owned banks when the government privatizes that enterprise and that the government cleans each bank's asset sheet when the bank is privatized.¹

We conclude that in terms of enterprise and financial sector performance and government credibility, replacing bank claims on enterprises with claims on the government at the time of privatization offers important advantages. This alternative reduces the cost, time and effort required to privatize enterprises, and enhances the viability and efficiency of newly privatized firms. Furthermore, by explicitly assuming enterprise bank debt at the time of privatization, the government permits the more rapid privatization of state-owned banks and enhances bank viability and efficiency. Moreover, government assumption of enterprise obligations to state-owned banks when each enterprise is privatized minimizes pressure for subsequent government intervention in the newly privatized enterprise and banking sectors, and enhances government credibility.

*Final revision accepted: August 19, 1992. The findings, interpretations, and conclusions are the authors' own. They should not be attributed to the World Bank, its Board of Directors, its management, or any of its member countries.

In short, we suggest that the true moral hazard is not that the government will create expectations of future government intervention in a market economy by taking responsibility for enterprise obligations to banks incurred under socialism, but rather, that the failure to break explicitly with the past will force governments to intervene on an *ad hoc* basis after rejecting intervention, thereby reducing credibility and creating expectations of more interventions.

Our assessment then turns to the fiscal consequences. We explore the circumstances under which explicit government assumption of enterprise obligations to banks causes an increase in the present value of the government's domestic debt. Then, we empirically address the question: What does the extra growth rate in the economy have to be in order to pay off any extra fiscal burden from the government assuming enterprise debts? We conclude that (a) the additional fiscal burden in expected present value terms is likely to be small (and there might even be net fiscal advantages) and (b) the efficiency gains necessary to satisfy the additional fiscal burden — even under very pessimistic assumptions — seem very small.

We should emphasize the boundaries of this paper. This paper does not present a privatization plan for enterprises or banks: we simply evaluate the attractiveness of the government assuming state-owned enterprise debts to state-owned banks at the point of privatization under alternative privatization plans.² Similarly, this paper does not propose a mechanism for restructuring and liquidating state-owned enterprises or banks; we simply argue that TSEs should ultimately privatize much of the enterprise and financial sectors and that the government's decision regarding the inherited stock of enterprise debts to banks will affect the efficient operation of banks and enterprises. Furthermore, we do not separately address a growing problem in many transitional socialist economies: interenterprise arrears. Nonetheless, the principles and criteria laid out in this paper also apply to interenterprise debts.

Finally, we believe the privatization process is likely to occur over many years. Consequently, we evaluate the implications of the government explicitly assuming responsibility for an enterprise's obligations to state-owned banks when that enterprise is privatized or the government cleaning the balance sheet of a bank when that bank is privatized. Thus, the principles and criteria for evaluating alternative definitions of the asset and liability structure of enterprises and banks advanced in this paper apply to both rapid and slow privatization.

2. A POLICY CHOICE

In formerly socialist economies that are engaged in the transition to market economies, policy makers must make a policy choice: governments must define the asset and liability structure of the enterprises and banks to be privatized.

In making the transition, policy makers in TSEs are attempting to use existing asset and liability structures. This means that enterprises that received bank loans under socialism will retain these liabilities when the government privatizes them. Similarly, banks that made loans under socialism will retain these assets on their balance sheets.

An alternative way to arrange the assets and liabilities of enterprises and banks in the move toward a market economy is to define enterprises as free of bank debt and replace bank assets with government securities. In this paper, we primarily examine these two extreme ways of specifying the asset and liability structure of banks and enterprises that are to be privatized, i.e., with historic bank-enterprise obligations intact, or with enterprise obligations to banks replaced with government securities. In practice, of course, countries may choose many ways of allocating the assets and liabilities of the official sector as they make the transition to predominantly privately owned, market economies. In the conclusion section, we briefly discuss other asset and liability structures.³

To gain some perspective on this policy choice, we find it helpful to think of a socialist economy as divided into two sectors: the official sector and households. The consolidated balance sheet of the official sector is composed of enterprise, bank, and fiscal accounts. Besides land, the primary domestic assets of the official sector are the physical capital, buildings, and intangible institutional capital of enterprises and banks. The primary domestic liabilities of the official sector are the deposits of households. The financial obligations within the official sector — among the government, enterprises, and banks — may be very complicated, but this of course does not alter the balance sheet of the official sector taken as a whole. Importantly, enterprise obligations to banks are intraofficial sector obligations. Therefore, rearranging the assets and liabilities of entities within the official sector cannot alter the official sector's balance sheet.

At first glance the assignment of assets and liabilities to the components of the official sector may appear a static and unimportant accounting exercise. This paper, however, argues that this assignment has important implications for the

speed and efficiency of privatization, the development of a healthy, efficient financial system, and the economy's dynamic response to liberalization. Thus, the way in which authorities cope with past debts can have important incentive effects that will affect the rate and sustainability of economic recovery and long-run growth.

3. IMPLICATIONS, EFFICIENCY, CREDIBILITY, FINANCIAL PERFORMANCE

We evaluate the implications of choosing to privatize enterprises with and without debt obligations to state-owned banks. We use four interrelated criteria but devote particular attention to the financial sector. The outline for critiquing, evaluating, and comparing different methods of specifying the asset and liability structure of banks and enterprises is as follows:

- enterprise privatization and efficiency;
- government credibility and intervention;
- financial sector performance, privatization of banks, bank operational efficiency, implementation of effective supervision, financial structure; and
- fiscal stability.

Any potential choice of the asset and liability structure of banks and enterprises should be evaluated in the context of these criteria. Since in many transitional socialist economies the real value of productive assets is typically low when evaluated at world market prices and many of these countries are suffering from tremendous disruptions to past international trading patterns and large changes in their terms of trade, the costs inherent in the transition are monumental and no assignment of assets and liabilities will avoid these costs. Nonetheless, the choice of the asset and liability structure of banks and enterprises must be made, and the choice will importantly influence incentives and thereby affect the rate of recovery.

The next three subsections compare the two methods of distributing assets and liabilities in terms of enterprise privatization and efficiency, government credibility and intervention, and financial sector performance. Based on these criteria alone, we conclude that defining enterprises as free of bank debt at the time of privatization and replacing these loans on the balance sheet of banks with government bonds is superior to privatizing with historic asset/liability obligations intact. Section 4 then examines the fiscal implications of the two methods of distributing assets and liabilities. We find that the fiscal consequences of the government explicitly assuming enterprise obligations to state-owned

banks at the time of privatization are likely to be much less than analysts typically assume.

(a) *Enterprise privatization and efficiency*

Attempting to preserve historic bank-enterprise obligations may delay, politicize, and ultimately jeopardize the privatization process. Domestic and foreign investors contemplating the purchase of enterprises will have incentives to lobby the government to assume responsibility for past debts. Enterprises and banks will have similar incentives when the government plans to privatize enterprises by distributing their shares to the public. This may produce case-by-case government involvement in enterprise debt management and introduce delays and uncertainty into the privatization process. Scarce resources will be spent evaluating the implications and value of old debts, and in lobbying government officials. Furthermore, the added uncertainty will tend to dissuade some potential purchasers, and may lower the price that others are willing to pay.

Defining enterprises as free of bank debt will simplify the evaluations that are a prerequisite to privatization. The impetus to lobby the government to assume responsibility for past debts is eliminated, and pricing enterprises will be subject to less risk. This should expedite privatization and the realization of the efficiency gains expected to be derived from privatization.

If governments privatize enterprises with their historic debt obligations intact, some fraction of existing enterprises that would otherwise survive and prosper will fail because of their inability to meet inherited debt service obligations. Thus, some enterprises will undergo the costly and inefficient process of bankruptcy simply because policy makers have chosen to define "enterprises" in the world after socialism as including past bank debts. If instead governments assume past debts when privatizing enterprises, there will be fewer unnecessary bankruptcies, which should enhance economic efficiency and minimize unemployment and other transitional costs.⁴

Firms free of bank debt will have more retained earnings than firms with their historic debt obligations. Since much of investment is financed through retained earnings (which may be a particularly important source of capital during transition), putting more capital resources directly under the control of firms may increase investment and efficiency. It is worth noting that the advantages of putting more retained earnings directly under the control of newly privatized firms would not occur if the government were to guarantee the loans instead of explicitly assuming total responsibility for the loans.

Defining firms as free of bank debt may also increase the flow of external financing and improve corporate governance. Potential encumbrances on real assets arising from inherited debts would be eliminated, facilitating the flow of new secured lending by banks and other creditors. In addition, firms that are sold free of bank debt will fetch a higher price in the market, which may increase the stake and interest of new owners in the firm's long-run success.

Thus, choosing to privatize enterprises free of bank debt should accelerate privatization, enhance the viability of enterprises and increase the flow and efficiency of investment financing, thereby inducing a faster transformation with lower adjustment costs. This option of privatizing enterprises free of debts to state-owned banks can be implemented both within the context of a "big bang" privatization or a slower privatization process. Within the context of a slower privatization process, enterprise debts to state-owned banks would be assumed by the government when the government privatizes the enterprise.

(b) *Government credibility and intervention*

Examples from around the globe suggest that reductions in government credibility can raise uncertainty, increase interest rates, and jeopardize the successful implementation of policy reforms. Choosing to privatize enterprises free of bank debts incurred under socialism may improve government credibility. Put simply, "better to do so now with credibility than later with lost credibility."

Policy makers who choose to enter the transitional phase to a market economy with historic asset/liability arrangements intact risk institutionalizing *ad hoc* government intervention in what is supposed to be the new private sector. Experience suggests that in many instances the government will ultimately assume past debts to facilitate the privatization process, avoid widespread bankruptcy, and promote a healthy financial sector. With more privatized firms likely to be unprofitable when burdened with past debt, the stage is set for subsequent government bailouts, subsidized loans, and poorly designed directed credit schemes. The motivations for these interventions may be based on political considerations with little regard for economic efficiency or long-run government credibility, and these interventions are likely to occur under crisis conditions.

The governments of formerly socialist countries generally agree on the need to establish a break with the historic pattern of widespread

involvement in economic activity. Defining assets and liabilities such that enterprises are free of bank debt and banks are solvent represents a more credible break with the past. This policy choice may reduce pressures for, and expectations of, government intervention and special favors, circumventing the progressively corrosive effect of the government assuming or guaranteeing debt after publicly asserting that it will not intervene. Furthermore, these effects would reduce overall uncertainty in the economy and potentially lower the risk premium component of interest rates.

(c) *Financial sector performance*

Using the historic asset/liability structure, most of the banking systems in transitional socialist economies are insolvent: the market value of old debts is typically much lower than the deposits of households. The insolvency of the banking system creates a number of problems that inhibit the ability of the financial system to mobilize savings and allocate resources effectively. Specifically, using the inherited asset/liability structure hinders the privatization of banks, the efficient operation of banks, the adoption of sound regulatory policies and bank supervision, and the development of a sound financial structure. Redefining assets and liabilities so that banks' claims on enterprises are eliminated helps to overcome these obstacles.

(i) *Privatization of banks*

We see the progressive privatization of the banking system as a desirable goal. Privatization will enhance competition and improve incentives. Increased competition and the profit motive should stimulate improvements in personnel and skills, physical capital, and the overall efficiency of bank operations. Besides improving the "production function" of banks, privately held banks should be less prone to political manipulation than publicly held banks. Although we do not believe that complete privatization will or should necessarily occur in one "big bang," we do believe that the process should start, even if the initial efforts are very small. Moreover, in the context of a longer run privatization process, the government may wish to privatize a bank (or part of a bank) before the government privatizes all the enterprises to which the bank has issued loans. In such a case, the government could substitute government bonds for the loans to state-owned enterprises on the balance sheet of

the bank and move these loans to another state-owned institution.

Redefining claims within the official sector when a bank is to be privatized such that the bank is relieved of claims on state-owned enterprises would foster the more rapid and successful privatization of banks. Eliminating enterprise obligations to banks makes privatization more feasible because potential purchasers can value assets more easily and with greater precision, and because extinguishing "bad" debts enhances the capacity of banks to operate profitably. Privatization in this manner is likely to prove more lasting, in that the government can credibly argue that it has no responsibility for losses the banks may incur in the future. Clean banks can be sold to foreign and domestic investors without future recourse to the government. Absent the old loans, investors will likely see considerable value in the banks' physical facilities, funding base, trade name, account relationships, and staff. Banks might be sold at a multiple of tangible book value.

In contrast, by preserving the claims by banks on enterprises, the prospects for the privatization of the dominant banks seem remote. Privatization could be attempted by either selling the banks or giving them to the public. Nonrecourse sale to informed purchasers is highly unlikely given the uncertainties regarding the banks' assets, and their consequent negative net worth. Giving banks to the public does not relieve the government of its responsibility for dealing with the insolvency of the banks, and thus cannot be considered as genuine privatization. If the banks are deemed by the public to have negative net present value, the owners may simply let the banks go bankrupt. Faced with imminent bankruptcy and the possible collapse of the monetary and payments system, the government would be likely to assume responsibility for the deposits and perhaps renationalize the banks. In fact, with little capital at risk and with liabilities seen as guaranteed by the government, managers would have few incentives not to engage in risky ventures, likely magnifying the degree of insolvency with which the government eventually will have to deal.

Privatization brought about by extinguishing all pretransition claims offers advantages over the alternative of granting an explicit guarantee against losses on those claims. Providing a guarantee requires a valuation of the assets in order to establish some limit on the extent of the protection. By extinguishing the claims, not only would the scope, length and cost of the due diligence and negotiation processes be reduced, but the government would avoid additional costs

arising from uncertainties regarding the adequacy of the guarantee. The purchaser may underprice the guarantee due to uncertainties regarding the accuracy of its asset valuations, the permanence of the guarantee under successive regimes, and the long-run financial capacity of the government.

(ii) *Bank operational efficiency*

The largest effect on financial efficiency will derive from the ability to privatize banks. Senior managers of privately owned banks would strive for job security and financial reward by improving the bank's financial performance. Privately owned banks would have incentives to seek out profitable lending opportunities, and would more rapidly develop the capacity to distinguish between good and bad borrowers. They would be more likely to resist lending to existing, non-viable borrowers. The improvement in financial efficiency will have correspondingly positive effects on enterprise efficiency.

In addition to the financial constraint to privatization arising from uncertainties regarding the losses inherent in the historic claims, the task of resolving those claims places a substantial burden on human resources and serves as an added impediment to privatization. New owners need to reorient management and staff toward market-based, sound, and profitable operations as soon as possible. If privatized along with the old claims, with the exception of some asset resolution skills, many of the resources expended in the work-out of those claims will provide little long-term benefit to the banks. The reorientation of management and staff, which must be considered fundamentally important to operational efficiency, likely will be deferred and misdirected. In the extreme, the allocation of very limited human resources to this task could threaten the long-run viability of a bank in a competitive market.

Redefining the banks as initially free of claims on enterprises would permit owners and managers to assemble and train the staff necessary to operate effectively in a market economy. Existing managers and staff whom would otherwise have to be retained to participate in the process of resolving the old claims can be replaced. Human resources could be redirected toward developing business plans, establishing sound credit granting and risk management processes, and installing controls and processes. External technical assistance could be similarly redirected.

As previously noted, the redefinition of the banks' assets would facilitate the evaluation of

firms and remove potential encumbrances on enterprise assets, both of which should lower intermediation costs. In addition, past loans are currently distorting credit allocation. Banks are issuing credit to troubled firms to help them service old debts and pay wages. If debts incurred under socialism were eliminated, banks would have less incentive to finance inefficient enterprises. Thus, choosing to define enterprises as debt-free would expedite the allocation of credit to more productive uses and encourage banks to more aggressively seek out new business relationships.

Efficiency gains in the financial sector, coupled with the improved integrity of government and banks, should have beneficial consequences for the enterprise sector. Not only should overall borrowing costs be lower, but as banks improve their skills in mobilizing resources and allocating capital to the most productive sectors, the overall efficiency of the enterprise sector will improve.

(iii) *Implementation of bank supervision*

A key objective of bank supervisors is to provide reasonable assurance that capital is commensurate with risk, such that the amount of capital is sufficient to absorb potential future losses in individual banks and the system as a whole. To achieve capital adequacy, supervisors utilize various methodologies, most of which are built around a system of prudential regulation designed to limit risks and ensure a certain level of reserves and capital.

By attempting to preserve the historical claims of banks on enterprises, capital adequacy has no significance for the bulk of the banking system, as losses associated with these claims exceed the capital bases of the major banks by several multiples. Absent continuing government support, directors and managers of these banks have no realistic means by which to establish adequate reserves and capital. Further, they have little incentive to adhere to prudential rules, which in many cases define and limit risk exposures in terms of capital, and supervisors have little capacity to enforce them.

Supervisors may respond by establishing two sets of prudential regulations, one for new private banks, and another for the dominant state-owned institutions. A two-tier system of supervision not only compromises the integrity of supervisors, who should be perceived as immune to the influence of political expediency, but supervisors may find it more difficult to develop and administer the two-tier system, contributing to delays in implementation. Partially as a result,

in many instances not only the dominant state-owned banks but also the growing number of small privately held banks are operating without clear and comprehensive guidance regarding the rules of banking and without regulatory oversight.

Relieving banks of their claims on state-owned enterprises would substantially reduce the uncertainty regarding existing loan portfolios. Therefore, supervisors and managers can more readily determine and achieve an appropriate level of reserves and capital. Furthermore, prudential rules, most importantly the capital standard, become more relevant and potentially enforceable.⁵

(iv) *Financial structure*

Transfer of the commercial operations of central banks into new entities that now comprise the bulk of the commercial banking system often produced a segmented and noncompetitive structure. While the deficiencies of the resulting structures are generally understood, reconfiguration of the structures often is viewed as prohibitively formidable. One argument for maintaining the status quo is that centralized headquarters functions and existing staffs are necessary to facilitate the substantial interactions between the banks, governments and enterprises that will be required to negotiate the workout of all the historic claims.

Relieving banks of their historic claims on state-owned enterprises may create a temporary period of greater flexibility regarding both the organizational and asset structures of the dominant banks. Redefining the claims within the official sector so that banks' claims on state-owned enterprises are extinguished eliminates the need for the workout process and establishes an environment ripe for new lending and financial arrangements. The need to retain the existing structure and staff is reduced, and flexibility to alter the organization, management and staff of the banks is increased. Replacing claims on enterprises with claims on the government would substantially simplify banks' assets structures. Such simplification would facilitate the redistribution of assets, allowing the creation of smaller banks, along more rational lines, facilitating privatization and promoting competition.

4. FISCAL IMPLICATIONS

In the preceding section we conclude that defining enterprises as free of bank debt at the

time of privatization and replacing these loans on the balance sheet of banks with government bonds has numerous advantages over privatizing with historic asset/liability obligations intact when using the criteria of economic and financial performance and government credibility. This section compares and contrasts the fiscal implications of privatizing enterprises after explicitly assuming all debts owed by enterprises to state-owned banks with privatizing enterprises without assuming the debts. By fiscal implications we mean the incremental resources that have to be raised through taxation. For purposes of simplicity, we equate the present value of those fiscal revenue raising requirements to the implied increase in the outstanding stock of government obligations. Resources that accrue indirectly to the government from enterprises paying off debts to state-owned banks are not considered taxation. Furthermore, we note that sales of enterprises and banks by the government to the private sector reduce the net stock of domestic government debt obligations.

To isolate the channels through which privatization may affect taxation requirements we first consider the case when enterprise privatization is accomplished by *selling* the enterprises to the private sector. These sales may be to individuals, mutual funds, or private firms, and may be to foreign or domestic investors. The important characteristic is that agents who are outside of the official sector will purchase enterprises owned by entities within the official sector.

We then examine the case when enterprise privatization is accomplished by *giving* enterprises to the public. This may occur by simply distributing shares to households, creating mutual funds held by households and distributing enterprise shares to the funds, or by allowing individuals to purchase vouchers for a nominal fee and then to bid for ownership of enterprises with these vouchers. The important characteristic is that ownership of enterprises is transferred to the private sector without having the private sector purchase the enterprises at anything close to market determined prices.

Although this dichotomy may not apply to any particular economy, the analysis provides a simple analytical framework for examining the fiscal implications of combinations of different privatization schemes and different schemes to cope with the bad debt problem.

(a) *Selling enterprises*

We begin the analysis with a benchmark case. Consider a privatization scheme whereby all

enterprises are sold on one day. Under these conditions there are only very minor differences in the fiscal situation between the government assuming the debt prior to privatization or the government not assuming the debt.

Consider first the example of a viable firm, a firm where the expected present value (EPV) of assets plus revenues minus operating costs exceeds the book value of debt. Let debt equal 50 and the EPV of assets plus revenues less operating costs equal 100. Under some standard simplifying assumptions, the government receives 50 for the firm if the government does not assume the debt, and the government receives 100 but incurs additional debt of 50 for a net receipt of 50 if the government assumes the debt. Thus, in the case of a viable firm, the government decision to sell the enterprise with or without past debt obligations will not much affect the fiscal situation.

Now consider the more complicated example of a "nonviable" firm whose EPV is less than the book value of debt obligations, and first consider the case when the government does not assume responsibility of enterprise debts. Let the book value of bank loans equal 150, and the EPV of assets plus revenues minus operating costs equal 50. Thus, the EPV of the firm including the book value of debt obligations is -100. Because of the implications of limited liability, it seems reasonable to assume that a government selling this enterprise could receive a positive price since investors might be willing to pay something for the "option value" that the firm will do very well. Nonetheless, the "average" nonviable firm will go bankrupt and default on 100 of its bank loans.⁶ Since the government owns the banks, the EPV of the additional government obligations associated with the average nonviable firm, when the government does not assume responsibility for enterprise debts, is 100, the amount of the "bad" loans. These obligations, however, may not be recognized explicitly in the fiscal accounts for some time.

On the other hand, if the government assumes loans with book value of 150 when the firm is privatized, the government would receive approximately 50 for selling the firm, so that the government's obligations would immediately rise in present value terms by 100. While this is the same as the EPV when the government does not assume the debt, these obligations are explicitly recognized in fiscal accounts immediately.⁷ Thus, explicit assumption of state-owned enterprise debts to state-owned banks when the government privatizes the enterprise will not alter the EPV of fiscal obligations by much, but in the short run, the fiscal accounts may deteriorate.

(b) *Giving firms to the private sector⁸*

Again let's consider the simple benchmark case where all enterprises are given away on one day. Similarly let's first consider a viable firm with debts of 50 and EPV of assets plus revenues minus operating costs of 100. If the government privatizes the firm with its debt obligations, the government's obligations do not rise and the average firm of this type will repay the loan. If instead the government assumes the debt, its obligations rise by 50. Thus, in those cases where firms can satisfy their debt obligations — let's call these "good" loans, the fiscal situation is worse when the government explicitly assumes enterprise debt than when the government does not assume the debt. Specifically, government obligations increase by an amount equal to the size of the "good" loans, and this increase is recognized in the fiscal account immediately. We should also recognize, however, that taxable wealth in the private sector also increases one-for-one with the government assumption of "good" loans.

Now consider a nonviable firm with debts of 150 and EPV of assets plus revenues minus operating costs of 50. In terms of expected value then, 50 of the 150 in loans are "good," while 100 are "bad." In this case, if the firm is given to the public with the debts intact, the expected debt repayment equals 50, so that the government ultimately expects its obligations to rise by 100 in present value terms. But the increase in government obligations may not be recognized explicitly in the fiscal account for some time.

In the case where the government assumes the debts prior to privatization, government obligations rise by 150, and are reflected immediately in the fiscal accounts. In comparison with the case where the government does not assume the debt immediately, the fiscal situation is worse by 50, equal to the size of the "good" loans.

While assumption of the debts prior to giving away viable and nonviable firms increases government obligations by the amount of the "good" loans, this action increases the wealth of the domestic private sector by a corresponding amount. This increase in wealth can conceivably be taxed to service the increase in government obligations. Also, explicit assumption of enterprise debts would reduce enterprise bankruptcy, which would reduce government expenditures on unemployment and other social safety net obligations.

(c) *Synopsis of fiscal implications*(i) *Conceptual*

Our simplified analytical framework suggests

that when selling enterprises, there may be only minor differences in the EPV of the fiscal situation between the government assuming or not assuming all enterprise obligations to banks. When giving enterprises to the domestic private sector, the fiscal situation could be significantly worse when the government assumes enterprise debts. Specifically, if the government assumes the loans prior to privatization, the fiscal situation deteriorates by the size of the "good" loans, loans that would otherwise be repaid to government-owned banks. But since the assumption of the good loans increases private sector wealth by a corresponding amount, the deterioration in the fiscal situation can be mitigated if government taxes this increase in wealth.

Whether selling enterprises or giving them away, perhaps the more operative distinction is that when assuming the loans at privatization, the increased stock of government obligations is explicitly recognized in the fiscal accounts, whereas by not assuming the debt, the increase in government obligations occurs overtime as private firms fail and default on their obligations to government-owned banks. The EPV of these obligations (ignoring incentive effects), however, is equivalent.

Other factors will have a substantive influence on the fiscal situation. First, when privatizing by sale, the fiscal situation may actually be better in the case where the government explicitly assumes enterprise debts than in the case where the government does not assume these obligations. Purchase prices could rise by more than the extinguished debt due to lower evaluation costs, lower costs involved in lobbying officials to assume responsibility for the debt on a case-by-case manner, and less uncertainty about the privatization process in general. Indirectly, lower uncertainty, lower evaluation costs, and increased government credibility may lower real interest rates, further increasing prices paid for enterprises.

Second, whether by sale or give-away, banks burdened with portfolios full of "bad" loans will be impossible to privatize.⁹ Alternatively, as we argued above, banks clear of past bad loans could be privatized more easily and successfully. Thus, by explicitly assuming enterprise debts, fiscal revenue would be increased directly by the price of the banks, and indirectly because the government would not have to subsidize inefficient, loss-making state-owned banks.

Finally, and perhaps most importantly, the more rapid privatization of enterprises and banks made possible by resolving historical debts, and efficiency gains inherent in not having to resolve claims inherited from the previous economic

system, would stimulate economic activity. Explicitly assuming enterprise debts would thus lead to larger tax receipts at current taxation rates, as well as lower unemployment compensation payments.

Our analysis of the implications for the present value of the government's obligations has been conducted assuming that the government assumes past enterprise debts at the time of privatization, either by sale or give-away. If the government assumes the debt prior to privatization, government debt will rise temporarily because the government will not receive the higher price for the firm until it sells the firm, resulting in a potential cash flow deficiency. Moreover, assuming the debts prior to privatization may promote further accumulation of debt. Prior to privatization the historic relationship between the enterprise and the bank may remain very strong. There may be a tendency for firms to accumulate more debt and few incentives for banks to deny this credit. For these reasons, waiting until the time at which firms are privatized to assume past bank debt has some merit.

(ii) *Quantitative*

To gain some perspective on the potential tradeoff between the efficiency gains of the government explicitly assuming enterprise debts and the potential fiscal costs, we address two empirical questions: First, what would the extra growth rate in the economy have to be to pay off the extra fiscal burden over 10 and 30 year horizons without changing the marginal tax rate; and second, what is the extra fiscal burden the year after the government assumes all enterprise debts? To quantitatively assess these questions, we consider the worst scenario for the fiscal accounts: giving enterprises to the public all at once.

In Tables 1 and 2, we compute the extra real per annum GDP growth necessary to pay for the extra fiscal burden of the government assuming state-owned enterprise debts to state-owned banks under of a number of alternative conditions. In each table we consider three enterprise debt to GDP ratios — 0.15, 0.30, and 0.45 — that potentially cover many of the situations in Central and Eastern Europe. We also consider three assumptions regarding the percentage of "good" debts, i.e., debts that would be paid in full by the enterprises: 10%, 25%, and 50%, which also seem to cover the diversity of circumstances in TSEs. Thus, the present value of the *extra* fiscal burden of the government assuming responsibility for all enterprise debts in a county where 25% of the loans are "good" and the enterprise debt to

Table 1. *Extra real GDP growth per year needed to pay extra government debt over 30 years*

Enterprise debt/GDP:	0.15	0.30	0.45
Percentage "good" loans			
10%	0.01%	0.02%	0.03%
25%	0.03%	0.06%	0.08%
50%	0.06%	0.11%	0.16%

Table 2. *Extra real GDP growth per year needed to pay extra government debt over 10 years*

Enterprise debt/GDP:	0.15	0.30	0.45
Percentage "good" loans			
10%	0.09%	0.19%	0.28%
25%	0.23%	0.46%	0.69%
50%	0.46%	0.91%	1.35%

GDP ratio is 0.30 is $(0.30) \times (0.25)$, or 7.5% of GDP.

If we assume that the government completely pays this debt in 30 years, then (under some simple assumptions specified in the appendix) Table 1 presents the extra real per annum growth rate under the various assumptions. Thus, for example, if the enterprise debt to GDP ratio is 0.30 and 25% of loans are "good," then the country would only have to grow an extra 0.06% per annum in real terms, i.e., about one-twentieth of 1% extra growth, to generate sufficient tax revenues to satisfy the additional fiscal burden without raising the marginal tax rate. Table 2 presents the corresponding figures when the period of amortization is 10 years. Again using the example of an enterprise debt to GDP ratio of 0.30 with 25% "good" loans, the required extra growth (assuming no change in the marginal tax rate) is only 0.46% extra real growth, i.e., less than one-half of 1% extra growth per year.

Table 3 focuses on the extra fiscal expenditures in the year following the government assuming debt. To compute extra fiscal expenditures next year as a share of GDP next year, we multiply the ratio of extra government debt to GDP by the nominal interest rate (to compute extra interest expenditures next year) and we divide by one plus the growth rate of nominal GDP (to compute nominal GDP next year). Thus, using a nominal interest rate and nominal GDP growth rate of 23% and assuming that the enterprise debt to GDP ratio is 0.30 and that 25% of

Table 3. *Extra government interest expenditures in the year following assumption of all enterprise debt as a percent of GDP*

Enterprise debt/GDP:	0.15	0.30	0.45
Percentage "good" loans			
10%	0.28%	0.56%	0.84%
25%	0.70%	1.40%	2.10%
50%	1.40%	2.80%	4.20%

enterprise loans are good, we find that extra government expenditures are 1.4% of GDP. The figures in Table 3 exaggerate the fiscal burden because our computations assume that the fiscal government takes responsibility for all enterprise debts at once, so that the computed extra interest payments the year following government assumption of debt is as large as possible. If the privatization process takes place over many years and the fiscal government only assumes enterprise debts at the point of privatization, the initial fiscal burden will be smaller.

To us, the *potential* additional fiscal costs of the government explicitly assuming all enterprise debts to state-owned enterprises when giving the firms to the private sector do not seem large in comparison with potentially very large efficiency gains. More important than our interpretation of these rough computations is our recommendation that analysts should attempt to document the enterprise and financial sector efficiency effects, examine government credibility consequences, and quantify any *additional* fiscal revenue raising implications when evaluating alternative ways of coping with the bad debt problem in TSEs.

A few simple, tentative conclusions emerge from our analysis. First, if the country has chosen to privatize enterprises by giving them away, explicitly assuming loans prior to privatization is more attractive the larger the "bad" debt problem. Explicitly assuming debts has the efficiency effects on the enterprise and financial sector discussed above, and if the bad debt problem is large, the *additional* fiscal costs (in comparison with not explicitly assuming the debts at privatization) are small. Second, quantitatively, the fiscal costs of giving firms away seem small, particularly when balanced against potentially large efficiency gains. Third, if the country chooses to privatize enterprises by selling firms, explicitly assuming enterprise debts to state-owned banks is particularly attractive, because the additional fiscal costs are small, if not negative (a positive fiscal consequence), and the

efficiency gains could dramatically help the transitional process.

(d) *Bureaucratic and political economy costs*

There are certainly bureaucratic and political economy costs associated with the government assuming enterprise debts explicitly that may make this policy choice difficult. Most individuals within the official sector are not judged on the balance sheet of the official sector as a whole or on the efficiency of the entire economy. Individuals are frequently judged on the performance of their agency or sector. Thus, shifting resources and obligations within the official sector may importantly affect the criteria by which individuals are evaluated and thereby create great resistance to altering the asset and liability structure of entities within the official sector. This implies that government assumption of enterprise obligations may be very costly to implement, regardless of its potential social benefits. Therefore, officials responsible for the country as a whole may need to take these incentives into consideration when analysing the implementation of policies that cut across entities within the official sector. Similarly, hybrid or compromise approaches may be able to capture most of the efficiency gains from explicitly assuming debts prior to privatization, while circumventing some of the bureaucratic problems and potential fiscal costs.¹⁰

5. CONCLUSION

This paper focused on a decision that policy makers in TSEs must make: how to define the asset and liability structure of enterprises and banks as they are privatized.

Most governments are attempting to preserve the historic structure of claims as they pursue privatization. The large stock of debts incurred under socialism and the inability of enterprises to satisfy these debts is impeding privatization, hindering the efficient operation of enterprises and banks, and harming government credibility and the effectiveness of reform efforts. In practice, governments often assume enterprise debts to banks on a case-by-case basis in order to sell enterprises to the private sector. We argue that a more comprehensive and explicit application of such a policy would enhance efficiency by depoliticizing and speeding up the privatization process, improving the viability and profitability of

newly privatized enterprises, increasing government credibility, and improving the efficiency of the financial sector.

In our analysis, we focused on the financial sector. We observe that TSEs have not yet privatized major banks, and we explain that privatizing banks will tend to augment the efficiency of financial intermediation and the speed and success of the transition. The paper contends that governments are unlikely to succeed in privatizing major banks unless the government assumes responsibility for a significant portion of bank claims on enterprises. Furthermore, we argue that the operation and restructuring of state-owned banks will be enhanced by the government assuming enterprise debts.

Finally, we examined the effects on the fiscal situation of the government explicitly assuming enterprise debts to state-owned banks when the government privatizes the enterprises. Our estimates suggest that the fiscal implications are likely to be small. Given (a) the potentially large efficiency gains from the government assuming enterprise debts and (b) the relatively low fiscal costs, we believe governments should seriously consider assuming enterprise debts to state-owned banks as they privatize enterprises.

One way to apply some of this paper's arguments without the government assuming all enterprise debt is to preserve enterprise debt obligations to banks that are of unquestioned quality. Such loans might be those that are rated as "pass" at detailed loan reviews performed with the assistance of external experts. Experience in some countries suggests that such loans might comprise 10–20% of outstanding loan portfolios.

A second way to apply this paper's major suggestions is to preserve those claims that either banks or enterprises themselves agree to preserve. This type of "self-selection" would be of particular benefit in the case of privatization by distribution of shares because it may minimize the increase in government debt while maximizing efficiency gains. To accomplish this, it may be useful to construct some form of self-selection mechanism designed to encourage firms to retain liability for loans that can be repaid.

In terms of multilateral assistance to TSEs, explicit assumption of enterprise debts by the government at the time of privatization would shift the focus from resolving the inherited bad debt problem to supporting the efficient flow of resources toward productive investment. To promote the speed with which newly privatized banks assume positive roles in the transition process, support for the development of fundamental credit processes in the dominant banks could be intensified, and additional resources

could be devoted to rapidly implementing effective bank supervision.

1. Although we refer to the government substituting a government bond on the balance sheet of banks, the government could instead reduce government claims on banks.

2. For more on financial sector reform in transitional socialist economies see Caprio and Levine (1992), Fischer and Gelb (1991), Gelb and Grey (1991), Long and Sagari (1991), and McKinnon (1991).

3. We assume that the government assumes all loans issued by state-owned banks to state-owned enterprises up to the point when the enterprise is privatized or liquidated. In practice, this could be modified.

4. Eliminating the debt burden of enterprises may give new life to "bad" firms, perhaps prompting new lending by banks not yet able to identify nonviable firms. This will undoubtedly be a part of learning to operate in a market economy. To the extent, however, that old relationships between state-owned banks and state-owned enterprises continues to strongly influence loan decisions once the government privatizes enterprises, it may be particularly important for the government to privatize banks to reduce the importance of historic, social, and political obligations in credit allocation.

5. Private banks should not be allowed to operate without sufficient capital at risk and without sufficient regulation. Thus, strict licensing procedures linked to regulatory capacity is crucial, and capital requirements, commensurate with the very risky environment, should be set significantly higher than 8%.

6. Of course, owners of some firms may "steal" the assets first and then go bankrupt, leaving a bigger bank debt loss. Worse, some owners may acquire still more debt before going bankrupt. Alternatively, some firms may succeed and pay off completely their bank debts.

7. There will be fewer bankruptcies if the government assumes debts explicitly at the point of privatization. Since bankruptcy has both efficiency costs and bureaucratic costs, explicit assumption of enterprise debts will reduce fiscal expenditures and the burdens on the bankruptcy courts.

8. Since some privatization plans require that private individuals pay a fee to participate in the privatization process, we might be exaggerating the fiscal costs.

9. We note in section 3 that giving away banks with bad loans cannot be viewed as genuine privatization, and could lead to renationalization.

10. There are also political economy influences that favor the government explicitly assuming enterprise bank debts. For example, national newspaper headlines in country X that it sold company Y for \$300 million may produce more support for the government than selling company Y for \$50 million, even though the government has to assume \$250 million worth of bank obligations in the first case.

REFERENCES

- Caprio, Gerard, and Ross Levine. "Reforming finance in transitional socialist economies: Avoiding the path from shell money to shell games." Policy Research and External Affairs Working Paper, No. 898 (Washington, DC: The World Bank, 1992).
- Fischer, Stanley, and Alan H. Gelb. "The process of socialist economic transformation." *The Journal of Economic Perspectives*, Vol. 5, No. 4 (Fall 1991), pp. 91-106.
- Gelb, Alan H., and Cheryl W. Gray. "The transformation of economies in Central and Eastern Europe," Policy and Research Series, No. 17 (Washington, DC: The World Bank, 1991).
- Long, Millard, and Silvia Sagari. "Financial reform in socialist economies in transition," Policy Research and External Affairs Working Paper, No. 711 (Washington, DC: The World Bank).
- McKinnon, Ronald I. "Financial control in the transition from classical socialism to a market economy." *Journal of Economic Perspectives*, Vol. 5, No. 4 (Fall 1991), pp. 107-122.

APPENDIX: GROWTH AND DEBT

This appendix specifies how we compute the rough estimates regarding how much extra growth is needed to pay for extra fiscal debt. Specifically, we ask the following question: given the ratio of state-owned enterprise debts to GDP and assuming (a) a discount rate, (b) a baseline real GDP growth rate, (c) a tax rate, (d) a time period over which the debt and interest will be paid, and (e) a fraction of the debt considered to be "good" (i.e., debt that enterprises would pay in full), what would be the extra rate of growth in the economy necessary to payoff the extra fiscal burden — the "good" debt — over the given time horizon without changing the marginal tax rate.

Formally, let r = the discount rate (we assume 3%), g = the baseline real GDP growth rate (we use 3%), t = the tax rate (we use 30%), D = the initial enterprise debt to GDP ratio, f = the fraction of enterprise loans considered good (assumptions given in tables), T = the time horizon over which the debts will be satisfied (assumption given in the text), and e = the extra growth necessary to payoff the *additional* fiscal responsibility, where the additional fiscal responsibility equals f^*D , and EPV_t = the expected present value of tax revenues (as a share of GDP) if the government does not assume enterprise debts.

Thus, EPV_t , the expected present value of tax revenues when the government does not assume the debt is

$$EPV_t = \sum \frac{t(1+g)^i y}{(1+r)^i}$$

where individual time periods are indexed by i and the summation is done from $i = 1$ to T .

In the case when the government privatizes enterprises by distributing shares to the public, the fiscal debt rises by f^*D more when the government explicitly assumes enterprise debts to banks than if the government does not assume these debts under the simplifying assumptions discussed in the body of the paper. Thus, if the tax rate remains constant, the economy will have to grow faster to satisfy these additional obligations. Mathematically to find the additional growth, we must compute e :

$$EPV_t + f^*D = \sum \frac{t(1+g+e)^i y}{(1+r)^i}$$

where individual time periods are indexed by i and the summation is done from $i = 1$ to T .