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NATURE AND DYNAMICS OF THE INFLATIONARY PROCESS IN RUSSIA

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ABSTRACT

This thesis makes an analysis of the major inflationary mechanisms that origins from factors inherent to Russia`s new economic environment since the beginning of the reform program in January 1992. After some theoretical clarifications over the two different views of the inflationary dynamics, (i.e.. the monetary and the fiscal view), an accurate picture of the inflationary structures of the industrial and the financial sector will be made. Then, the various factors (other than the January` s price liberalization) responsible for the persistence of the high level of inflation in the country will be systematically studied (i.e. firms` soft budget constraint, indexation mechanisms and inflation inertia process, dollarization and depreciation of the ruble, and the use of seigniorage by the government). An anti-inflationary program including an efficient bankruptcy law, a tax-payment and government-bond indexation, is proposed. However, political pressures coming from various coalitions hostile to the economic reform are viewed as what activate the inflationary process in Russia.

RÉSUMÉ DE L`OUVRAGE

Le présent travail se veut une analyse des principaux mécanismes inflationnistes provenant de facteurs inhérents au nouveau climat économique qui règne en Russie depuis le début de la réforme entreprise en janvier 1992. Apres certaines clarifications théoriques concernant les deux principaux courants de pensées de la dynamique inflationniste (l`école monétariste et celle fiscaliste), un tableau précis des structures inflationnistes des secteurs industriels et financiers russe sera brosse. Par la suite, les différents facteurs (autres que la simple libéralisation des prix survenues en janvier) qui sont responsables de la persistance du haut niveau d`inflation dans ce pays seront étudiés de manière systématique (il s`agit des problemes de contraintes budgétaires lâches, des mécanismes d`indexations, du processus d`inertie inflationniste, de la dollarisation de l`économie, de la dépréciation du rouble, et la création de monnaie par le gouvernement comme moyen de financement). Un programme anti-inflationniste incluant une mise en application efficace d`une loi sur la faillite, l`indexation des paiements fiscaux et des bonds gouvernementaux, est proposé. Toutefois, les pressions politiques exercées par différentes coalitions hostiles aux présentes réformes sont considérées comme étant l ultime élément enclancheur du processus inflationniste en Russie.

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LIST of ABBREVIATIONS

CBR: Central Bank of Russia

CIS: Commonwealth of Independent States

CMEA: Council of Mutual Economic Assistance

CPE: Centrally Planned Economy

EIU: Economist Intelligence Unit

GDP: Gross Domestic Product

IMF: International Monetary Fund

MICE: Moscow Inter-bank Currency Exchange

NMP: Net Material Product

OECD: Organization for Economic Co-operation and Development

RFE/RL: Radio Free Europe/Radio Liberty (Electronic Mail)

TSC: Transitional Socialist Country

INTRODUCTION

The recent collapse of the socialist regimes in Eastern Europe marked the beginning of a new era for economics. Henceforth, in order to respond to the now unrepressed popular will of the citizens of these countries, scholars from all over the world are trying to develop new theories and policies that will insure the transition process from a command to a market economy is the least painful possible.

One of the greatest threats to such a transition program is undoubtedly the persistence of inflationary pressures after its introduction. Indeed, it is relatively easy to understand the mechanisms by which a sudden inflation burst will result from the implementation of a price liberalization policy in a country that has always exerted a control over prices to keep them below their market values. In fact, within a short period of time, price adjustments force economic agents to use most of their monetary overhang that resulted from decades of repressed inflation. Thus, to the extent this adjustment process is not disrupted by the introduction of other kinds of inflationary pressures, price stability should rapidly come back, leaving the government authorities free to fully get involved in various other measures (privatization of state firms, reform of the tax system, foreign trade policy restructuring, staff-training programs, etc.) to allow the country to continue its way towards the market economy.

However, as one can observe in all the East European countries presently in transition, price stabilization seems to be a much more complicated task than a simple elimination of the overhang money that was accumulated during the former socialist regime. In fact, it seems that some factors inherent to Transitional Socialist Countries (TSCs) act as generators of inflationary pressures and thus constitute a threat for the success of the entire reform process.

The present work will make an analysis of the major inflationary mechanisms that originate from such factors for the particular case of Russia. Since the beginning of its vast economic reform program on January 1st, 1992, this country has been in what can be considered as an hyperinflationary episode, according to the classic Cagan (1956) definition (i.e.a monthly inflation rate exceeding 50%. See Appendix I for the rate of inflation in the former USSR and in Russia since 1981). This is not the first time though that Russia has faced hyperinflation. Following the 1917 October Revolution, the implementation by the Bolsheviks of the various War Communism policies contributed to creating a similar situation, but not for the same reasons. At that period, diverging from the traditional Marxist theory, the goal of Soviet authorities was to attain full communism directly, without going into the stage of capitalism. Thus, in the context of a civil war, industrial and agricultural resources were diverted from private to military use. Lacking a solid domestic tax base and foreign assistance, the money printing presses were used. This increase in the money supply,

combined to a fall in the supply of consumer goods, created severe inflationary pressures that were relaxed only in the mid 1920s (Gregory and Stuart (1986:chap.3)).

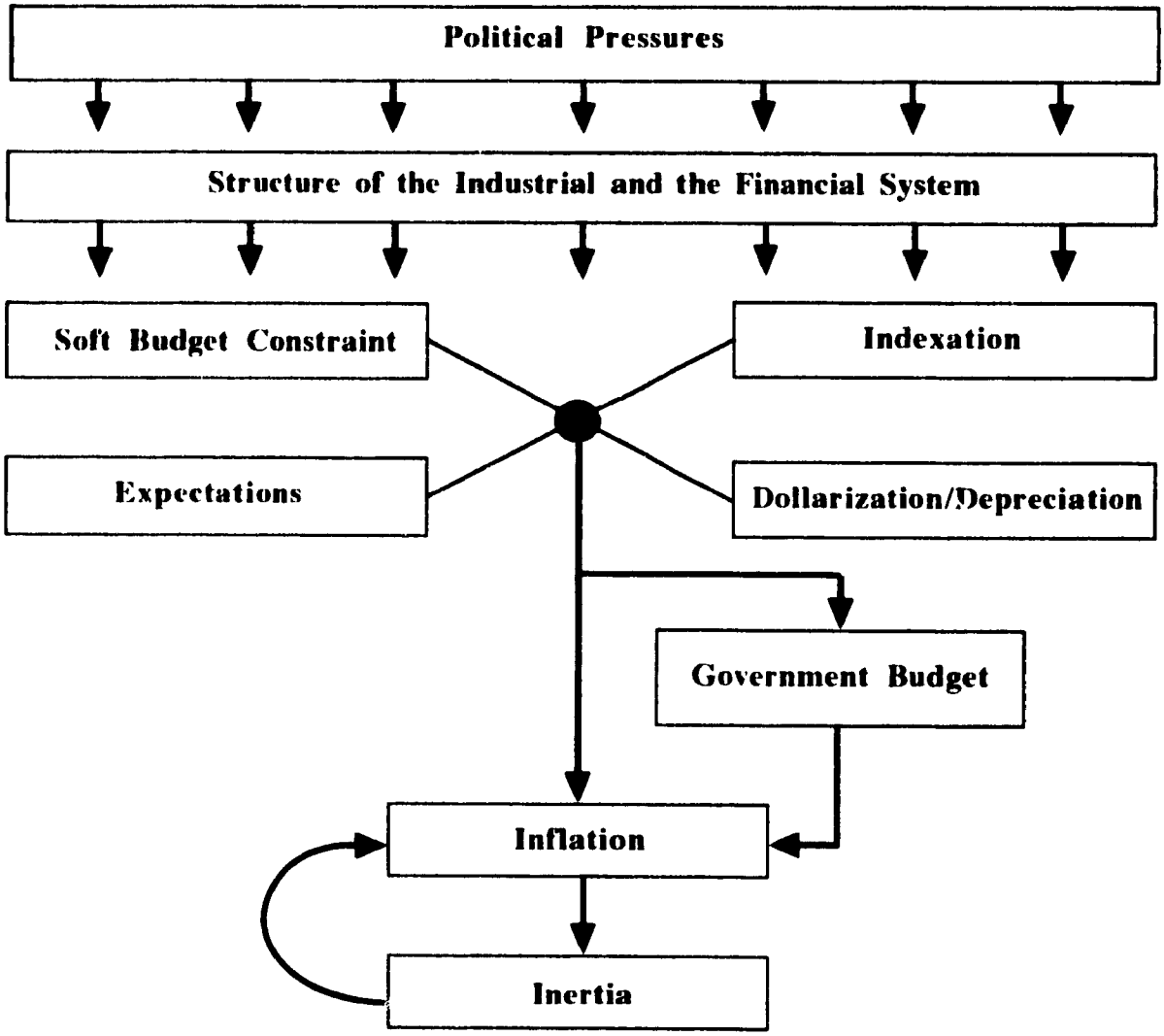
Almost 70 years after the War Communism episode, Russian authorities now attempt to come back from communism to a more market-oriented system and face high and persistent inflation again. Why is this so? What are the reasons that can explain a monthly inflation average rate of more than 55% since the January 1992 price adjustment? Is that because of the intrinsic nature of the old socialist infrastructure of the industrial and the financial sector? Or is it merely due to the use of seigniorage by the government to finance an uncontrolled budget? Do inflationary indexation mechanisms once put in place, then strengthening inflation inertia? Are there any factors that generate important currency depreciations, creating additional pressures on prices? ... As one can see, many questions can be raised regarding the various peculiarities of the inflationary process in Russia. However, the ultimate goal of the present work can be summarized in only one simple statement: "Why does high inflation still persist in Russia?"

A general overview of how the present work has been organized is represented in Figure A. However, before undertaking the analysis of the various causes of the inflationary phenomenon *per se* (Chapters 2 to 5), Chapter 1 will try to clarify the debate over the fiscal or the monetary origins of inflation in TSCs and will illustrate some theoretical

concepts that will be used in subsequent chapters. Chapter 2 will attempt to draw a short but accurate picture of the structures of the industrial and the financial sector in order to facilitate the understanding of the various discussions that will take place in the next chapters. More specifically, it will show how, from the peculiarities of these economic sectors (the structure of the latter being influenced by various political pressures of many lobbyist groups), several inflationary mechanisms are activated. Then, a rigorous analysis of these mechanisms will be undertaken in the next chapters.

Chapter 3 will study the soft budget constraint phenomenon, and will explain how, by its effect on the Russian state budget , it constitutes an important source of inflationary pressures. Also, we will see how the various government attempts to harden the firms' budget constraint resulted in an explosion of interfirm debt, and why the only solution to stop this process is the enactment of an efficient bankruptcy law. Afterwards, in Chapter 4, we will study the concept of inflation inertia and will clarify the reasons why some indexation mechanisms (such as wage indexation) aggravate the inflationary problem in Russia, while others (such as tax-payment and government-bond indexation) can be used as a cure. Finally, Chapter 5 will assess the impact on the ruble s value of the dollarization of the Russian economy, and will explain the mechanism by which it and five other factors of depreciation of the currency lead to additional pressures on the price level.

Figure A: Inflationary Dynamics in Russia



Throughout the work, the reader will realize how interrelated are the various sources of inflationary pressures. In fact, it is simply illogical to conceive, for instance, that firms` soft budget constraint will not have any effect on the population`s expectations[1], the pressures in

[1]Inflationary expectations constitute the only source of inflation that will not be the subject of a distinct chapter. In fact, because of their nature, it has

favor of a higher level of protection through indexation, or on the value of the domestic currency. For this reason, the inflationary process is qualified a «dynamic», in which all of its components interact with each other. Finally, as the reader will note in the course of its lecture, each identified source of inflation affects the price level in two ways: in a direct manner, and through its effect on the government budget. This «double inflationary channel» will be examined in each of the paragraphs that deal with the various sources (i.e. Chapters 3, 4, and 5), and will be analyzed in the context of the whole inflationary-dynamic process in the conclusion chapter.

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been judged more practical to discuss their effects in the context of each of the topics undertaken in the various chapters.

CHAPTER 1
Inflation in Transitional Socialist Countries: Fiscal or Monetary Phenomenon?

In much of the recent literature that deals with the inflationary phenomena occurring in Transitional Socialist Countries (TSCs), the common view is that inflation is the result of a disorganized fiscal system. Public sectors characterized by a highly inefficient tax collection system and also by an unwise spending policy tend to generate inflationary pressures. Therefore, because of a relationship between public deficit and price evolution, the inflationary process in TSCs can be interpreted as a *fiscal phenomenon.*

This statement could be viewed as contradicting the common neo-classical paradigm, as well as modern macroeconomic theory. In fact, there is a general agreement among economists on this issue:

> "In the long run, inflation is strictly a **monetary phenomenon** (*sic*). There can be no lasting inflation unless the nominal money supply is growing, and continual increases in the money supply will guarantee that there is enduring inflation."[1]

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[1] Wilton, D. and Prescott, D.- Macroeconomics.- 1987, p. 328.

In this chapter, we will show why these two views about inflation are not contradictory. Section 1 and 2 will first briefly present the arguments that support both the monetarist and the fiscal view of inflation. Then, section 3 will discuss the major criticisms of the fiscal view and will explain why the absence of a strong positive correlation between the rate of inflation and the level of government's deficit is consistent with the idea that deficits are one of the major channels that lead to high inflation.

1. The Monetarist View of Inflation

To help understanding why inflation is essentially a monetary phenomenon, we will consider the equation of exchange:

$$(1) \quad m + v \equiv p + y$$

...where m is the stock of money, v, the velocity, p, the price level, and y, the real annual income (lower cases denoting the rate of change).

In a "stable" country (i.e. a country that does not face big political or economical upheavals) empirical evidence shows a relative stability in the long run evolution of velocity. Marchon and Stringer (1985) explain this by the fact that velocity is mainly determined by institutional factors (e.g.: degree of efficiency of the banking system, payment habits of economics agents, etc.) which traditionally move gradually. Real income also is generally not very volatile since it

depends mainly on stable variables such as productivity growth, capital accumulation and size of the labor force.[2] Therefore, there could exist a strong link between the quantity of money in an economy and the price level. This link has been empirically proven several times for many countries so that nowadays, it almost has become a truism that price-level rises result mainly from excessive money-supply growth (Beckerman, 1992:32)[3].

If inflation was only a matter of excess money in an economy, it would be logical to prescribe stabilization policies that would merely restrict the monetary (or credit) emission. By making the currency unit more scarce, policymakers would increase its value with respect to other assets (financial or non-financial) in the economy and thus would reduce the inflation and distortions that come with it. Unfortunately, a tight monetary policy directly affects commerce, production and investment which can also be distortionary and maybe even

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[2]In countries like TSCs where many reforms are taking place in order to change almost entirely the economic and political mechanisms, such assumptions stating that the rate of change of Y and V are relatively constant over time cannot be made. The transition from a Soviet-type to a market economy generates a great fall in output and is likely to increase the velocity of money (this increase being dependent on many factors like the level of dollarization in the economy and the peculiar structure of the banking sector). These issues as well as their effect on the price level will be studied in the subsequent chapters. Here, we will restrict our discussion only to the explanation of the link between M and P in a "normal" environment.

[3]In their paper "Some Unpleasant Monetarist Arithmetic", Sargent and Wallace (1981) show cases where temporary tightening of monetary policy causes an immediate and permanent *raise* of inflation. But because of a number of non-standard features in their model, many criticized the lack of generality in their results (on this subject, see Drazen (1985)).

inflationary[4]. Thus, even if the neo-classical view that considers inflation as being a monetary phenomenon is indisputable, a real theory of inflation should explain why presumably equilibrating price jumps fail to bring the equilibrium, i.e. why do we observe self-perpetuating inflation (also called inflation inertia of feedback) in many economies. Many economists who study countries facing high and persistent inflation (like many Latin American countries as well as each TSC) argue that the budget deficit is the ultimate source of the problem. It follows from this that inflation could be viewed as a *fiscal phenomenon.* The next section will study this aspect.

2. The Fiscal Origins of inflation

Since any country s money supply is regulated by government authorities, it is reasonable to say that a sustained monetary abundance can be observed only if these authorities allow the stock of money to exceed the public willingness to hold it. One way of generating such excess money supply is by allowing important public-sector budget deficits.

Many authors share the common view that high inflation is the result of budget deficits financed through money creation (Dornbusch (1985, 1992); Åslund (1992); Filatochev and Bradshaw (1992); Tanzi (1992); Shelton (1989); Kiguel and Liviatan (1991); Hemming and

[4]Beckerman (1992:88) argues that to the extent credit restrictions diminish aggregate supply, the fall in the total income produced by an economy bids the price level up.

Mackenzie (1991); Choudhary and Parai (1991) and Cardoso (1992)). Given recent experiences in several countries with high inflation, Dornbusch (1992) argues that there are more and more similarities between their experiences as the inflation rate rises. Even if the particular mechanism by which inflation is generated can differ -say, deficits of state enterprises rather than a particular ministry-, there exists a general pattern that leads the country from a public-sector deficit to an expansion of money and credit. This dynamic is observed in many Latin American countries as well as in TSCs. It can be algebraically illustrated by using a conventional monetary model of high inflation (Dornbusch, 1985). Such a model assumes rational expectations and that the growth rate of money is determined by the requirement of budget financing. Then, it implies that the real value of money creation equals the deficit:

$$(2) \quad \dot{M}/P = \mu m = gy$$

where: $\dot{M} = dM/dt$

μ = growth rate of money

$m = M/P$ = real balances

g = the deficit ratio

y = real output

A linear velocity (V) equation is also assumed:

$$(3) \quad V = y/m = \alpha + \beta\pi$$

where π is the rate of inflation, α is the noninflationary level of velocity, and β is the responsiveness of velocity to the rate of inflation. Finally, by substituing (3) to (2) and by assuming a steady state equilibrium in which the rate of money growth equals inflation ($\pi = \mu$), we obtain an expression for the equilibrium rate of inflation when deficits are financed through money creation:

$$(4) \quad \pi = \alpha g/(1 - \beta g)$$

A few comments must be made about the implications of this equation.

First, one can observe that the inflation rate is positively linked with the budget deficit ($d\pi/dg \geq 0$). Moreover, the link is nonlinear (convex), which means that the larger the deficit a government tries to finance, the steeper the rise of the inflation rate. Commander (1992) (as well as most upholders of the orthodox view) is one of those who support the nonlinearity view of inflation and stresses that this, added to the endogenous character of the real fiscal deficit, generates a situation in which the cost of inflation can rapidly increase over time.[5] Therefore, one can realize how important this relation between inflation and deficit becomes in understanding the dynamics of the inflationary process. Also, in the light of equation (4), one can see why many economists argue that inflation is *first* a fiscal phenomenon. However, other economists argue that the former overestimates the link of

[5]This statement directly refers to a concept that, because of its importance, will be studied in a distinct chapter: inflation inertia.

causality between the two indicators. For this reason, the next section will examine the legitimacy of their criticisms.

A second important point to be made regarding the general pattern that leads a country from a public-sector deficit to inflation is related to α and β, the parameters of the velocity equation. Equation (4) shows that the inflation rate depends on both the noninflationary level of velocity and the responsiveness of velocity to the rate of inflation. Those parameters capture the dollarization phenomenon, ie. the importance of the use of the US dollar in a country that has its own currency unit. The trade of the domestic currency to get dollars reduces the monetary base for the inflation tax and thus, the price levels must rise. Thus, the more important is dollarization in an economy (ie. the higher is α), the stronger is the impact of a deficit over the rate of inflation. But, here again, the inflation feedback produces its perverse effect. As inflation goes up, dollarization will become more and more popular to escape from the tax (ie. a higher π will generate a higher α). Furthermore, the faster the degree of responsiveness of a given country (ie. the higher will be β), the faster this cycle will go on over[6].

The third and last important comment on the link between inflation and deficit will be made by using the long-run version of equation (4), which was derived by Dornbusch (1992:19):

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[6]Further discussion on the dollarization phenomena will be made in Chapter 5.

$$(5) \quad \pi = (\alpha g - y)/(1 - \beta g), \qquad \beta g < 1$$

From equation (5) one can observe a negative correlation between income and inflation. This means that there is room for noninflationary deficit finance since an increase in y offsets the effect an increase of g has on inflation. In fact, by generating a higher demand for real money in the economy, an increase in a country`s real income allows government to issue more money without introducing the risk of inflation. But since seigniorage can be considered as a tax on money holdings, there must be a level of taxation above which the tax is so distortionary that the cost of imposing it becomes higher than the revenues that are generated by it (the Laffer Curve principle). Then the question to ask is what would be the maximum revenue a government can collect in order to finance its deficit? In his attempt to answer, Cagan (1956) derived a model made of an equation showing the demand for real cash balances and another equation describing the formation of expectations. He found that the condition of maximization was to set such a rate of money growth that the elasticity of the tax base (ie. the demand for money) with respect to the tax rate (here, the rate of money growth) should be equal to -1.[7] But since a deeper discussion of this issue would be beyond the scope of the present work, the reader is refered to Cagan`s paper. What was important to illustrate from (5) is that when output grows significantly, seigniorage can be a

[7]Note that this is a familiar condition from monopoly theory.

noninflationary mean of financing public-sector deficit (up to a certain limit though).[8]

From the above analysis, one can understand the reason why many economists who study nations facing high inflation favour the idea of considering inflation to be essentially a fiscal phenomenon. In fact, even if price level instability is, at its root, a question of supply of money, this money is managed by government authorities whose actions often result in monetary disequilibrium. One of these actions is the strong tendency to generate huge budget deficits which are financed by money and credit creation. For these reasons, economists must focus on the fiscal aspect of the dynamics to elaborate solutions. In his study of the high inflationary period in four countries, Sargent (1982) was one of the first to argue (in a period when monetarism was The Law) that emphasis should be placed on budget stabilization rather than on the growth of money. He defined a credible fiscal stabilization to be the *sine qua non* condition for stopping high inflation:

> "The essential measures that ended hyperinflations in each of Germany, Austria, Hungary, and Poland were, first, the creation of an independent central bank that was legally committed to refuse governmnent`s demand for additional unsecured credit and, second, a simultaneous alteration in the fiscal policy regime. [These measures] had the effect of binding the government to place its debt with private parties and foreign governments

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[8]In Chapter 3 (The Soft Budget Constraint), a discussion on the various ways for a government to finance its deficits will be made.

> which would value that debt according to wether it was backed by sufficient large prospective taxes relative to public expenditures."[9]

Of course, this view has been challenged. Thus, the next section will briefly explore some of the major criticisms formulated towards defenders of the fiscal view of inflation. In the following chapters, the exactitude of this view will be tested by analyzing of the current period of high inflation in Russia.

3. Criticisms of the Fiscal View of Inflation

Those who support the fiscal view of inflation argue that budget deficits are the cause of inflation and consequently, that disinflation programmes need to rely on budget balancing. Others suggest that this analysis oversimplifies the nature of the problem since it does not take into account the fact that in a context of high inflation, government authorities may not easily be able to use fiscal and monetary tools as it is prescribed by the theory. For instance, it could be difficult to increase tax revenues or to substantially reduce expenditures (and subsidies) without violating contractual obligations (or, in the case of TSCs, leading some state enterprises to bankruptcy). Moreover, on the money side, authorities that reduced the money-supply growth could generate widespread bankruptcy in the private sector and aggravate the government`s deficit.

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[9]Sargent, Thomas J..- "*The End of Four Big Inflations*", 1982, p.89.

Even if the later criticisms of the fiscal view of inflation have their importance, the major one (ie. the one that was mentioned by every author read who was sceptical vis-à-vis this view: Beckerman (1992); Liviatan and Piterman (1986); and Kolluri and Giannaros (1987)) regards the apparently weak and ambiguous empirical correlation between the deficit and the rate of inflation. In order to have a clearer picture of this situation, the relation between the two variables has been analyzed for four Latin American countries that are well known for their problems with high inflation: Argentina, Bolivia, Brazil and Peru[10]. Rates of correlation between inflation and the deficit expressed as a percentage of GNP were computed and they are shown in Appendix II (see page 118).

One can observe a large discrepancy between the countries` rate of correlation between inflation and deficit. While in Brazil and in Bolivia the rate reaches quite a high value (respectively: 0,814 and 0,809), the one computed for Peru shows a negligible correlation (0,075). In Argentina, despite a relatively low rate (0,239), one can observe that when the rate of inflation is shifted forward, the correlation tends to be negative (though not significant). Then, this

[10]These countries were selected basically for two reasons. First, data availability: we wanted to make an analysis over a "reasonable" (ie. not too short) period of time. Second, data reliability. In both cases, former Socialist countries would not have been good candidates even if they seem to have more similarities with the Russian economy. But one must note that inflation is a universal phenomenon and it affects an economy regardless of its regime type. As Dornbusch (1992:13) once said: "Of course the experience in the post-communist economies is special as it starts from repressed inflation, but even that is not very different from experiences in Argentina or Brazil, where cycles of price controls and hyperinflation are now common.".

computation seems consistent with the common view that the link between the deficit and the rate of inflation is rather uncertain. However, it has been shown that the absence of a strong positive correlation is nevertheless consistent with the idea that deficits are the ultimate cause of high inflation. The next paragraphs deal with this issue.

In their analysis, Drazen and Helpman (1990) theoretically demonstrate how a deficit, even when it is considered responsible for inflation, can be empirically unrelated to it. To do so, they built a model in which a government finances its deficit by money creation and by issuing bonds. In this model, debt dynamics are unstable: if the government keeps the present rate of money growth, lump-sum taxes and spending, it will generate an increasing indebtedness up to a level where the authorities will have no choice but to change their macroeconomic policy. This situation will bring individuals to form their expectations over both the time at which the policy switch will take place and the content of the new policy.

According to Drazen and Helpman, it is precisely these expectations of a change in policy that link the budget deficit to the rate of inflation. Depending on the way government is expected to eliminate the deficit (by money financing, tax financing, or a mixed policy) and also depending on the level of uncertainty over the stabilization policy, one can observe different levels of correlations between deficit and inflation.

In order to prove the veracity of their model, Drazen and Helpman ran several simulations. The results clearly shows that as debt increases, inflation rises. But from a certain level of debt on, inflation declines sharply. The authors explain this situation by stressing the importance of the risk premium in the determination of the equilibrium rate of inflation (ERI). First, they derived an expression for ERI as a function of the real balances *m(t)* and the risk premium *o(t)*:

$$(6) \quad p/P = f[m(t) - o(t)]^{11}$$

Then, they argue that as the debt level of a country approaches its upper limit[12], the risk premium becomes so high that it seriously counteracts the effect of the constant growth rate of real balances. Hence, it is possible to observe that while deficit goes in one direction, inflation goes in another.

Blanchard and Fisher (1989:chap. 10) also showed several cases where an increase in the deficit can occur at the same time as a fall in price levels. One of those cases occurs when it is expected that at time T (ie. the moment when the government adopts a new policy), the stabilization program will take the form of an increase in taxes (rather than an increase in money balances) that will bring the economy

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[11] $p = dP/dt$

[12] The upper limit of debt (b_{Tmax}) is the level where debt burden generated by the present policy becomes unsustainable. This level is reached at T_{max}, the latest time at which a policy switch is expected.

towards a zero-inflation steady state[13]. Here, since individuals forecast that inflation will fall in the future, inflation will start to decrease *today*, generating a negative correlation between deficit and the rate of inflation for each period between today and T[14].

As one can see, the latter arguments allow one to believe that the weakness of the empirical correlation between the government deficit and the price levels is not sufficient to reject the hypothesis of the fiscal nature of inflation. Of course, it is true that inflationary pressures come from a growing nominal supply of money (making inflation a monetary phenomenon at its basis). However, the relevant question to be asked is: "what constitutes the generators of such an excessive presence of monetary units in an economy?". The answer to this question inevitably implies a closer look *not only* at the fiscal aspect of the inflationary phenomenon, but also at the way the various economic institutions are organized in a given country. Therefore, in this work, not only we argue that inflation is both a monetary and a fiscal phenomenon (various government decisions affecting the quantity of money), but we attach a lot of importance to the way the economic structures of a country have been built up since they constitute by themselves a significant inflationary channel. Thus, before undertaking

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[13]This means that under the new policy, seigniorage will not exceed its noninflationary level.

[14]It must be noticed that in the model of Blanchard and Fisher as in the one of Drazen and Helpman, debt follows an unsustainable path. Therefore, before time T, debt (and deficit) increases.

our discussion of the various inflationary mechanisms generated by these structures in Russia (Chapters 3, 4, and 5), we will start by looking at the latest transformations in the Russian industrial and financial sector.

CHAPTER 2
Structures of the Industrial and the Financial System

Before undertaking the study of any economic problem of a given country, one must first have in mind a clear picture of the way institutions have been set up and of how they operate. This is a *sine qua non* condition in order to be able to avoid analytical biases resulting from a bad knowledge of the structural peculiarities of the various economic systems. Therefore, the present chapter will describe the structure of the Russian industrial and financial sector to give the reader the clearest picture possible in order for him/her to be able to follow more easily the various discussions on the later chapters. Section 1 will analyze the latest development in the Russian industrial sector, highlighting the fact that even if the reform program has made this sector much more market-oriented, many "legacies of the past" still continue to prevent it from operating as if it was in a real market economy. Section 2 will do the same type of analysis as in section 1, but in regard to the Russian banking system. Finally, section 3 will assess the efficiency of the latter system and will analyze how the various gaps in the mobilization and the allocation of savings affect the chances of success of the reform, and prepare the way for various inflationary mechanisms.

1. The Russian Industrial Sector

In recent years, important changes have occurred in the relations that link the Soviet/Russian governments to the industrial sector. Since the 1987 Law on State Enterprises (which was considered the first step towards a radical revision of the Soviet economy), the Soviet Union has been getting ever closer to a more decentralized economic system. In fact, the basic idea behind the reform has been to give industrial units greater autonomy and thus to converge to a market-oriented system. "There was to be a new role for planning, with a shift from directive planning to overall strategic guidance of the economy" (Sakwa, 1990:279)[1].

Owing to the philosophy of a centrally planned economic system, Soviet firms were typically very large and autarkic. Their levels of production were set by the Gosplan, and the Central Bank of USSR (Gosbank) was responsible for supplying the necessary funds for them to achieve their obligations (the role of Gosbank is discussed in section 2 of the present chapter). The survival of all these huge state firms was thus assured (ie. there was no threat of bankruptcy) because of a system of «soft budget constraints».

One of the most important conditions for the success of a transition to a market economy is a general restructuring of the

[1]The aim of this section being not to systematically analyze the history of the reforms in the industrial sector, we refer the reader to Sakwa (1990), OECD (1991) and IMF (1992b) for further details.

enterprise sector. Since the beginning of the January 1st, 1992 radical economic reform, one of the major objectives of the Yeltsin government has been to do so by privatizing the large, old and inefficient state firms on the Russian territory. This has appeared to be a very difficult task for many reasons. First, as Filatochev and Bradshaw (1992) point out, while central control was relaxed over the enterprises, this has not been accompanied by growing competitiveness, nor by an *effective* law on bankruptcy[2]. As a result, increasing wage pressures did not find any resistance since no hard budget constraint was imposed. From 1990 to 1991, the average monthly industrial wage rose by 86,5% (R311 to R580). For the single month of January 1992, it rose by 65% (IMF, 1992b:11). Furthermore, many enterprises have resisted the introduction of new technologies and have renounced investment in order not to reduce the capital available for wage payments. These ways of doing things dangerously threaten the reform program and could result in additional costs in the medium run.

Marer (1992) raises another important obstacle to privatization and structural reorganization (and thus, to the success of the whole transition program): the resistance of managers who used to benefit from the structure of the old system. He argues that since the absence of real owners and of any link between firms' performance and their prospective rewards, managers have no incentive to invest in the success of the transition. On the contrary, they risk losing their vested

[2]Though a bankruptcy law was voted on by the parliament on November 12, 1992, it seems not to be respected in practice. We will discuss this question in Chapter 3.

interests. Then, to protect themselves against the uncertainty coming from the actual process of structural reorganization, they do not hesitate to use their influence and power to form industrial lobbies and negotiate the content of legislation with government`s authorities[3]. On them, Comte (1992) says:

> "Hommes de l`ancient système, ils constituent un groupe social sans lequel rien ne peut se faire en Russie: aucune réforme économique ne passera sans leur consentement et leur soutient [...]"[4]

In December 1992, the percentage of privatized enterprises hardly reached 4% in Russia (a presidential decree of December 1991 forecasted a level of privatization between 50% and 70%, depending on the industry (IMF, 1992b:35)). 78% of the volume of goods and services were still supplied by state firms (*Commersant*, Dec. 8, 1992:7). Undoubtedly, government authorities face a substantial resistance to changes that make the economic transition even more painful. In regard to inflation, not only has a wage-price spiral become a reality in 1992, but due to their monopolistic position, state firms have been able to charge excessively high prices for their products. In fact, profits of Russian enterprises have jumped from R154 billion in 1990 to R320 billion in 1991 and to R979 billion for the period between January and

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[3]A good example of the efficiency of the industrial lobby was illustrated in *Commersant*, Sept 1, 1992:4. We learn that after a discussion with leaders of the industrial lobby on the making of the structural policy for 1993, a different version from ex-Prime Minister Yegor Gaidar`s initial plan was adopted: "The idea of financial stabilization has been discarded in favor of costly programs of subsidizing «the vitally important industries»".

[4]Comte, Philippe.- *Qui Dirige les Enterprises Publiques de l`ex-URSS?*, 1992, p.4.

May 1992 (EIU, 1992:25). Though an anti-monopoly policy is being developed, its efficiency is limitated. In theory, a list of firms that are in dominant market positions has been compiled and authorities are supposed to control prices increases of goods supplied by those firms. If abuses are reported, the regulatory response could go from a closer monitoring to the imposition of limits of profit margins (IMF 1992b:34). In practice, however, it seems from the data that the policy has still not reached a reasonable level of efficiency.

The aim of this section was to draw a brief but fair picture of the situation in the Russian industrial sector. Kolodko et al. (1992:33) brilliantly summarize it as follows:

> "Although a postsocialist country`s economy with a clear pro-market orientation is, as a rule, characterized by much less restrictions on market mechanisms than in the case of a modified planned economy, this is by no mean tantamount to meeting all the conditions for the functioning of these mechanisms in the same way as in a relative «mature» market economy."

As we have seen, this situation is due to many factors: 1) the goods and services market has been liberalized before the formation of an appropriate legal framework that would assure a better financial discipline[5]; 2) there still exists a large monopolistic structure of the industrial sector; and 3) a majority of state firms managers adopt conservative attitudes and increase the price to pay for transition.

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[5]Note that this situation is inherent to a transition period and thus, normal.

Understanding the present situation in the industrial sector is a prerequisite for being able to analyze adequately the sources and dynamics of the inflationary mechanism in Russia. But before undertaking the analysis *per se*, we must also consider the behavior of another key sector in the process of inflation: the *financial sector.* Therefore, the next two sections will discuss it in detail.

2. The Russian Banking System in Evolution

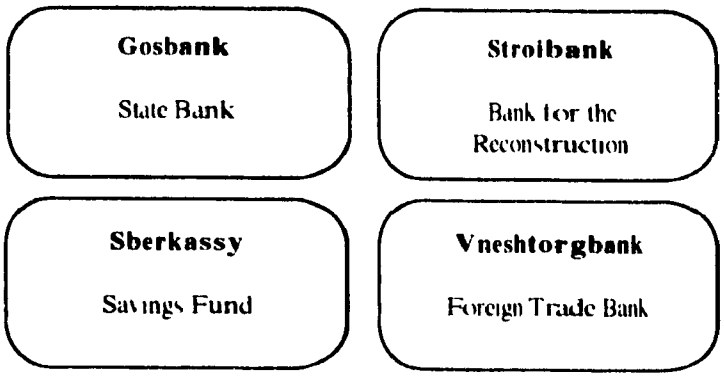
The Banking System before 1988

Before the July 1987 Decree on the Reform of the Banking System, the financial sector of the ex-USSR was characterized by a high degree of centralization. From Stalin to Gorbachev, the State Bank (*Gosbank*) played both roles of commercial bank and central bank. It was the treasurer of the government`s public finance and had a monopoly over banking and credit. Though the Soviet banking system (often called a «monobank» or «monotype» system) did not imply any secondary credit expansion, it had unlimited capacity to create bank deposits (ie. credits).

Beside the Gosbank, there was the *Stroibank* (Bank for the Construction) which was in charge of the long-term financing of construction projects across the country, and the *Sberkassy,* the Soviet`s Savings Fund. From 1961, all foreign trade operations had been confided to the Foreign Trade Bank (*Vneshtorgbank*). The structure of

the Soviet banking system as it looked before the beginning of the present reform is illustrated in Figure II.1 (Massioukova, 1992).

Figure II.1: The Banking System of the USSR before 1988



Source: Massioukova, 1992

The role of the banking system was to finance the production plan which was expressed in physical terms. This was the basis on which a financial plan was formulated. The role of Gosbank was to monitor the observance of the plan by issuing sufficient credits to state firms in order to allow them to produce the required quantity of goods. Therefore, in such a system where credit was directly allocated to economic agents without any specific control, interest rates as well as the exchange rate merely played an accounting rather than an allocative role (Sundararajan, 1991).

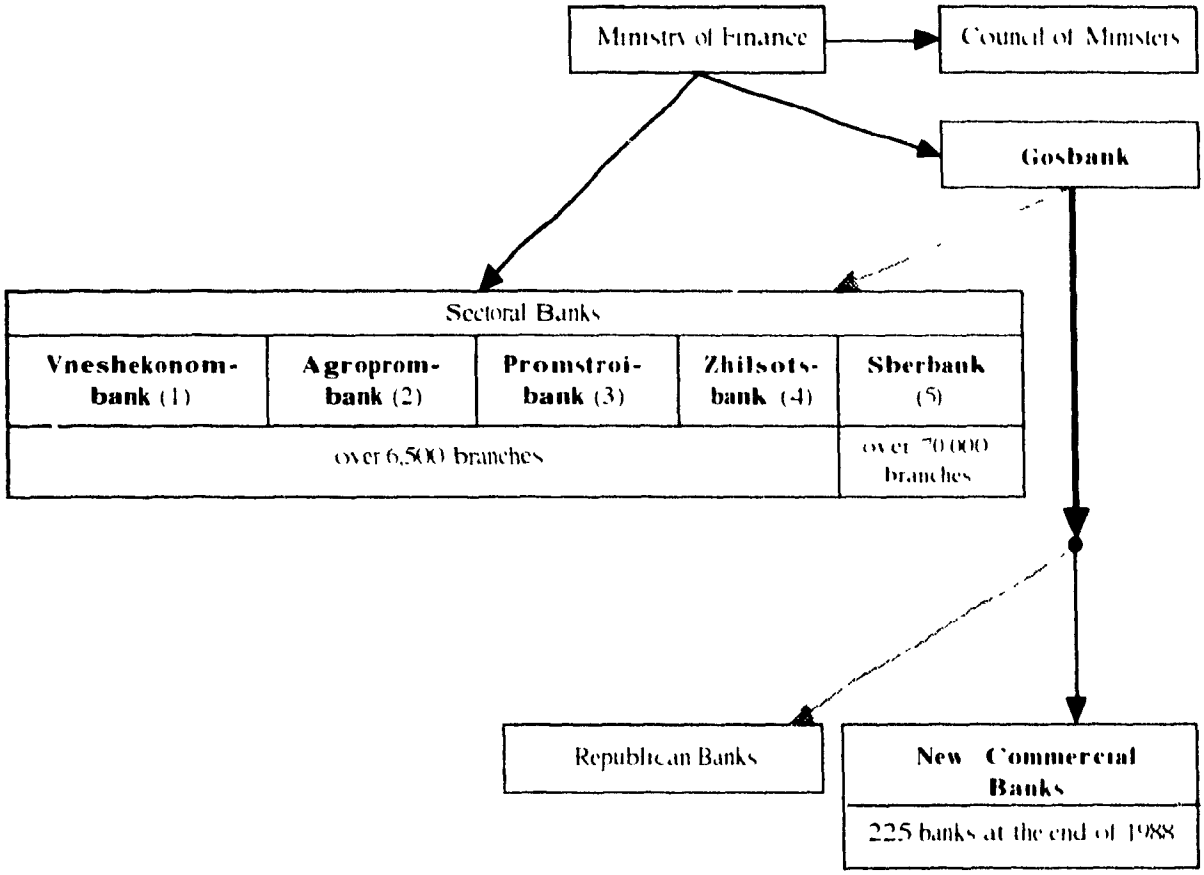
1988: Creation of Sectoral Banks

From January 1st 1988, the old banking system was reformed to give birth to five sectoral banks: the Savings Bank (*Sberbank*), the Foreign Trade Bank (*Vneshekonombank*), the Bank for Construction and

Industry (*Promstroibank*), the Bank for Agriculture (*Agroprombank*) and the Bank for Social Sector (*Zhilsotsbank*) (see Figure II.2). This was an important step towards the reform of the financial system in Soviet Union since for the first time, the monobank was split into a national bank and a group of public commercial banks, thus separating (theoretically) the central from the commercial banking functions (we will see in the next section why this transition from a monobank to a two-tier banking system has not been a total success). Let us mention, however, that during this period, the State Bank of Russia was only a branch of the Gosbank and did not play a prominent central banking role.

In August 1988, a first step from a two-tier to a three-tier banking system was made. A provision legalized the establishment of the «new commercial banks». These institutions proliferated quite rapidly. In September 1992, they were around 2,000, of which 1500 were in Russia. However, they were handicapped by the legacy of the old banking system: each (state) enterprise was a client of one of the five sectoral banks which were created to manage the non-central-banking functions in the Soviet monobank system. Therefore, the new commercial banks got only a small share of the country`s financial assets, mainly those coming from the emerging entrepreneurial sector (Massioukova, 1992; IMF, 1992; and Tanzi, 1992).

Figure II.2: The Banking System of the USSR, 1988-90.



Notes: Unbroken and broken arrows indicate administrative and economic subordination, respectively
(1) Foreign Trade Bank (2) Bank for Agriculture (3) Bank for Construction and Industry
(4) Bank for Social Sector (5) Savings Bank

Source Massioukova 1992

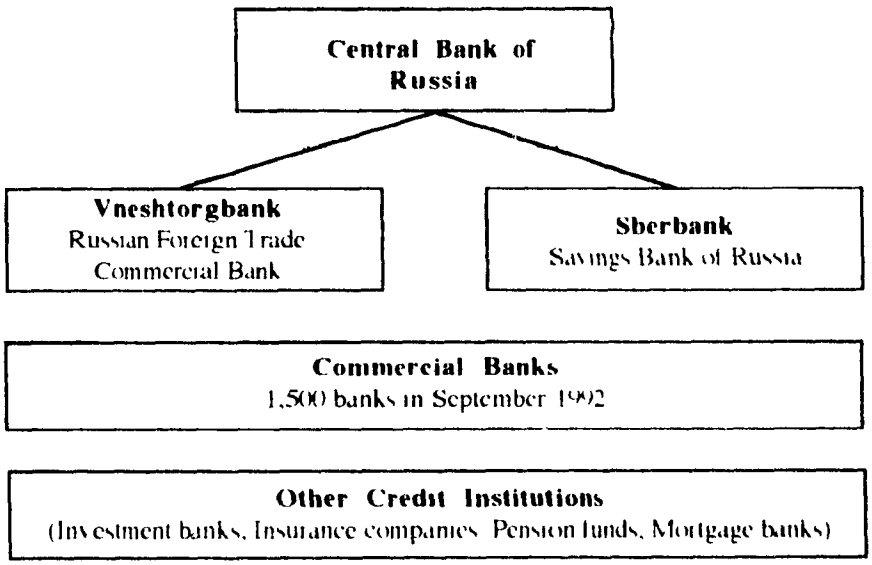
Creation of an Independent Banking System in Russia

It was only in 1991 that the Russian banking system began to act independently of the Soviet banking structure. In December 1990, the Supreme Soviet of the USSR adopted two laws that established the legal basis for a Western-like financial system: the Central Banking law and the law on Banks and Banking Activity. Versions of these laws were

enacted by Russia, specifying that on the Russian territory, Russian laws took precedence over Soviet Union laws. The State Bank of Russia obtained additional power and was formally defined as a central bank, ceasing to be a mere republican branch of the Gosbank. Then, from early 1991, although Gosbank continued to control the ruble printing presses until its takeover on November 22, 1991 by the Central Bank of Russia (CBR), the latter became free to set its own monetary policy (IMF, 1992).

The Russian banking system as it looks today can be illustrated by the diagram presented in Figure II.3. On the top, there is the CBR which is now independent from the state`s executive organizations, but under control of the Parliament. Like any other traditional central bank, it controls money and credit emission, defines the monetary policy and assumes the broad oversight of the financial system. Behind it, two specialized banks for which CBR is the majority shareholder: the *Vneshtorgbank* (the Russian Foreign Trade Commercial Bank) which offers trading facilities mainly for large exporting enterprises, and the *Sberbank* (the Savings Bank of Russia) which is a deposit-taking institution for small savers. It is worth noting that the old Soviet Foreign Trade Bank was renamed the Bank for Foreign Economic Affairs (*Vneshekonombank*) and became, under the control of the CBR, the only institution in charge of the management of the former union`s debt.

Figure II.3: The Actual Russian Banking System



Source Massioukova, 1992, IMF, 1992

The "third-tier" of the Russian banking sector is composed of (private) commercial banks. Basically, there are two categories of commercial banks in Russia. The first one includes ex-sectoral banks that were reorganized as commercial banks, and the second one contains what we have previously called the new commercial banks[6]. About two-thirds of all the commercial banks of Russia have been created on the basis of the former sectoral banks. There exist two main differences between the two categories. First, since they carried their former clients (mainly big state firms) throughout their restructuring, former sectoral banks are much bigger than the average of the new

[6]See «1988: Creation of Sectoral Banks» above.

commercial banks.[7] Second, despite their relative smallness, the latter seem not to suffer, contrary to the former, from undercapitalization. In fact, the legacy of the old system has created a situation where ex-sectoral banks inherited the nonperforming loans made to unprofitable state enterprises. New commercial banks do not have such a problem. They provide credits to the growing entrepreneurial sector and according to market rates which are much higher that those asked by ex-sectoral banks or by the CBR[8] (Massioukova, 1992; IMF, 1992b; and Tanzi, 1992).

3. On the Efficiency of the Russian Financial System

The efficiency of a banking system can be evaluated with respect to two fundamental elements: first, its capacity to mobilize savings; and second, its ability to allocate them to the most efficient uses (Tanzi, 1992:8 and IMF, 1992a:45). The following sub-section will study the particular aspects of these elements in the frame of the current Russian economy.

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[7] Estimates suggest that in 1991, the average assets of the top 50 new commercial banks were around R1,5 billion, compared to the biggest ex-sectoral bank (*Rosselkhozbank*, formely *Agroprombank*), whose assets sum up to over R100 billion (IMF, 1992; and *Izvestia*, Feb. 13, 1992 in Massioukova, 1992).

[8] In order to prevent a too high interest rate differential between new commercial and ex-sectoral banks, Gosbank imposed a 25% ceiling on lending rates. However, many violations of this ceiling were reported. In 1992, all limits on interest rates have been removed by CBR, though the central bank has declared that monitoring will be implemented to prevent "excessive margins" above its own lending rate (IMF, 1992:18).

Mobilization of Savings

a) the savings ratio

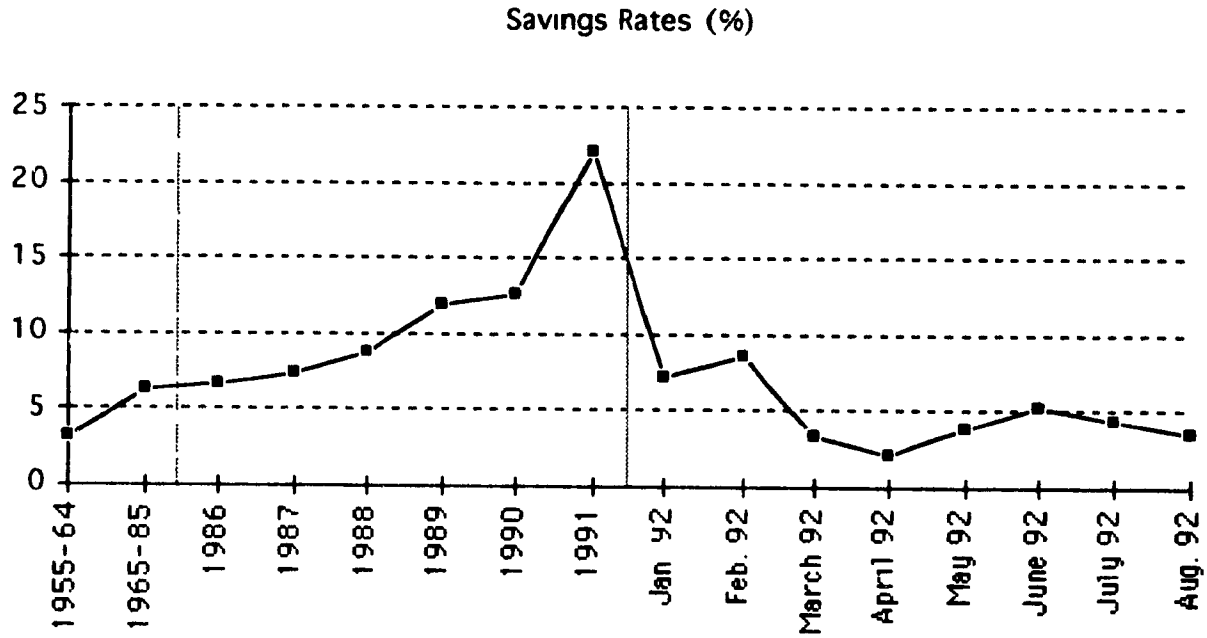
The difference between disposable income and consumption expenditure (what we commonly call «savings»[9]) is a fundamental vehicle for economic development. Accumulating capital requires a sacrifice of current consumption over a certain period of time. However, this sacrifice allows a country to build up the necessary structure (roads, modern communication networks, etc) to create a more efficient economic system. Then, with a sufficient rate of savings allowing a fair level of capital formation, a country may develop quite rapidly (the cases of some middle-income countries like South Korea, Singapore, Hong Kong and Taiwan that have reached savings rates from 20% to 30%, are good examples). However, if the share of a country's output devoted to investment is too low, the level of capital formation (and thus, the economic development) will be negatively affected. In fact, generally speaking, countries having high level of growth have always got high savings rates, and *vice versa*.

Chart II.1 shows the evolution of the savings rate in Soviet Union and in Russia for the period between 1955 and 1992. We observe that mainly since 1985, the level continuously increased until January 1992, the date from which most prices in the economy were liberalized. Also, when one compares these rates with those of other countries, it seems that Russians were less inclined to save than other nations (mainly during the period preceding the major economic reforms under

[9]The definition was taken from Samuelson and Nordhaus (1989:982).

Gorbachev and since the January 1992 reform). Let us see why this is so.

Chart II.1: Savings Rate for USSR/Russia, 1955-92[1]



1. In percent of disposable income
Sources: OECD (1991); IMF (1992b); and various issues of *Commersant*.

In the previous section, it was pointed out that at least during the period before the adoption of laws that set the base for the restructuring of the financial sector, the role of the banking system was to adapt its credit issuings to the State production plan. This plan did not necessarily reflect consumers` choices. Adding to this the effect of having an economy in which the majority of prices are fixed below the market level by the State, this results in a situation in which many

goods are not produced in sufficient quantity. People thus find themselves in a position where they cannot use the entire share of their income they wanted to devote to consumption spending. Then, since they cannot buy goods that are not on the shelves, they are «forced» to save an extra portion of their income. This phenomena is called *forced savings* and seems to have raised the «natural» rate of savings in Russia.

Cottarelli and Blejer (1992) consider the money-to-income ratio a poor indicator of the monetary overhang in the Soviet Union. They argue that because money was the main store of value in former Soviet Union (this being due to the limited choice for households over financial instruments), monetary overhang would be primarily a *wealth overhang*[10]. For that reason, authors evaluated the Soviet monetary overhang between 1964 and 1990 by comparing desired and actual wealth accumulation(i.e. consumption and savings *behavior*). They found that between 1964 and 1980, desired and actual consumption were equal and therefore, there was no significant overhang. However, a structural break in consumption behavior was observed in 1980. Moreover, as we moved to the end of the decade, the relation between observed consumption and the regressors included in the "preferred" consumption function progressively broke down; observed consumption values being lower than the desired values. This resulted in an increase of the level of savings (c.f. Chart II.1) since households kept a larger

[10]The concept of "wealth overhang" can be defined as the difference between the nominal stock of wealth actually held and the amount desired in the absence of current and past rationing (Cottarelli and Blejer, 1992:257).

share of their money income (instead of spending it). Authors' estimate of this overhang was around R190 billion for the end of 1990, this amount being equivalent to 20% of GDP and to about one third of the entire existing financial wealth of households.

There exist several plausible reasons for the break down of the relation between observed and preferred consumption in the 1980s. One is the possible change in the structural relation determining desired saving, namely the Soviet household propensity to save. Cottarelli and Blejer reject this explanation, arguing that it would be quite improbable to observe such a strong and sudden variation of the consumption behavior after decades of stability. A second reason could be the effect of an increase of unrecorded consumption transactions in the black market. Here, even if authors judge this argument relevant, they recall that any value for consumption is derived from income. Then, any underestimate of consumption must come from an underestimate of disposable income. Thus, since in their model both actual and desirable consumption were underestimated, the overall effect can be neglected.

Maybe the most common reason evoked in the literature to explain the "oversaving" of the late 1980s is a shortage of goods and services for sale at regulated prices (Cottarelli and Blejer, 1992; Åslund, 1991 and Tanzi, 1992). During this period of time, households saw their money income rising while there were fewer and fewer goods to purchase. In a good description of the situation prevailing in Soviet Union during perestroika, Sakwa (1990) attributes this situation to a

lack of political courage. As everybody admitted price reform (or price increases, which was synonymous in the present case) to be the essential precondition for the success of perestroika, the official promise to Soviet citizens was that living standards would be safeguarded.

> "[...] political fears and the dangers of inflation led to the postponement of the price reform until a balance had been achieved between supply and demand of consumers goods. Matters in fact worsened, with wages tending to rise faster than both output and productivity and increases in money supply threatening to get out of control."[11]

The analysis made by Sakwa hides a last explanation for the emergence of forced savings in Soviet Union. Kolodko et al. (1992) argue that households` expectations of future inflation may create precautionary motive for savings. Periods of high inflation usually lead to a tightening of macroeconomic policy and can create expectations for an eventual recession. Therefore, it is logical to save today in preparation for darker days[12].

Since the beginning of the Yeltsin/Gaidar economic reform, we observe from Chart II.1 that the savings ratio rapidly came down to

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[11]Sakwa, Richard.- "Gorbachev and his reforms 1985-1990", 1990, p.274.

[12]That savings rate increases during a period of inflation can seem paradoxical. In fact, if one expects the price of a good to increase in the future, it would be logical to buy now rather than later. However, evidence shows that against the commonly accepted theory, inflation and savings can be positively correlated (this was the case for Soviet Union, and also for the United Kingdom in the recent past (see Chrystal, 1992)). Thus, it seems that the effect of inflation on savings is mixed and rather unclear (see Smith, 1990:46-7 and Chrystal, 1992).

levels that are more comparable with those that occured before the troubled period of the 1980s. This is due to the quaisi-complete price liberalization which eliminated the overhung money in the economy. In order to purchase goods and services at the new prices, people had to disburse much more money than at the time when almost all prices were subsidized. This movement of "forced dissavings" largely contributed to the fall of the savings ratio in Russia. It is thus important to realize that despite the appearances, the propensity of Russians to save has not increased. Giving the urgent need of a high rate of savings to generate sustainable growth in Russia, policymakers must look at factors that will have a real impact on it[13]. We will now study what can be considered as the most important of these factors: the real rates of return.

b) The real interest rates

Many scholars interested in the evolution of the transition of East European countries to a market economy have pointed out the increasing gap between inflation rates and nominal interest rates, the former being always higher than the latter (Calvo, 1992; Cheasty, 1992; Kolodko et al., 1992; OECD, 1991 and others). Data in Table II.1 confirm this widespread opinion. First, we observe that until 1991, domestic interest rates were quite low and remarkably stable (particularly when compared with the acceleration of inflation). In fact, it had been so for more than 25 years[14]. As we said earlier, this was due to the way

[13]On factors affecting savings, see the remarkable literature review of Roger S. Smith, 1990.

[14]OECD vol.1 (1991:395).

interest rates (or the price paid for borrowing money) was perceived in former Socialist economies, that is, as an accounting tool rather than a monetary policy instrument used to influence the financial market.

Table II.1: Inflation and Interest Rates in USSR/Russia, 1985-92.

Year	Domestic Annual Interest Rate on Credits (%)	Inflation Rate in Annual Terms (%)[1]
1985	2,2	4,6
1986	2,4	8,5
1987	2,3	9,8
1988	2,2	6,4
1989	2,8	7,9
1990	2,8	7,5
1991	7,5	86,0
1992 January	-	$1,2 \times 10^{11}$
1992 February	20,0[2]	13 952
1992 March	-	22 328
1992 April	-	5 102
1992 May	72,4	6 075
1992 June	84,4	15 110
1992 July	99,4	267 009
1992 August	104,2	30 233
1992 September	-	19 130
1992 October	-	5 569
1992 November	131,6	43 462

1. The rate of inflation is calculated taking into account the price growth and the increment in the hot money mass.
2. It is the rate of the first quarter of 1992.

Sources: For inflation from 1985 to 1990, Åslund (1992); for 1991, IMF (1992a), these figures do not take into account hot money mass (thus, they are underestimated); for 1992, various issues of *Commersant*. For interest rates from 1985 to 1991, Cheasty (1992); for 1992, various issues of *Commersant*.

In 1991, the CBR began to set its interest rates independently of Gosbank. During the year, the central bank lending rate varied from 6% to 9% if the resources were to be used for industrial credit, and from 1% to 5% for lending to sectors eligible for preferential credit (mainly

agriculture and housing). At the beginning of 1992, a uniform rate was set at 20% (IMF, 1992b).

Table II.1 gives us an idea of the real interest rate in the Soviet Union and Russia over the studied period[15]. Though it remains negative through all the period, the hyperinflationary wave of the recent months has made it reach unprecedented levels. Even if nominal lending rates have increased substantially during 1992, there is still a powerful tendency against savings. This situation clearly slows down capital formation and hampers an eventual economic revival in Russia. Contrary to the goods and services market where the majority of prices were liberalized, the financial market is still under the control of the Central Bank of Russia that keeps its lending rate well below the market level[16] (in 1991, when there was a ceiling of 25% on commercial bank lending rates (and also when the inflation rate was much less than it was in 1992), cases were reported where some financial institutions (undoubtedly, new commercial banks) offered rates of up to 1000% annually! (IMF, 1992:18)). Two reasons can explain such behavior. Firstly, because of the direct impact of higher interest rates on output and unemployment, there are strong incentives for the government to keep them low are strong. Secondly, we can observe that at least until

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[15]Due to the difficulty to obtain the latest data of Russia's economic indicators, it was possible only to draw a partial (but fairly representative) picture of the evolution of the real interest rate.

[16]Calvo (1992:83) estimates to be a good approximation to envision the central banks of the TSCs as credit monopolists. In fact, given the highly imperfect domestic credit markets, they are the only ones that have a real influence in the setting of the price of credit.

now, Russians suffered from money illusion: they still continue to save in a period of negative real interest rates. This situation facilitates the financing of the public deficit and is certainly a good means (at least for the near future) to avoid inflationary financing.

However, it is clear that too low (or negative) interest rates are unsustainable. Government will not be able to escape the necessary fall of output and to benefit from money illusion *ad vitam eternam*. More specifically with regard to the latter, savers will adjust their behavior and the rate of saving could drop sharply. If positive real rates of return are not offered, government bond issuing is likely to be unfeasible and the privatization program could be seriously threatened. In a word, the whole transition program could be affected. This shadow picture does not take into account the negative impact that such negative real interest rates have on inflation: low rates lead to the issuing of cheap credits. Adding to this the "chronic" soft budget constraint that still characterizes both (ex-sectoral) banks and (state) firms, a legitimate question could thus be: "Should the government modify its current behavior and then focus on a policy of high interest rates to mobilize savings and increase the chances to make the transition a success?" Some authors attempted to find the answer.

Supporters of a reform based on orthodox policies favour the maintenance of positive real interest rates for many reasons: it encourages savings, reduces the incentive of the government to finance deficits through money creation, diminishes the demand for credit and,

prevents "capital flight", ie. placements made abroad[17]. However, as Kolodko et al. (1992) point out, the impact of a high interest rate level in an economy in course of transformation can be quite perverse. Not only does it provoke a sharp drop in production and investment (in Russia, negative rates are so high that the effect of a transition to positive levels would certainly be very destabilizing, economically as well as politically), but it can also result in an even higher pressure on inflation, discouraging aggregate supply more than aggregate demand. Moreover, due to their inadequate infrastructure, TSCs are still waiting to benefit from one of the major advantages of high domestic real rates of return: foreign capital[18].

Beckerman (1992:chap.6) stresses the risks of generating inflationary inertia by substantially raising the interest rates. According to him, since such a policy encourages people to purchase both private and public obligations, it increases at the same time the future purchasing power of savers (due to a rise in interest revenues). Thus, if exercised, this purchasing power can renew inflationary pressures in the economy.

Finally, Calvo (1992) and Calvo and Coricelli (1992) consider the risk of inflation from a rise in interest rates to be rather low. They

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[17]Beckerman (1992:96).

[18]This situation cannot be applied to Russia (though the country also faces a lack of adequate infrastructure and suffers from a low level of foreign investment) since it still does not have positive real rates of interest . However, it can be so in the case of Poland (see the study of the Polish hyperinflation and stabilization program, chap.4 of Kolodko et al.).

are more preoccupied by the credit crunch that can be generated and by the state of generalized bankruptcy than may follow. This could result in a weakening of the political support of the reform program and therefore, can cause the latter to fail.

As one can see from the literature, the policymakers of Russia and of the other TSCs have to face a difficult dilemma. On one hand, raising (and even positive) real interest rates is probably the best way to increase the country`s savings ratio and thus to give the economy the capacity to use funds for (hopefully) productive investments. On the other hand, such a policy could seriously aggravate the fall in output, increase the unemployment by causing numerous bankruptcies, increase the public deficit and thus diminish the already-weak political support for the transformation program. It is clear from the literature that high interest rates may cause the transition to fail, or at least make it much more painful for the population.

As Kolodko et al. put it: "[...] the problem remains open to what extent the interest rate can be used in controlling the volume of money increase"[19]. For sure, positive real interest rates must be regarded by policymakers as a goal to achieve for the reasons mentioned above. However, they should not be forced. In Russia, real interest rates happen to be negative because of the current inflation, inflation expectations and the chronic pessimism over the country s economic

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[19]Kolodko et al. (1992:35).

performance. Because of their too huge negative effects on the economy, it may be a mistake to force them up. The real sources of the inflationary problems in Russia lie elsewhere. It would now be appropriate to discuss an element of the Russian banking system that is closely related to the sources of inflation discussed above, that is, the way mobilized savings are *used.*

Allocation of Savings

Probably one of the most common features that used to characterize former Socialist countries was their reliance on an *intensive* rather than an *efficient* use of capital and labor resources. As we know, a market-type economy supports the exact opposite philosophy. Therefore, in the making of a transition program, even if the question of how to mobilize savings is highly relevant, the problem of allocating them in the most efficient way possible must be placed high on the agenda[20]. Therefore, at this stage of our analysis, an overview of the way Russian financial system allocates savings becomes essential.

As reported by Commander (1992) and by Calvo and Coricelli (1992), not only Russia but all TSCs still tend to be characterized by highly separated monetary circuits between households and enterprises. This segmentation of the financial system does not permit a channeling of household savings to the enterprise sector. We must

[20]Some authors believe that too much energy has been spent on the mobilization of savings, and not enough on their efficient allocation. For a discussion on this suoject, see Tanzi (1992).

remember that in Russia, the vast majority of commercial banks were born from ex-sectoral banks. Each of these institutions had been created to offer financial services only to a specific category of clients (Sberbank was doing business with households, Agroprombank with the agriculture industry, Vneshekonombank with the export industry, etc.). Now, it seems that they still have not diversified their operations. Though Sberbank of Russia has begun to lend to other commercial banks and to supply small amounts to «priority sectors» (IMF, 1992b:94), almost no banks accept issuing credits to private persons (*Commersant*, December 15, 1992:6). In an interview given to *Commersant*, the director of the Institute of Economics of the Russian Academy of Sciences admitted that: "[banks] prefer to conduct large operations, rather than being responsible to private holders of small sums"[21]. In fact, institutions that do business with individuals set very high minimum deposits ceilings[22].

Such a wall between household and enterprise credits must be seen as a urgent problem to solve if Russia aspires to a reasonable efficiency regarding the allocation of savings. Moreover, the present situation of financial markets does not offer households a fair choice of assets. Thus, money is more than ever held as an asset and not only for transaction purposes. From January to September 1992, the Russian population`s cash accumulation has reached no less than R756 billion (1,8 billion$US). Clearly, this money has to be used in a more

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[21] *Commersant*, Dec 15, 1992:6. The director is Mr. Leonid Abalkin.

[22] For example, in December 1992, Incombank refused any personal depositor that would have less than R10 million (24,000$US) to lend!

productive way and in that sense, financial intermediary institutions (as well as the government whose bonds markets are still poorly developed) have a lot to do to improve the system.

In regards to the development of a modern information network for the financial sector, a lot of improvement has to be made. In his study of the evolving role of central banks and financial institutions in TSCs, Sundararajan (1991) argues that the major challenge for those countries will be to develop: "[...] a new organizational structure that will ensure adequate horizontal and vertical communication from an earlier structure that was highly hierarchical [...]" (p.255). Also, it is vital to create traning programs for staff members to introduce them to new ways of doing banking, and to utilize more modern and efficient technology. In that case, however, major improvements seem on their way to being realized[23].

Finally, it is important to stress the effect of the «soft budget constraint» phenomenon on the allocation of savings. Many authors consider this problem as being the major cause of the difficulties in the

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[23] For example, more and more Russian banks are joining the international SWIFT system of financial telecommunications (this system will enable them to execute rapid payments transfers and international account settlements, *Commersant*, Dec. 15, 1992:7). Also, Rosselkhozbank (the "commercial bank" version of the former Agroprombank) expects to put into operation a space communications system that will connect, via satellite, more than 1,000 of its subsidiaries and offices across the country (*Commersant*, Dec. 8, 1992:9). Finally, the CBR has made public its intention to develop an electronic interbank settlements system. For that purpose, the Central Bank has begun to welcome Western firms, specialized in this domain, to make a demonstration of their system (*Commersant*, Nov.24, 1992:9).

transformation process of the former Socialist countries[24]. Among them, Calvo and Frenkel (1991) argue that because central banks are still acting as a lender of last resort by financing automatically losses of enterprises, it has created a vast interdependence among enterprises' balance sheets (interfirm debts). This situation has made it very difficult to distinguish firms that are viable from those that are not. Therefore, interfirm debts have become an increasing obstacle for banks that cannot correctly assess the creditworthiness of their potential clients. Funds could then easily be given to unviable enterprises, resulting in a bad allocation of the nation's savings.

In assessing the efficiency of the Russian financial system, it is clear that credit markets and institutions still have to undertake major transformations in order to reach a minimum of coherence and thus, to play their full role in the transition process of their economy. Despite some notable improvements since the end of the former regime, there still exists a highly concentrated and segmented bank structure that hampers its competitiveness. Banks do not operate under hard credit constraints and similarly to the industrial sector, they strongly depend on central bank credits. The result appears thus in the form of savings misallocation, which makes the economic reform process even more difficult to achieve. Moreover, present economic conditions seem not to allow the use of higher (and even positive) interest rates to mobilize

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[24] For this reason, a whole chapter will be devoted to soft budget constraint.

savings because of their strong negative effects on output, unemployment, fiscal revenue and the program`s credibility.

In the light of the above analysis, several conditions must be fulfilled in order to create a financial system that could mobilize and allocate savings in the most efficient way. Among them, the most important are the following: 1) Financial institutions should operate as profit making organizations and should worry about their own solvency; 2) they should use the population`s cash accumulation by suspending their restrictions on small lenders or borrowers; 3) Effort must be devoted to improve the information network in order for the banks a) to be able to assess the solvency of their potential customers, and b) to facilitate interbank transactions; 4) finally, banks should be able to put clients into bankruptcy when they become insolvent[25].

The incomplete transformation of both the industrial and the financial sector and the political resistance of a category of individuals who benefited from the former regime and still hold strategic hierarchical positions, generates an environment in which inflationary pressures are not at all under control. Up to now, we have tackled some general causes of inflationary pressures, like economic agents` expectations, government budget deficit, and inflation feedback (c.f. Chapter 1). In the next chapters, these elements will be incorporated in a rigorous analysis of the three categories of inflationary mechanisms

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[25]The question on the usefulness of a bankruptcy law will be discussed in the next chapter.

that are responsible for the largest part of the current Russian price-instability and that are generated by the above-described setting of the economic structure, namely, the various indexation mechanisms, the dollarization of the Russian economy, and what will be the subject of the next chapter, the institutions` soft budget constraints.

CHAPTER 3
The Soft Budget Constraint

No doubt one of the most typical phenomenon observed in all centrally planned economies (as well as in some Latin American countries) is what one usually describes as the *Soft Budget Constraint.* This term refers to the behavior of firms and banks that "relax" the relationship that exists between their expenditures and revenues. Economic units that have a soft budget constraint have an incentive to run deficits because these deficits are financed by some other institution, usually by the government. This situation is tantamount to granting firms and banks the power of indirectly printing money (or getting seigniorage), which is a source of inflation (Kiguel and Liviatan, 1991).

The present chapter is divided into three sections. The first one will explain the concept of soft budget constraint, mainly by using work by the Hungarian economist János Kornai. Then, an analysis of the soft budget constraint as a major source of inflation in the Russian economy will be made. This section will also discuss the Russian government budget balance, will study the various options of financing the deficit, and will analyze the causes as well as the consequences of the presence of large interfirm debts. The last section will discuss the necessity of an

effective bankruptcy law in order to impose a hard budget constraint on all types of enterprises (both private and state-owned).

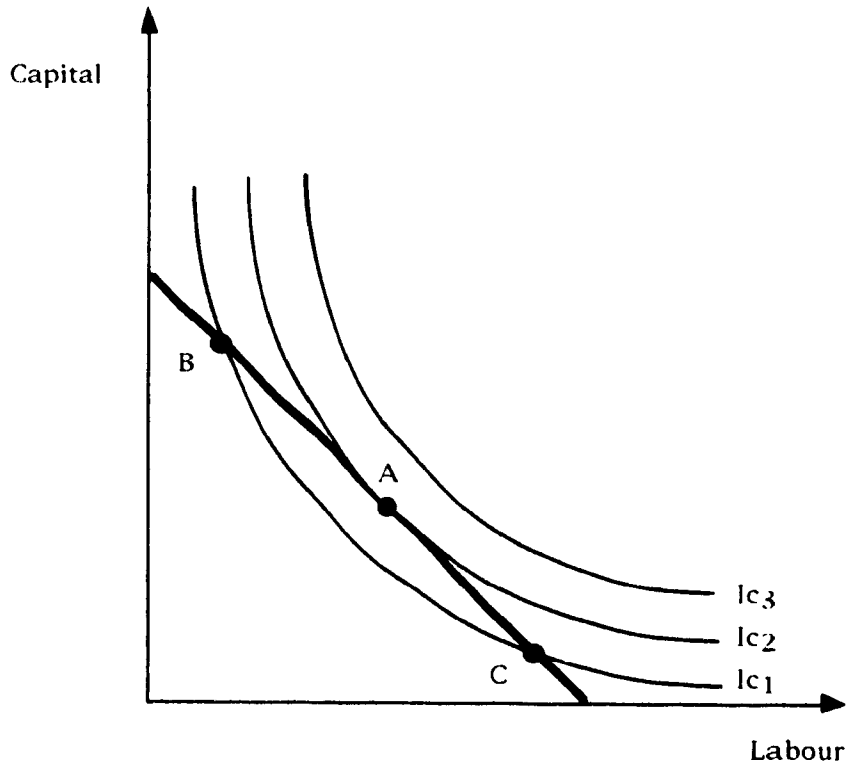
1. Illustration and Clarification of the Concept

Kornai (1980a) was the first to focus on the softness of the budget constraint in analysing the problems of transition of former socialist countries. Previously, the emphasis has been put rather on profit-incentives for the development of policy prescriptions and recommendations. Nowadays, the concept of soft budget constraint is widely recognized as being an effective analytical tool to study problems emerging from the reform process in Eastern countries. The next paragraphs will use Kornai`s works (1980a, 1980b, 1986) to describe and explain the major characteristics of a soft budget constraint.

A budget constraint refers to the combination of commodities that a consumer (household, firms, or governments) can buy with a given income at a given set of prices (Samuelson and Nordhaus, 1989:966). On a graph, it is represented by a straight line whose slope depends on relative prices of commodities (Figure III.1 shows the budget constraint of a firm that uses various combinations of capital and labour to produce given quantities of output represented by the various isoquant curves Ic_i, with output higher for higher i). While the combinations of inputs between point B and C respect the firm`s budget constraint, the ones needed to produce Ic_3 show a cost overrun: the expenditure

required exceeds the budget line. Basic microtheory considers point A to be the optimal combination of capital and labour since it allows a maximum production of output (Ic_2) with respect to the firm`s resources constraint (at A, the ratio of the marginal products of the two inputs equals the ratio of their factor prices).

Figure III.1: The Budget Constraint



Unlike the *financial balance of the firm* which is merely an accounting identity[1], Kornai points out that the budget constraint

[1]For a given period, the financial balance of the firm can be expressed as following:

Terminal stock of money - terminal stock of debts = Initial stock of money - initial stock of debts + Δ credit (raised minus repaid) + Δ (receipts minus outlays).

represents a *behavioural regularity*, ie. a whole set of partial rules which jointly restrict the behaviour of firm`s managers.(1980b:233). Therefore, the budget constraint refers to the behavioral characteristic of the decision-maker: the latter being able (in theory) to adjust the firm`s expenditure to its financial resources. Moreover, the author considers the budget constraint as a constraint on *ex ante* variables and, first of all, on demand: it is based on the managers` expectations of the firm`s future financial health when actual expenditure will occur (1986).

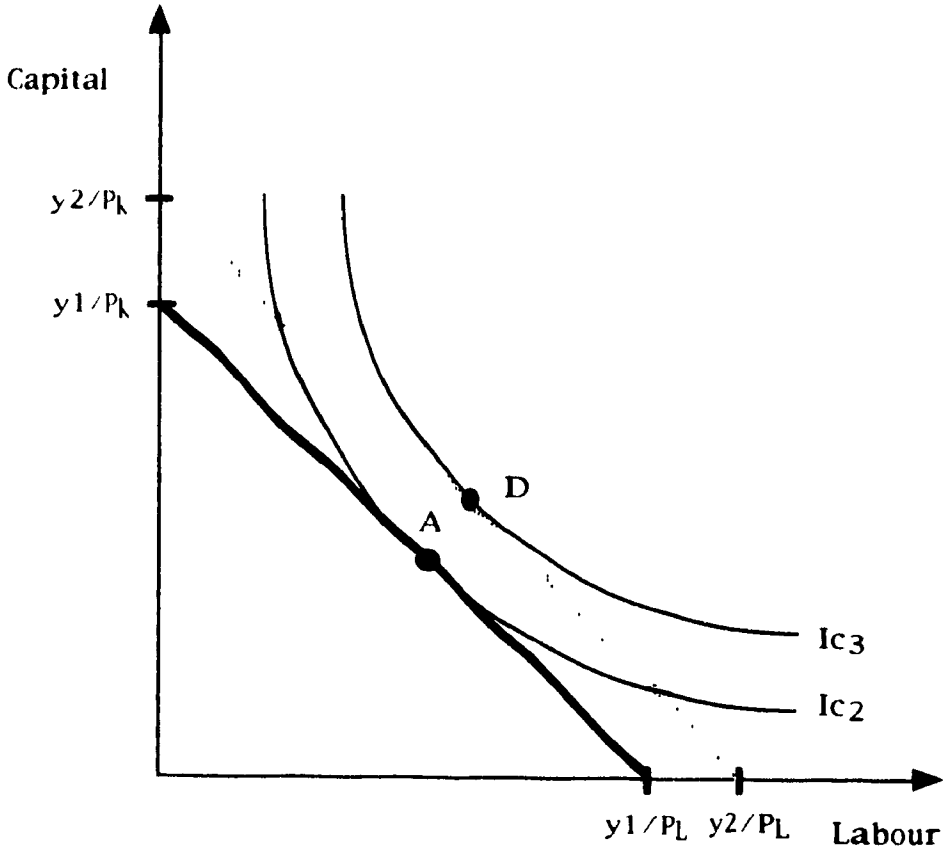
Having made a brief recall of what is a budget constraint, we will now focus on the situation when it is qualified as being 'soft'.

> "The 'softening' of the budget constraint appears when the strict relationship between expenditure and earnings has been relaxed, because excess expenditure over earnings will be paid by some other institution, typically by the State. A further condition of 'softening' is that the decision-maker expects such external financial assistance with high probability and this probability is firmly built into his behavior." (Kornai,1986:4)

The economic dynamics of these two conditions for a soft budget constraint is shown in Figure III.2. Henceforth, the budget line is not a relevant constraint for the firm anymore. We saw in Figure III.1 that a manager was not able to produce Ic_3 since this level of output required more input than the firm`s resources (y_1 in Figure III.2) allowed to buy. But now, if the manager decides to produce at point D, the extra financial resources needed to do so ($y_2 - y_1$) will be covered by some

external financial support. Of course, this policy of bailing out today any enterprise's deficit makes the managers expect that it will be the same for tomorrow. Such a behaviour will create a kind of vicious circle that will aggravate the lack of financial discipline in the economy. Therefore, at this stage of the analysis, it becomes relevant to examine the conditions that make the budget line effective or not, i.e. under what circumstances managers accept or refuse to respect the financial constraint of their firm.

Figure III.2: The Soft Budget Constraint



Note: P_L is the wage level; P_k, the price of capital; y_1, the available resources for the firm; and y_2, the required resources to produce *Ic3*.

Kornai (1980a, chap. 13; 1980b) has made a list of conditions to observe in order to generate an economic system characterized by soft budget constraints. These conditions will now be discussed and an assessment of the appearance of them in the Russian economy will be made.

A first condition is that a majority of firms are price-makers. This condition is observed in economies where the structure of the industrial sector is highly monopolistic. In Russia, such situation has occurred since the beginning of the reform program. In fact, as reported by many sources (c.f. Chapter 2 section 1, on the rate of privatization and the profit of state firms), the few huge state firms charge excessively high prices for their products. However, let us recall that Russian state firms have not always been price-makers. In fact, soft budget constraints have been observed during both regimes (the former centrally planned and the reformed one) but their existence was due to different reasons. From 1917 to 1991, prices were fixed by the state authorities, making firms price-*takers*. However, the financial aspect of the Soviet production process was not at all a potential source of limitation for firms since the state used to give the credits needed to respect the *Gosplan* physical plan. Thus, during the centrally planned regime, the soft budget constraint was generated by the accounting role played by prices[2]. Today in Russia, the phenomenon is rather due to

[2]Kornai gives an additional explanation by arguing that during the former regine, a firm: "[... could] influence the price because, although it [was] formally determined by an administrative price authority, the firm [had] a large influence on the authority`s decision". (Kornai, 1980b:237).

the fact that even if most prices are no longer set by state authorities, the latter still do not force the firms to adjust to these prices (among other things) because of the firms` position of monopolists (the question of firms` adjustment to prices will be discussed later). Prices are thus not exogenous for firms.

Another condition for generating a situation of soft budget constraint in an economy is the softness of the country`s tax system. Kornai lists two characteristic manifestations of it: the formulation of tax rules are influenced by the firm, and firms are granted payment exemptions or postponements as individual favours. Up to now, there is no reason to believe that such corruption has stopped in Russia. The industrial lobby of state firms` managers of the old regime is still very influential (c.f. note 3 in Chapter 2) mainly because there exists a (growing) conservative wing inside the government which is fed by the population`s dissatisfaction coming from the numerous failures of the present team of reformists (Gould, 1992).

A third condition is what Kornai calls "free state grants". It refers to all the subsidies or contributions to investment expenditures that are made by the state to the firm, either without payment obligation, or for the purpose of compensating for losses. That condition makes the government a kind of creditor of last resort, playing rather a «paternalistic role» (as Kornai puts it) vis-à-vis its enterprise sector, instead of acting as a safeguard against financial indiscipline of economic agents. In Russia, this situation is very common and discussed

by many authors (Calvo and Frenkel, 1991; Calvo and Coricelli, 1992b; Filatochev and Bradshaw, 1992; Kiguel and Liviatan, 1991; and Kolodko et al., 1992).

The last condition for a soft budget constraint refers to the softness of the banking system. Since banks still do not operate under hard credit constraints and strongly depend on central bank credits, and also because of the lack of an information network to assess the solvency of a potential debtor, many loans are granted to firms without knowing if they will be able to fulfil their repayments[3]. Also, firms are allowed to make credits between each other, and when they buy inputs, they can postpone payments to the sellers without any previous agreement. Those interfirm debts, widely present in Russia, constitute a major economic and political obstacle to the success of the reforms (EIU, 1992:24), and will be studied later.

The maintenance of an economic system characterized by soft budget constraints generates many consequences for a given country. First, it is obvious that in an environment where firms benefit from a quasi unlimited financial support, they can easily continue to operate indefinitely, regardless of their financial status. Therefore, *profitability of a firm is not a premise to its survival.* Second, since investment resources can originate from external sources with almost no restriction,

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[3]This point was discussed in Chapter 2, section 3: *In Assessing the Efficiency of the Russian Financial System.*

biased information regarding a firm's solvency is launched in the economy. Third, firms evolving in a soft budget constraint environment *do not need to adjust to price*. In fact, if we take the example of a price-maker, any variation of input prices will have no effect on its production scheme since it will be able to adjust its output price to cover cost variations. In cases where the firm is a price-taker, the scenario is different but the result is identical: any loss due to a non-adjustment to new input prices will be compensated by extra soft credit, tax remission, state subsidy and so on. Finally, a last consequence (which is merely the result of the ones listed above) is the fact that the *demand of enterprises for inputs is almost unlimited.* Having no financial restriction, no dependence on prices and no obligation of profitability (in fact, only a fixed quota of output to achieve), excess demand is often generated, creating either shortages, or inflation, or both.

All these consequences are fully present in a Centrally Planned Economy. In regard to Russia, at this stage of our study, it is reasonable to conclude that even if this country has faced drastic changes since the beginning of the reform process, it still shows features inherited from the past regime. The soft budget constraint is undoubtedly one of them and it seems that, mainly for political reasons, the central government has not been able to counteract it. As a report from the Economic Intelligence Unit puts it (1992:24): "[...] ultimately, the root of the soft budget constraint lay in the political expediency of securing full employment, regardless of the inflationary consequences [...]". Thus, in

the following section, we will focus on these inflationary consequences that are generated by the soft budget constraint phenomenon.

2. Effects of a Soft Budget Constraint on Inflation

Before the reform process began, one characteristic of the Russian (Soviet) taxation system was its *implicit* character. In fact, since the government owned almost all the industrial and the agricultural capital, it was able to extract enterprises` surpluses and to use this tax revenue to cover its budget expenditures. This method, considered to be reasonably efficient, allowed the government not to built a complex Western-style tax system with its numerous laws and its various types of tax (on personal income, on sales, on profit, excise taxes, etc.).

This characteristic of a typical centrally-planned economy used to offset the negative effects on inflation of a lack of financial discipline among enterprises (McKinnon, 1992). Even if the latter had soft budget lines, a rigorous state control over the supply and the demand of each product prevented this absence of financial constraints from being problematic for the economic equilibrium of the country. Moreover, as long as government kept control on its tax base (ie. the state firms), it was able to prevent inflation by limiting households` cash holdings.

Now that central planning is no more a reality in Russia, the present financial and fiscal system, by themselves, cannot restrain the firms` ability to bid for scarce resources, as it is the case in a capitalist

economy. As explained by McKinnon (1992:102-3), this situation results in upward pressures on the price level:

> "The passive system of money and credit makes the budget constraint on enterprises unduly soft. First, loss making enterprises continue to borrow from the state bank, and this perverse flow of bank credit contributes to the loss of control over the money supply. Second, once planning control are removed, profitable enterprises [...] may well 'overbid' for scarce producer goods or foreign exchange. Unsurprisingly, this increase in the money supply -[...] arising from the liberalization itself- exacerbates inflationary pressure."

To understand the mechanism generating inflation, it is important to note that most of the funds granted by the Central Bank of Russia originated either from the need of the government to finance its budget, or from the financing of insolvent state firms. However, it is clear that because of the government`s position of lender of last resort, any credit granted to an enterprise by any ex-sectoral bank (or by the state itself) will be ultimately written under the liabilities column of the state budget. Therefore, the way government chooses to finance its debts will have a direct impact on the country`s price level. It is thus because of the close relationship between the 'degree of softness' of the firm`s budget constraint and the government budget financing that a closer look at the latter become relevant at this stage of our analysis. However, the reader must note that not only the soft budget constraint, but *all* the other sources of inflationary pressures in Russia (represented in Figure A of the introduction) have, in one way or

another, an effect on the state budget. That is one reason why we call the inflationary process «dynamic». But to avoid redundancy, the question of the state budget financing will be discussed now, and we will simply refer to it when analysing the other sources of inflationary pressures.

Russian Government Budget Financing

Before discussing the government budget financing *per se*, a point must be made concerning the overlapping of fiscal and monetary policies. To date, there is no clear separation between these two policies in Russia. As pointed out by Tanzi (1992), the current situation shows monetary institutions playing fiscal functions in the economy[4]. In fact, the banking system still finances many firms through highly subsidized credits. This function of giving subsidies to firms should be done, in principle, through the state budget. Of course, to the extent that ex-sectoral banks are bailed-out by the state, whether an insolvent firms receives cheap credit from the bank or directly from the government gives the same result: larger government liabilities covered by inflationary financing, i.e. the use of monetary tools by the state to finance its deficit (e.g.: money creation, negative real interest rates, and currency overvaluation)[5]. This mechanism of almost automatically bailing-out any institutions (banks and firms) facing financial problems is still observed in Russia. We will see in the next section why an

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[4]Technically, by issuing credit to each other, firms also play a fiscal function. The question of interfirm debt is discussed later.

[5]As one can see, not only financial institutions play some fiscal functions, but the contrary is also true: fiscal institutions play monetary functions.

effective bankruptcy law (added to an acceleration of the privatization process to relax pressures exerted on the owner(i.e.the government)) becomes essential to allow financial and fiscal institutions to play their respective roles in which they are comparatively more efficient.

It is timely here to recall the three common ways for a government to finance its deficit. As shown in equation (7), this can be done with money, domestic debt, foreign debt, or any combination between the three (Dornbusch, 1992):

$$(7) \qquad gY = M/P + B/P + B^*e/P$$

Here, gY is the deficit in term of fraction of the national income, M is the rate of change of the stock of money, B and B* denote the rate of change of the domestic and foreign debt, e is the exchange rate (say, rubles over a dollar) and P is the price level.

One of the most typical characteristics of the former socialist countries was their low government deficits, or even their budgetary surpluses. Not only were fiscal policies used solely for a redistributional objective[6], but also, unlike what the classic Keynesian philosophy might suggest, socialist theorists do not find any advantage in generating unbalanced (negative) budgets to counteract an exogenous shock. As a

[6]It was pointed out by Cheasty (1992:40) that a fiscal policy is usually seen as having two goals: redistribution AND stabilization.

matter of fact, in any socialist country, a permanent balanced budget was the mark of efficiency of the state planning system (Cheasty, 1992).

Table III.1: Soviet/Russian Budget Balance, 1981-92

Year	Column I Official Figures (% of NMP)	Column II Real Figures (% of GDP)
1981	2,23	(2,3)
1982	1,89	(3,1)
1983	0,67	(2,2)
1984	0,97	(2,0)
1985	0,72	(2,3)
1986	0,41	(6,0)
1987	0,77	(6,9)
1988	--	(10,3)
1989	--	(9,9)
1990	--	(8,0)[1]
1991	--	(27,0)[2]
1992 1st quarter	--	(30,0)[2]
1992 1st half	--	(17,0)
1992 forecast	--	(4,0)[3]

Nota: Numbers in parenthesis are negative.
1. Estimated value.
2. Estimated by *Commersant-Data* analysts (*Commersant*, April 27, 1992).
3. Estimated by *Commersant-Data* analysts (*Commersant*, December 22, 1992).

Sources: Column I, Shelton (1989) and *Statistical Yearbook 1988-89* (United Nations, 1992). Column II, Åslund (1992); for 1991 and 1992, various issues of *Commersant*, except for the 1st half of 1992 value: EIU (1992).

Column 1 of Table III.1 shows the Soviet budget balance for the years between 1981 to 1987, as provided in the official government publications. One can see that throughout the period, the country always had a budget surplus (though small). This situation could be interpreted as being synonymous to a healthy economy. In fact, if official figures were to be believed, then, this would mean that the Soviet government was in pretty good shape. However, evidence from

more later years has clearly demonstrated the opposite. In her study of the Soviet budget, Shelton (1992, chap.I) attributes the government`s wish to preserve the budget surplus illusion to its will to keep the political credibility of the system intact. She admirably demonstrates how this was done through manipulations on the revenue side of the budget and, in particular, through *money creation.* Then, in order to fill the gap between its earnings and its expenditures (ie. a higher gY in equation (6)), the Soviet government simply used the monetary printing press, and as a result, increased the quantity of money in the economy (M/P). In this regard, Filatochev and Bradshaw (1992:744) argue that the use of seigniorage by the Soviet Ministry of Finance started in 1968, though Shelton (1989:8) makes mention in her book of a consensus among Western observers that the Soviet economic performance has started to decline only after 1975. Despite the lack of definitive agreement on the beginning of the economic disturbance in the former Soviet Union, Column 2 of Table III.1 shows a constant incapacity of the government to cover its budget, which confirms the Shelton`s conclusion. Now, the relevant question to ask is: "Has Russia imitated the former USSR by financing its deficit through money creation, and if yes, what are the consequences on price levels". The next paragraphs will try to answer to it.

From Column 2, one can observe to what extent the Soviet Union and Russia (until recently) have been u· ɔle to cope with the impact of the transition on the budget. From 1985 to 1990, the deficit oscillated between 5% and 10% of GNP, and it reached an unprecedented level of

30% during the first quarter of 1992. The fact is that the transition brings strong pressures on the government`s budget and increases its financial need. Many measures are taken to buffer the impact of the economic disturbances on the poorest. For instance, social safety nets are put in place, pensions and minimum wages are indexed to compensate (at least partially) for the increases in the price level, and various political pressures are made to pursue the old policy of granting soft credits to state firms already technically bankrupt.

On the revenue side, we have seen that since the beginning of the privatization process, the government has given away its tax base. In fact, because of the nature of the old tax system, no formal internal revenue service existed to collect revenues from economic agents that were no longer under the control of the state. Then, at the end of 1991, an exhaustive program of tax reform was undertaken in Russia in order to make the fiscal system correspond more to those in place in market economies. Among the most important taxes, this new system includes: a) a 28% Value-Added Tax introduced on January 1, 1992[7]; b) an enterprise profit tax varying from a standard rate of 32% to higher rates (up to 70%) for selected industries; c) an income tax[8]; d) various export taxes (levied at 100% of the difference between domestic and

[7]It must be noted that in February of the same year, a 15% rate were introduced for retail sales and basic foodstuffs. On January 1, 1993, the new VAT rate was set at 20%.

[8]Previous to the tax reform, Soviet citizens did pay personal income taxes. However, the state collected most of its revenue (around 90%) from the activities of the state firms and cooperatives (Shelton, 1989:4).

world market prices); and e) various excise taxes, among others: gasoline, 35%, Vodka, 80% and tobacco, from 15% to 40%[9].

Monetization of the Deficit

Usually, a good indicator of the way a government finances its deficit is the evolution of the country`s money mass. In Chart III.1, we see the rates of increase of the Soviet/Russian broad money (M2) for the period between 1986 and October 1992. The rate of money growth exploded in 1991, and things are likely to be worse for 1992. In fact, only for the period between June and August was money growth less than 50% higher than the rate observed for whole year of 1991. Clearly, this rise cannot be attributed to higher demand due to an increase in the level of productivity of the industrial sector. As a matter of fact, the latter has slumped during 1992[10]. Rather, we must try to find an answer on the supply side, that is, the State`s actions.

In our assessment of the efficiency of the Russian banking system (Chapter 2, section 3) we argued that government bond issuing (B/P in equation (7)) was unlikely to be successful, mainly because of the current high negative real interest rates and the poorly developed domestic market for bonds. Then, even if this method of financing includes an inflationary component (the interest payments)[11] and thus

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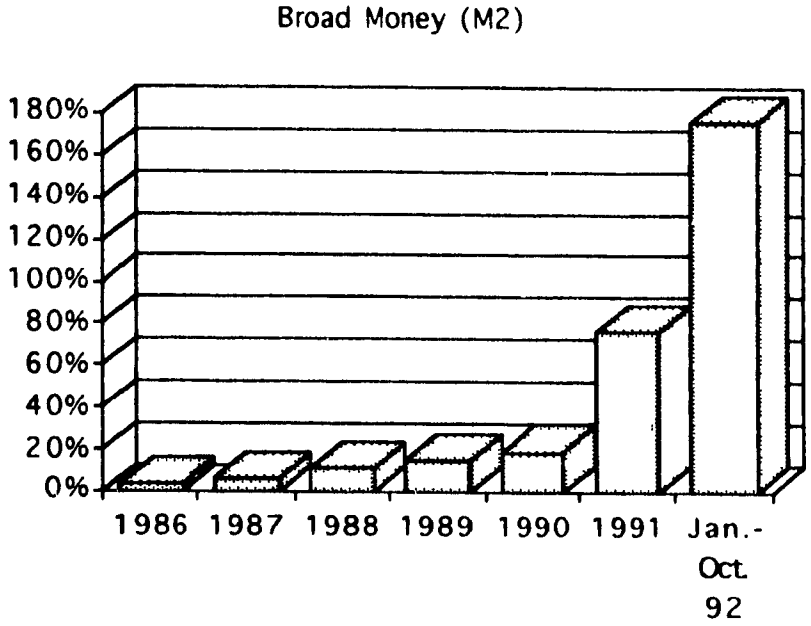
[9]For a summary of taxes in Russia as of March 1, 1992, see Table A1 of IMF (1992b:103-15).

[10]The fall in the industrial productivity index will be discussed in Chapter 5.

[11]Cheasty (1992:57).

can be considered a potential source for money growth, one cannot see it as being the major cause of the recent monetary burst in Russia.

Chart III.1: Rate of Increase of M2 for USSR/Russia, 1986-92[1]



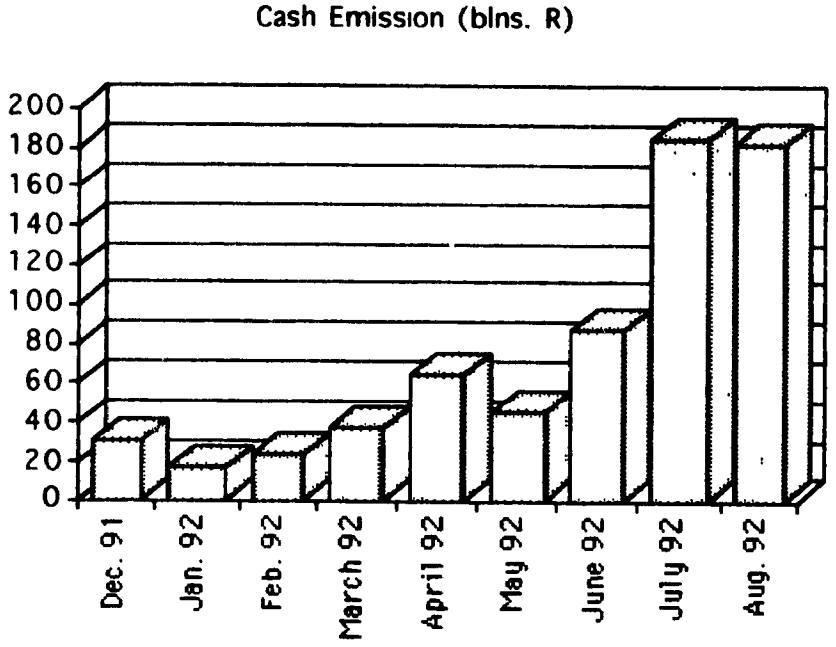
1. Rates from 1986 to 1990 are for the USSR. The 1991 rate is an estimate.
Sources: From 1986 to 1990, Åslund (1992); 1991, IMF (1992b); 1992, *Commersant*, September 19, 1992.

In regard to the foreign financing alternative (B*e/P in equation (7)), it must be pointed out that with such a huge negative domestic-world interest differential, Russia is not really attractive for western creditors[12]. Moreover, since the country`s currency is subjected to a high depreciation, the domestic cost of this option makes rather

[12]An article published in the September 29, 1992 s issue of *Commersant* makes mention of the rather difficult relations between the government of Russia and the foreign financial institutes (p. 18).

improbable that it can be followed at least in the short run. Then, foreign financing also cannot be considered as the primary cause of the growth of the money supply.

Chart III.2: Cash Emission in Russia, Dec.1991 to August 1992



Sources: Various issues of *Commersant*.

The most plausible explanation of the recent evolution of the money mass in Russia remains the monetization of the state deficit. Only six weeks after the beginning of the Yeltsin/Gaidar reform, *Commersant* (February 24, 1992:8) published an *Inflation Survey* in which it was shown that even though the monetary emission was cut by 45% in January (compared to the December 1991 figure), it rose by 220% in the three first weeks of February (mainly due to the payment of delayed January wages). "Almost half of the growth in the cash

supply will have to be in newly printed money, [...] suggesting that the January price reform has failed to cure the chronic disease of monetary emission." (p.8; the rate of growth of cash emission in Russia from December 1991 to August 1992 is shown in Chart III.2).

Things have not changed since then. More recent *Inflation Surveys* (March 23, April 27, May 26, June 23, July 28, August 25 and September 29) as well as *Macroeconomic Surveys* (November 10, December 15 and 22) published by *Commersant* confirm the use of money financing by the Russian government and put the budget deficit as being the main source of money mass growth. Moreover, according to Central Bank sources:

> "[...] 94% of all credit issued by the Central Bank since the beginning of this year were made up by the credit issued or distributed on direct orders from the Yeltsin administration and Parliament."[13]

This situation is not encouraging for the near future. As Russian economic analysts Sergei Zhuravlev and Alexander Ivanter conclude: "[s]ince our financial system is underdeveloped and state obligation are regarded with total distrust, the budget deficit will certainly [continue to] be covered by monetization [...]"[14]. Tighter financial discipline by the government is needed both to generate greater possibilities for using domestic bond issuing and to attract foreign creditors, in a word, to use any financing methods other than seigniorage.

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[13] *Commersant*, September 29, 1992, p.18.
[14] *Commersant*, November 10, 1992, p.22.

The Causal Link Between Soft Budget Constraint, Government Deficit, and Inflation

From the above discussion of how the Russian government finances its budget disequilibrium, the reasons why TSC`s enterprises with soft budget constraint are generators of inflation now become clearer: a slow privatization process has generated a situation in which there exists a large majority of firms that are still financially dependent on the state, while price control by the latter has been relaxed. The problem lies in the fact that in such a context, unlike in market economies, prices do not play a market-clearing role. Because industrial managers simply assume that the government will finance production as before, firms do not adjust output to changes in input prices. So far, they have continued to produce above the demand level, regardless of the increases in input prices, absolutely confident that central authorities will pay the bill (EIU, 1992:24-5). As a matter of fact, that is what the latter have done in granting soft credits to state firms. In order to finance those grants, subsidies, and exemptions of all kind, they have used seigniorage and thus have injected extra money in the system. Therefore, since this money (or these assets) have no intrinsic value (ie. it is not supported by the government`s real fiscal revenues), its presence in the Russian economy only contributes to pushing nominal price levels up.

This arrival of fiat money in the Russian economy may suggest that the central government follows a rather soft monetary policy. This

would mean that the state`s decision-makers would underestimate the destabilizing effect, the climate of uncertainty, and the high cost for the consumers that are generated by high levels of inflation. In this regard, it is interesting to take a look at Chart III.3 where a comparison between the rates of growth of price levels and M1 is made for the period from January to October 1992. Even if one can observe the strong increase of narrow money (25 % in average each month), inflation rate is always greater than the increase in the money supply during the period covered. This involves a significant tightening of the monetary policy in Russia (IMF, 1992b:17). It seems, however, that the policy became more accommodating towards the end of the year. There was an inflation/money mass growth-rate differential of nearly 560% in January (data for this month are indicated in the footnote of the chart), but it was practically nil in October[15].

It seems quite strange that such restriction over the money mass has not been able to avoid a hyperinflation episode in Russia. At first glance, one could conclude that the typical orthodox recommendation of tightening money growth to slow down inflationary pressures would not be efficacious in the case of a former socialist country. Then, what could be the cause of such contradiction between theory and reality? The answer lies in a consequence of the soft budget constraint: the burgeoning debts among state firms.

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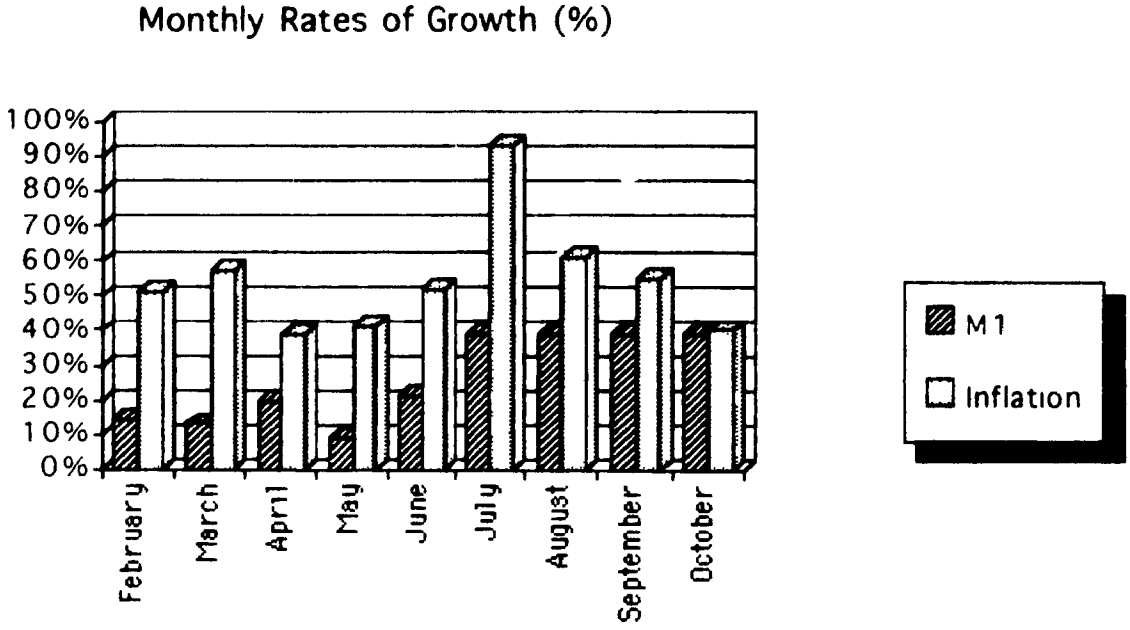
[15]As mentioned in the footnote of Chart III.3, due to the limited availability of data, M1 figures from July to October are the monthly average rate of increase occured during that period.

Chart III.3: Inflation vs Narrow Money (M1) for Russia, January-October 1992[1]



1. Because of the too large difference between January's inflation and the ones for the other months, the former were omitted in the chart in order to keep it as clearer as possible. January values are: for M1, 11%; and for inflation, 570%
Due to the lack of the relevant monthly figures, values for M1 between July and October are the monthly average rate of increase occured during the four months.

Sources: Various issues of *Commersant*.

Interfirm debt

A rapid increase of interfirm debt is considered as a response to the tightening of a country's monetary policy (Bofinger, 1992:253). Facing a credit crunch, enterprises in TSCs either issue soft credit to each other or delay payments to their suppliers (the "queuing" phenomenon[16]). In Russia, the level of interfirm debt has skyrocketed

[16]For further discussion on this phenomenon, see Marer (1991:43).

from R39 billion in January 1992 to R3 trillion in July[17] and R3,2 trillion in August, the last figure representing more than 50% of the country`s GDP[18].

In the short run, interfirm credit increases the velocity of money and thus can completely counteract the effect of a monetary restriction. Moreover, the high levels reached in Russia indicate that a large majority of state-owned enterprises has become insolvent. To this shadow picture, Bofinger (1992) adds that since the survival of the banks depends on those firms, they will not be able to continue to ration their credit. Therefore, the threat of a complete collapse of the financial system forces ex-sectoral banks as well as the central bank to accommodate this process. In fact, unless some kind of mutual settlement of debts is reached, not only the financial system but the whole economic reform could collapse.

In sum, as Kornai puts it:

> "A monetary ceiling is a necessary condition of financial discipline, but is not sufficient to ensure it. The transmission between a tighter monetary policy and the micro-response becomes unreliable in case of a soft budget constraint[19]. [...] The microunit will not react to the monetary restraint

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[17]EIU (1992:24).

[18]*Commersant*, January 12, 1993, p.12.

[19]Bofinger also considers the monetary policy as being: "[...] an ineffective tool for macroeconomic control in transforming economies." (p. 255). Finally, in a *Commersant* s Inflation Report (July 28, 1992), the economic analysts have come to the conclusion that: "[...] a tight monetary policy remains impossible in the post-communist economy [Russia]".

> by restricting its demand when it is not convinced of the dangers of financial failure."[20]

Then, we can conclude this section by stating that inflation cannot be efficaciously fought with simply with a restrictive monetary policy since the presence of a soft budget environment creates incentives for the government to bail out (by using seigniorage) insolvent firms. Moreover, when the latter need extra credit, they do not hesitate to ask other firms for it which counteracts the effect of the monetary policy. Thus, as Kornai suggests, this perverse circle can be broken only when the threat of financial failure (in other words, the possibility that a firm will go bankrupt if it does not respect its financial obligations) is present in the economic system. The next section will study the Russian bankruptcy law and will discuss its relative efficiency.

3. The Necessity of an Efficient Bankruptcy Law

The *Russian Law on Insolvency (Bankruptcy) of Enterprises* was approved by the Supreme Soviet on November 12, 1992, after many delays caused by the rejection by the Parliament of all the previous drafts (in Appendix III, highlights of the law are reproduced, but the reader will find the full text of the legal document in *Commersant*, January 19, 1993, pp.25-32). In theory, because it allows creditors to force debtors to liquidate their assets if they fail to meet creditors' claims for three months after the date of maturity (Article 1), this law is supposed to purge non performing firms from the market. In practice,

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[20]Kornai, J.- "The Soft Budget Constraint", 1986, p.13.

however, there are reasons to believe that such a scenario should not be expected in the near future. First, one assesses at some 80% the share of enterprises that, according to the law, are candidates for bankruptcy. It is clear that if the law were fully applied without any other modification of the current economic system, the resulting unemployment would be simply socially and politically unsustainable. Second, since most of the firms are still state owned and managed by people who constitute a strong political power in the country, it is probable that government will continue to give credit to unprofitable firms. However, the problem should slowly disappear as the privatization program progresses. Therefore, as we see, the efficiency of the bankruptcy law depends on the success of the privatization program, as the latter depends on the former (EIU (1992:27), *Commersant*, November 17, 1992, p.27). But no doubt both are necessary conditions, not only to stop inflation but also for the success of the economic transition.

Up to now, nothing in the literature consulted has shown that the Russian bankruptcy law has purged any of the insolvent state firms. As mentioned earlier, the threat of a sharp rise in unemployment puts the government in a difficult situation. Hardy (1992) argues that such a situation makes firms' managers expect the government to finance indefinitely their losses because it is the only way to avoid the collapse of the labour market, and the resulting social instability. He suggests the institution of a suitable safety net that would cushion the social impact of the massive unemployment generated by a strong application

of the bankruptcy law. According to him, the cost of such a net for the government would certainly not exceed the one actually paid for the various kinds of distortion coming from the presence of a soft budget constraint environment. Moreover, it would allow managers to change their expectations, would force them to harden their budget constraint, and thus would contribute to making both the financial and the industrial sectors more efficient.

In the literature, there is a general consensus over the need for a TSC to enact a bankruptcy law[21]. In fact, the costs for firms of falling into arrears (ie. of accumulating either huge interfirm debt or debt vis-à-vis the government) depend on the effectiveness and efficiency of such regulation. Thus, it is a way 1) to force both financial and commercial institutions to follow a hard budget constraint, and 2) to lead the economy towards a clearer separation between fiscal and monetary policy. Without it, interfirm and bank's (soft) credit are likely to increase and thus dry up sources of funds even more for solvent and efficient firms (Calvo and Coricelli (1992:82)). In other words, in the light of the analysis undertaken in this chapter, until the practice of bankruptcy is implemented and becomes an effective threat for enterprises that are unprofitable, the use of a monetary policy to fight inflation cannot be fully effective.

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[21] Bofinger (1992), Calvo and Coricelli (1992), Tanzi (1992), EIU (1992), Filatochev and Bradshaw (1992), Kornai (1986), and Maer (1991).

CHAPTER 4
Indexation and Inflation Inertia

Inertia and expectations are certainly among the most typical ingredients of the inflationary process. Chadha, Masson, and Meredith (1992) examined three inflation models in order to verify to what extent these two phenomena were present in a typical OECD non-oil country[1]: one with adaptative expectations that puts a weight of unity on past inflation in determining current inflation, and a weight of zero on future expected inflation (this model representing the extreme case where there is complete inflation stickiness or inertia); another that makes the past inflation independent of the current one (ie. that put a weight of unity on future expected inflation); finally, a last model was set up in which current inflation is dependent on a weighted average of past and future expected inflation.

Their finding was that the first two inflation processes were strongly rejected by the data. In fact, only the model in which *both* forward- and backward-looking elements were present for determining the current inflation were not rejected at conventional levels of significance. This led Chadha, Masson, and Meredith to conclude that both inflation inertia and inflation expectations seemed to be needed to

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[1]Their empirical study was made on the basis of data from Germany, France, Italy, United States, Canada and Japan.

characterize the economic reality of a country and thus, were relevant elements to explain inflation.

No such test has been undertaken for Russia, the relative youth of its economic system and the lack of data series legitimating the irrelevance of such work. However, the high and persistent inflation that occurs in this country leaves no doubt about the presence of a certain degree of both inflation inertia and future inflation expectations. However, because of its intrinsic nature, it would not be useful to undertake an evaluation of the range of the latter phenomenon in Russia in the context of this work. In fact, we know that the current climate of uncertainty generates various expectations from the population, thus affecting the state of the economy (and, at the same time, the price levels). Also, expectations *per se* are not specific to TSCs: every economic agent in each country builds its own expectations from his perception of the environment. However, let us merely mention that *inflationary* expectations do exist in Russia and are due to the specific political and economic environment generated by the enactment of the various reformist policies.

The present chapter will thus focus exclusively on the phenomenon of inflation inertia and its principal cause: indexation. Section 1 will define and clarify the concept of inertia. In section 2, the advantages and drawbacks of the various indexation mechanisms (wage, tax and debt indexation) in an inflationary context will be explored, and a proposition to use two specific types of indexation

mechanisms (tax-payment indexation and government bond indexation) to put downward pressures on inflation will be developed.

1. Inflation Inertia

In Chapter 1, we have mentioned that price jumps could be considered as an adjustment mechanism to any shock for a given market since they bring back the equilibrium between supply and demand. If that is true, it could mean that continuing inflation could therefore be the result of repeated shocks to the economy (ie. money-supply or aggregate demand increases, or falls in the money demand or productivity).

The principle behind the inflation inertia phenomenon is that price-level rises constitute, by themselves, such repeated shocks. In his book on "*The Economics of High Inflation*", Beckerman (1992:37) defines an inflationary shock and inflation inertia as follow:

> "An «inflationary shock» may be defined as an event that generates excess money supply, thereby inducing a price-level rise. The «inflation-feedback process» [also called inflation inertia or inflation stickiness] may then be defined as a cycle in which price-level rises repeatedly constitute new inflationary shocks."

Is there any presence of inflation inertia in Transitional Socialist Countries? Even if many authors answer «yes» to this question (Commander (1992), Dornbusch (1992), Kolodko et al. (1992), and

Cukierman and Liviatan (1992))[2] empirical analyses of open inflation in TSCs are still uncommon. However, Commander and Coricelli (1992) empirically analyzed the determinants of inflation for Hungary and Poland for the period 1981-1989, and 1983-1990, respectively[3]. By putting a (one period-) lagged price term in their price equation, their intention was to capture inertia in the system. The results demonstrated that inflation was characterized by a fairly high degree of inertia throughout the given periods. In fact, the coefficient of the lagged price term was 0,23 (t=2,70) in the case of Hungary, and 0,33 (t=4,20) for Poland[4].

Nonetheless, findings in Commander and Coricelli`s paper do not allow us to conclude that since inflation inertia is present in two TSCs, then, it is necessary present in Russia. However, from past experiences not only with TSCs but also with Latin American countries, many authors state that inflation inertia results, in the first place, from the use of indexation mechanisms (Commander (1992:7, example of Yugoslavia), Dornbusch (1992:28, ex. of Brazil), Kolodko et al. (1992: chap. I), Commander and Coricelli (1992:47 ex. of Poland and Hungary), and Beckerman (1992:chap. VIII, ex. of Brazil). Therefore, even if no empirical analysis has yet been made in Russia to determine the importance of inflation inertia in the whole inflationary process, a careful study of indexation mechanisms present in this country would

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[2]We will see why these authors make such statement in section 2 of the present chapter: *Indexation Mechanisms.*

[3]Data were quarterly.

[4]Authors reported the variables to be stationary and significant at a level of 5%. Also, they confirm the absence of serious autocorrelation.

be fairly representative. In this regard, the following section will then discuss those mechanisms.

2. Indexation Mechanisms

Definition and usefulness

When the unit of account in an economy is money, welfare losses are usually generated in periods of chronic and uncertain inflation rates. These losses can be minimized if the money value for wages, taxes and bonds are linked with a price index (ie. the money price of a basket containing goods and services in proportion to their importance in the total of the economy`s output). If such an indexation policy is put in place by the government, the unit of account of the economy now becomes the purchasing power. Thus, for a given increase in the country`s price index wages, tax brackets, and returns on bonds will be adjusted in order to offset partially or almost totally (depending of the degree of indexation) the impact of inflation on the economic unit`s purchasing power (Beckerman (1992), and Simonsen (1992)).

Thus, because of its stabilizing effect on relative prices, indexation limits the impact of an inflationary shock on the redistribution of income among individuals. For this reason, it facilitates the functioning of the economy in periods when the latter has to face a high degree of uncertainty resulting from inflation. Paradoxically, this advantage of indexation is also the source of drawbacks, one of which is the creation of a channel through which inflation is transmitted from past to current

periods. This inflation-feedback comes from the fact that the indexation rate is based on previous inflation rates[5]. Then, as one can see, indexation cannot be considered as a cure to inflation but rather as a crutch.

Another inconvenience of using indexation is that since it reduces the cost of inflation, it diminishes the political will for finding anti-inflationary policies (Simonsen (1992:112), and Kiguel and Liviatan (1991:88)). In fact, those policies are often unpopular among citizens and could be the source of many criticisms from the opposition parties that would seek political gains. Then, a "soft" government is tempted to use indexation at least to moderate the social disturbance that originates from price destabilization. However, even if this way of doing things can be helpful in the short run, it can become the source of persistent inflation that will make the whole inflationary process even more costly to eliminate in the future. In this regard, an analysis of the different indexation mechanisms used by the Russian government and an assessment of their impact on price levels will be undertaken in the next sub-sections.

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[5]It must be noted that there exists *ex-post* and *ex-ante* indexation. *Ex-ante* indexation implies that: "[...] the future money values of *ex-ante* index-linked financial assets are set *before* price-index increases are recorded, on the basis of authorities inflation projections" (Beckerman, 1992:127-8). Since this type of indexation have been much less used than ex-post indexation, and since Russia only uses ex-post indexation, the present study will exclusively discuss the latter for which a definition has been previously given in the main text.

Wage Indexation

As one can see in Table IV.1, the Russian minimum wage more than doubled during the Gorbachev era, but it increased by almost 560% in 1992: from R342 a month in January 1992, it was raised to R2,250 in January 1993 (it must be reminded, however, that during 1992, price level increased by more than 45,000%[6]). Also, from April 1, 1993, the minimum wage is index-linked to inflation every three months (RFE/RL Daily Report no.221, November 16, 1992). This policy affects only state employees (still about 70% of the workforce), such protection not being existent for the others (in fact, the law allows non-state employers to introduce "whatever minimum wage their funds permit"). Of course, the indexation of the minimum wage indirectly links other (non-minimum) wage levels to inflation since pressures will be put on employers to adjust the relative purchasing power.

In chapter 2 and 3, we saw that both the relaxing of the government`s control over the state firms and the persistence of a soft budget constraint together have contributed to increase wage pressures since they do not find resistance anymore. Now, with a policy of wage indexation, not only does the threat of wage-push inflation still exist in Russia, but the inflation-feedback mechanism becomes assuredly more *automatic* (Beckerman, 1992:142). In other words, wage indexation increases the responsiveness (the variance) of inflation to price (wage)

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[6]From January to November 1992, prices increased by 45,059%. To date, December`s inflation rate has not been published.

shocks. This statement has been demonstrated in Commander and Coricelli's (1992) empirical study on the sources of inflation in Poland. Particularly, they consider the Polish government's decision to index-link wages to the price-levels between 1988 and 1990 to be a major cause of the transmission of the inflationary impulse. In a more theoretical fashion, Simonsen (1992) built a macroeconomic model of *ex-post* wage indexation and demonstrated that such mechanism was inflation-perpetuating[7].

Table IV.1: Monthly Minimum Wage in Russia, 1985-93

	1985	1986	1987	1988	1989	1990
Minimum Wage (in rubles)	70	80	80	80	80	80

	1991 Apr.	1991 Oct.	1992 Jan.	1992 Mar.	1993 Jan
Minimum Wage (in rubles)	140	180	342	750	2,250

Sources: IMF (1992b), except for March 1992 (Le Figaro, 06/02/92:3) and for January 1993 (RFE RL Daily Report no. 221, November 16, 1992).

A last comment has to be made about the length of the period between each wage indexation. As it was said earlier, Russian

[7] Simonsen's model contains numerous assumptions and equations for which its deep analysis has been found to be both useless and behind the scope of the present work. We thus refer the reader to Simonsen s (1992), Gray's (1976) and Fisher s (1977) papers for further discussion on this subject (the last two papers derive an indexation model from which Simonsen made an extended version).

government will adjust the minimum wage every three months. This high adjustment rate is by itself a source of inflation acceleration[8]. This can be explained as follows[9]: Let us assume a simple model of indexation in which there is full indexation, there are no productivity gains, and there are firms that follow soft (accommodating) budget constraints and that manage to keep the economy at the full employment level[10]:

$$(8) \quad w_t - w_{t-1} = p_{t-1} - p_{t-2}$$

where w and p are the log of the nominal wage and the price level, respectively (here, ws are adjusted at the beginning of each period). Now, let us define e_0 as being the log of the *real* wage, and $\hat{e}_0 < e_0$ as the full-employment real wage level. Then, equation (8) is equivalent to:

$$(9) \quad w_t - p_{t-1} = e_0$$

Regardless of the time between each wage adjustment period, an accommodating policy aiming at full employment will generate the following inflation rate π_t:

$$(10) \quad \pi_t = p_t - p_{t-1} = e_0 - \hat{e}_0$$

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[8]There is a natural tendency for contracts to shorten during high inflation periods because a fixed nominal wage hides a rapid decrease of the real wage.

[9]The following model is based on Simonsen's extended Gray-Fisher model.

[10]*Nota bene*: these assumptions are quite representative of Russia's current economic situation.

Equation (10) means that if the government shifts intervals between wage adjustments from, say, six months to three months (ie. t represents quarters instead of half-year periods), the rate of inflation will simply double. Then, from Table IV.1, one can reasonably attribute a portion of the Russian inflation burst to the shortening of intervals that has occured in the country from 1985 to 1993. In this regard, Dornbusch (1992:23) notes that a short interval is not necessarily more stable than a longer one. According to him: "[n]ew shocks will shift the economy to even more frequent adjustments and hence to correspondingly higher rates of inflation". If a government, for political reasons, is reluctant to apply the necessary anti-inflationary measures to stop this wage-price spiral, only hyperinflation will be able to destroy the existing structure of wage contract. On this, Kolodko et al. (1992:7-8) argue that the occurrence of hyperinflation significantly contributes to lowering the stabilization costs since it automatically eliminates inflation inertia. Nevertheless, this solution is considered by the authors as being quite inefficient since the overcoming of hyperinflation typically means a return of the inflation rate to its pre-hyperinflation level[11].

To summarize this section, we can say that if wage indexation stabilizes one`s purchasing power and helps one to live in an inflationary environment today, it is at the cost of further robust

[11]On this, Kolodko et al. refer to Solimano (1990) who argues that this phenomenon contributed to the relatively low stabilization cost in Middle European countries in the 1920s.

inflation tomorrow. As Dornbusch (1992:28) puts it: "[wage i]ndexation is a mechanism that creates inertia and preserves inertia". Thus, to the extent the economy is protected from inflation, inflation will persist. Therefore, Russia`s new law on minimum wage indexation must be seen as a failure of the government to resist political pressures. It is a good thing to want to protect people from the effects of inflation, but doing it by setting a wage indexation mechanism is likely to aggravate the overall pain. Moreover, it must be pointed out that funds needed to finance indexation come directly from the state budget. In chapter 3, we saw how an inflationary financed budget deficit (like Russia`s) can affect price levels. In that sense, wage indexation generates inflation in two ways: through the feedback process and through the state budget.

Tax Indexation

The literature that deals with tax indexation puts the emphasis mainly on the application of indexation on the income-tax brackets. In order to analyze the inflationary impact of this particular mechanism, let us first draw an overview of how the Russian income tax functions.

The Law on Income Tax from Physical Persons was enacted in December 1991. It is a *progressive* tax, that is, higher rates of taxation are applied to higher taxable incomes. The brackets of the Russian income tax are expressed in monetary units (see Table IV.2). If they were expressed in terms of minimum wages (which, in Russia, are index-linked), it would avoid the rise of the overall tax rate that occurs from the current situation. In fact, in a high inflationary environment,

denoting income brackets in terms of monetary units brings relatively lower income people to higher tax brackets. Thus, on January 1992, the income level limit for the lower bracket (R42 000) corresponded to more than 10 times the minimum wage. On January 1993, it corresponded to only 1,6 time the minimum wage.

Table IV.2: Marginal Tax Rates on Individual Income in Russia for 1992

Annual Income (in roubles)	Marginal Rate (%)
Up to 42 000	12
42 001 to 84 000	15
84 001 to 120 000	20
120 001 to 180 000	30
180 001 to 300 000	40
300 001 to 420 000	50
Over 420 000	60

Sources: IMF (1992b).

As pointed out by Beckerman (1992:chap. 8) one possible drawback of the policy of tax-bracket indexation is that a higher overall tax rate (resulting from inflation that rises incomes to higher tax brackets) reduces aggregate demand and thus, inflationary pressures. However, this statement is not necessarily true for the reason that an increase in the level of taxation affects production incentives (downwards). This can be inflationary in two ways: through the fall in the productivity level and through an increase of wage pressures resulting from the employees' will to offset their loss of purchasing power. Moreover, it must be noted that the absence of any tax-bracket

indexation can create a situation in which the overall tax rate will always increase even when the inflation rate decreases. Thus, under such tax system, only a *fall* in the price level would lead to a reduction of the tax burden.

Whether tax-bracket indexation has an unambiguous effect on inflation still has to be verified empirically (Beckerman, 1992:151). What is sure, though, is that as with wage indexation, it makes life with inflation less uncomfortable for workers and thus weakens pressures on politicians to put in place anti-inflationary measures. However, an environment characterized by a high and persistent level of inflation leaves almost no choice for authorities: they must opt either for a frequent adjustment of the money denominated tax brackets (what Russia has opted for) or for indexation (Simonsen, 1992:124). For the reasons mentioned in the last paragraph, a "bracket drift" policy does not constitute a wise option in a such context. In fact, adding to its rather uncertain impact on inflation, it contributes to creating an "overtaxed environment", hostile to any economic recovery.

Despite this uncertainty around the inflationary effect of a tax-bracket indexation, one can be sure of the usefulness of an indexation mechanism that would eliminate (or at least reduce) the erosion of the real value of taxation due to the lag between the "taxable event" and the tax payment. This erosion is commonly named the "Olivera-Tanzi

effect"[12]. This effect is greater the higher is the inflation rate or the longer is the time between the taxable event and the payment to the government. In Russia, because of the difficulty in controlling inflation, government authorities have set short collection lags. For instance, the Russian Law on the Enterprise Profit Tax imposes on firms advance tax payments that are due as often as twice a month (on the 10th and the 25th)! However, on the side of the individual incomes, only the wage income tax is *monthly* withheld by firms from their employees' salary. Other types of income sources must be declared only on an *annual* basis (IMF, 1992b). This situation has generated significant revenue losses for the Russian government which faced an average monthly inflation rate of more than 55% between February and November 1992. It thus affected the budget deficit, raised money creation through the use of seigniorage, and ultimately, increased inflation (Dornbusch (1987, 1992), Åslund (1992) and Simonsen (1992) and Chapter 3).

In this context, rather than looking for further reduction of the tax collection lag, central authorities should examine the implementation of a tax-payments indexation mechanism. With such a system, instead of forcing individuals and firms to make advance (nominal) payments twice a month (or even more), it will induce them to pay an amount of tax that is index-linked to the price level and payable after a reasonable (and adjustable in the future) period of time (say, six months for individual incomes, and three months for business incomes).

[12]The name is in honor of Julio Olivera and Vito Tanzi who were both pioneers in the study of the phenomenon.

For example, assume an enterprise owes the government R100 in tax coming from income earned during the month of January. If this sum, added to the ones for February and March, is due only at the end of the first quarter, the real tax amount received by the state for January will be $R100/(1,55)^2$ = R41,62 (assuming a monthly inflation rate of 55%). Here, the Olivera-Tanzi effect deprives the government of no less than 58,38% of its expected tax income. However, if a mechanism of tax-payment indexation were present, the enterprise will have to pay the government $R100*(1,55)^2$ = R240,25 in tax for its income earned in January.

This indexation mechanism has the advantage of imposing *real* (as opposed to nominal) tax rates to economic agents. Moreover, it makes the taxation revenues robust to inflation and thus diminishes the chances of monetization of the budget deficit (reducing inflationary financing). Finally (and this is probably its nicest characteristic), this mechanism acts as a fiscal incentive to decrease inflationary pressure. As a matter of fact, the stronger are economic agents` inflationary pressures (e.g. through higher wages, excessive profits, etc), the higher will be the real fiscal rate on the basis of which their income will be taxed, and *vice versa* (ie. lower inflationary pressures will lead to lower real rates of tax). Such a system could prove to be quite efficient to kill rapidly and permanently high inflation in Russia. But, of course, it will work only if the government stops bailing out firms and imposes a hard budget constraint on economic units.

Debt Indexation

As was discussed in Chapter 2, the fact that real interest rates are currently highly negative in Russia prevents the state from using the full potential of bond financing. Also, it was argued that because of negative effects on the economy, it might be a mistake to force them up. This restriction, however, condemns the government to overuse seigniorage, thus creating inflation.

In such a situation, many economists (among others, Beckerman (1992), Calvo (1992a), and Simonsen (1992)) have suggested that the government issue index-linked bonds. In the case of Russia, the current level of inflation is probably still too high to think about the implementation of a *full* indexation policy (ie. a policy that would completely offset the price effect on a bond`s return). However, a partial indexation could be a good thing for at least three reasons. First, it constitutes a much less inflationary way to finance government deficit than seigniorage[13]. Second, these index-linked securities are likely to be more attractive than nominal ones since they both protect their holders (at least partially) from further inflation uncertainty and reduce the devaluation rate of their financial assets. Third[14], by issuing index-linked bonds, the government loses incentives to inflate since it returns a portion of the inflation tax to the public.

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[13]Index-linked bond issuing affects price levels through inflation inertia. Even if the economy avoids a massive money injection when these bonds are used instead of seigniorage, future interest payments plus inflation compensations will generate some kind of inflationary pressures (though the latter are likely to be much less significant than in the case of money creation).

[14]Beckerman (1992:135).

Such indexation policy has been used with relative success in some countries, notably in Brazil (see Simonsen (1992), and Beckerman (1992)), Chile, and Israel (see Guidotti and Kumar (1991)). In Russia, there is apparently no reason why it would not contribute to the success of an anti-inflationary program. Of course, some conditions must be respected, among which the most important are the maintenance of a relatively low budget deficit, the development of incentives to harden budget constraints, and the implementation of a tax-payment indexation policy to secure budgetary revenues and put downward pressures on inflation. Respecting those conditions, though, requires a great deal of political courage. In fact, the Russian economic environment is in such a state of disorder that any attempt to rearrange it inevitably affects many people`s behavior that used to be adapted to the multiple peculiarities of the previous system. But there is no easy way out for central authorities. They have to undertake measures that will not merely build walls to protect citizens from inflation, but rather that will get them rid of it.

As was discussed in this chapter, there exist different indexation mechanisms, of which some can be helpful, others, harmful to the success of an anti-inflationary program. A wage indexation policy, similar to the one implemented in Russia, though it helps people to "live" with price-levels uncertainty, generates inflation inertia and thus transmits the inflationary impulse from the past to the future. In that

sense, it cannot be considered as an efficient way to protect people from the disturbance of the reform. On the contrary, it increases the overall cost of disinflation to the extent that wage indexation will have, one day or another, to stop. But the decision to remove wage indexation usually generates a revival of inflationary pressures that often pushes the government to restore it (such a situation occured in Brazil in 1987: the government was pushed to restore indexation only one year after having stopped it).

Other types of indexation mechanisms can be useful to fight inflation, though. This is the case for a tax-payment indexation and a government-bond indexation. The former helps stabilize the state budget by offseting the Olivera-Tanzi effect and constitutes a fiscal incentive to push inflationary pressures downward. The latter helps to cope with the current high negative real interest rates both by providing incentives for savers to invest in government securities, and by preventing the state from using excessive seigniorage. However, as was mentioned above, a political aspect is linked to the implementation of all the measures mentioned in this chapter as well as in the previous ones. In fact, the Russian government is subject to all kind of political pressures coming from groups and coalitions for which the various transition policies have generated a decrease of their relative power, influence and wealth. In the concluding chapter, we will see how these pressures contribute to slow down the pace and modify the direction of the reform, and thus to hamper the economic stability of the country. But before that, we will study a last (but important) channel of

inflationary pressures in Russia: the dollarization of the domestic economy.

CHAPTER 5
Dollarization and Currency Depreciation

In periods of high inflation, people want to protect themselves from the depreciation of their monetary wealth. In order to do so, they will be tempted to put it in various kinds of inflation-proof assets like indexed bonds, physical stock, or foreign currency. The present chapter will explore the effect on the price levels of the use of the latter mean in Russia. First, a definition and some clarifications of the concept of dollarization will be made. Then, we will see how dollarization can generate inflationary pressures through its impact on both the government budget and the exchange rate. In regard to the latter, five major factors of depreciation of the ruble will be examined and their effect on price levels will be discussed.

1. Definition and Explanations of the Concept of Dollarization

Dollarization may be defined as: "[...] the use of the US dollar as a unit of account in an economy that has its own money unit"[1]. This phenomenon, like indexation, has the advantage of protecting purchasing power. In that sense, it makes life in an inflationary

[1]Beckerman (1992:126).

environment less painful during the short run, but contributes to perpetuating inflation inertia and weakens pressures on government` authorities to undertake unpopular anti-inflationary measures.

By using his equation of the equilibrium rate of inflation when deficits are financed through money creation, Dornbusch (1992) demonstrates how dollarization intensifies the inflationary process through the deficit (see equation (4) in Chapter 1, page 12). He points out that the flight from domestic currency into dollars reduces the domestic monetary base for the inflation tax and thus affects the velocity parameters α and β. Then, the more important the dollarization phenomenon in an economy (ie. the higher is α), and the faster the responsiveness of velocity to the rate of inflation (ie. the higher is β), the higher will be the effect of inflationary financing on the price level. In that sense, dollarization acts as an amplifier of the inflationary effect of seigniorage.

Dollarization also affects price levels through its impact on government revenues. In fact, since the dollar is not the official unit of account but is nevertheless a good store of value, this generates incentives to build up a more and more organized underground market in which the dollar (or any other hard currency) would be the only currency accepted. In such a situation, an increasing number of transactions and wage payments escape from the taxation system and thus create a loss of fiscal revenues for the government. This contributes to aggravating the government`s financial position, leads it

to a more extensive use of seigniorage, and thus, generates additional inflationary pressures in the economy.

As one may see, dollarization is both a generator of inflation, and a response to inflation. As Dornbusch (1992:22) puts it: "[a] government that experiences some inflation and makes dollarization easier will experience even more inflation". But preventing a population from using what is probably the best instrument to protect its monetary asset is far from easy. In Russia, though the ruble is the only legal currency, the use of the dollar on the domestic consumer market has been very popular. On October 27, 1992, in an attempt to counteract this phenomenon, President Boris Yeltsin signed a decree limiting the use of hard currency in retail transactions[2]. Goods purchased in Russia or made by a resident trading firm had henceforth to be sold only for rubles. All firms that were previously licensed to sell goods for hard cash have had to re-register. However, if one looks at the evolution of the inflation rate for the month following the decree, one cannot state that it had a significant effect on the economy (in fact, November s inflation reached 66%, compared to 40% for October). Although many factors contributed to this inflation burst, it is reasonable to state that one of them is the persistence of dollarization. To understand better this dynamic relationship between inflation and the use of dollars in the Russian economy, it becomes now imperative to study the impact on inflation of the evolution of the exchange rate.

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[2]The full text of the decree is in *Commersant*, November 3, 1992, p. 26.

2. Inflationary Effects of Currency Depreciation

In the last section, we saw how dollarization of the domestic consumer market could affect inflation through increasing the government's deficit. However, this is not the only channel by which the use of a currency other than the one officially in place in a country, influences the price level. In fact, by acting on the exchange market and increasing the demand for dollars (this being tantamount to a raising of the supply of rubles), dollarization and at least five other factors directly affect (downwards) the exchange rate: the credit emissions, the fall in output and productivity, the increasing share of imports that is paid in hard currency, the inflow of rubles coming from the other countries of the Commonwealth, and the expectation of a domestic currency depreciation. Thus, after a brief overview of the current Russian exchange rate and trade system, a study of these factors will be undertaken. Afterwards, the impact of the currency depreciation on inflation will be discussed.

The Exchange Rate and Trade System

During the reign of the former Communist regime in the Soviet Union, there existed a non-market official exchange rate that was set by the state and that oscillated from R0,684 per dollar in 1986 to around R1,700 in 1991. However, since the summer of 1992, the Russian official exchange rate has been the one quoted on the Moscow Interbank Currency Exchange (MICE). MICE is an interbank market that consists of auctions held twice a week (before April 1992, there was

only one trading session per week) which covers noncash transactions among banks that trade on behalf of enterprises. Though other interbank markets exist across Russia[3], MICE is where more than 90% of all the noncash transactions are held. Let us mention that on each of these markets, the Central Bank of Russia may intervene to influence the value of the ruble over the dollar[4] (IMF (1992b), *Commersant*, January 12, 1993; and February 9, 1993).

Though the Russian people benefit from internal convertibility (ie. "[... they] are free to maintain domestic holdings of certain assets (for example, bank deposits) denominated in foreign currencies, and thus to convert domestic currency internally to foreign currency assets"[5]), current and capital account convertibility are still not completed. In fact, the presence of restrictions on foreign exchange transactions (of which, one of the most important is the obligation for exporters to sell 50% of their hard currency earnings; 30% to the Central Bank[6] and 20% on MICE) still make the ruble a non-convertible currency (in the sense of the IMF`s Articles of Agreement[7]), though it is expressed in terms of

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[3]e.g.: the St. Petersburg Currency Exchange, the Siberian Interbank Currency Exchange, and the Urals Regional Currency Exchange.

[4]In 1992, the US dollar was the only hard currency quoted on MICE. However, Deutsche mark auctions are now held in Moscow and St. Petersburg since February 1993.

[5]The definition of internal currency is from Greene and Isard (1991:4).

[6]This measure was adopted in December 1992 in order to allow the CBR to benefit from a sufficient reserve of hard currency to intervene on the exchange market and thus to influence the value of the ruble vis-a-vis the dollar. Previously, only 10% of convertible currency earnings had to be surrendered to the CBR, except for exporters of energy and other raw materials for which the share amounted to 40% (IMF (1992:96)).

[7]For further discussion on this subject, see Greene and Isard (1991).

foreign currencies (Greene and Isard (1991:3); IMF (1992b:99); Kolodko et al. (1992:26); and *Commersant*, December 22, 1992:14).

In regard to the Russian trade system, it must be mentioned that contrary to the situation that prevailed under the former regime, imports are now mostly free of quotas and licenses (except for goods such as medicines, chemical raw material for the production of medicines, pesticides, industrial waste, etc., subjected to various controls). Exports are more subjected to quotas and licences for at least two reasons: first, they are a source of hard currency; and second, in a country still characterized by shortages of many goods, it becomes relevant to prevent some of these goods from landing in another country, while the Russian population would suffer from a too low supply on the domestic market[8]. To summarize, generally speaking, foreign economic activities can be considered as being now liberalized in Russia, though a full freedom over the proceeds of export activities is still missing (IMF (1992b)).

Factors of Depreciation of the Exchange Rate

The above brief portrait of the Russian exchange rate and trade system, though subjected to other significant modifications in the short run, will be useful for a better understanding of the factors inherent in the Russian economy that generate a depreciation of the ruble. A

[8]Such a situation could have happened, for instance, when the price of oil products were still under the control of the state, ie. until September 1992. During that period, world prices were much more attractive for Russian producers than domestic prices, inducing them to sell a larger share of their production abroad.

discussion of these factors will now be undertaken and a study of their inflationary effects will follow.

a) credit emission

Chart V.1 (at the end of the present chapter, page 112) shows the value of the American dollar vis-à-vis the ruble for the period between December 1991 and February 1993, as quoted on the MICE. One can observe that despite the January depreciation (mainly due to the inflation burst caused by price liberalization), the ruble was relatively stable during the spring and the summer. This was the result of the significant Central Bank intervention that bought rubles by offering dollars on the market[9]. However, from August to November 1992, a sharp depreciation occured. Analysts of the Russian economy unanimously attribute it to the large-scale ruble emission that occured during this period[10] (in fact, from July to October, narrow money (M1) increased by no less than 157%). This emission was mainly due to the decision of the government to solve the interfirm debt problem by

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[9]The CBR's interventions made it the most important seller of dollars on the MICE for the first half of 1992, with 60,5% of the total hard currency sold. In June, the goal of the Central Bank and of its chairman (Georgy Matyukhin) was declared to bring the dollar down to R80. For this month only, 224,29 million $ were dumped on the MICE, leaving the international reserve almost empty. When Victor Gerashchenko was appointed the new CBR chairman (in mid-July), he discovered that the reserve had been depleted to only 100 million $. This gave him little room for Central Bank intervention all the more so since a June's announcement making the MICE rate the only official exchange rate boosted the amounts traded in the currency market (thus forcing the CBR to put even more money on the MICE to have a significant impact on the exchange rate). That situation led the CBR to change its policy for the rest of the year: bringing down the exchange rate was no more a priority. Instead, to lessen the impact of its brief vacillations became the rule, and as a result, sustained pressures on the demand for dollars led to an increasing depreciation of the ruble.

[10]*Commersant*, September 1, 1992:14; October 6, 1992:26; and November 17, 1992:16.

issuing new money. Having suddenly more rubles to offer for each dollar, traders unavoidably made the ruble drop[11].

Another example of the impact of credit emission on the exchange rate can be observed when one looks at the MICE rate for January 1993. From R423 at the January 12th trading session, the dollar reached the value of R572 on January 28, which constitutes a dive of more than 35% of the Russian currency value in two weeks. This was due to many factors, all of them being related to the new Russian Premier`s (M. Victor Chernomyrdin) vision of the economic reform[12]. In December 1992, the Prime Minister announced no less than a R200 billion credit to the oil and gas complex, the cancellation of its debt of R8,5 billion, and additional centralized loans summing up to R900 billion to the commercial banks (*Commersant*, January 12, 1993:10, 12).

> "In addition to [this], which in turn increased the demand for hard currency, a factor that led to the sharp fall of the ruble is the possibility that the Russian government may decide to implement the *Resolution On Progress of the Economic Reform* adopted by the Seventh Congress of People`s Deputies. Among other thing this would entail an increase in the government spending. In addition, the Council of Ministers announced plans to subsidize agriculture and the state-run industries, including plans to increase centralized credits, carry

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[11] Interview with the MICE Deputy General Director, M. Osenmuk, in *Commersant*, September 29, 1992:14.

[12] Victor Chernomyrdin was the founder and is still the manager of *Gasprom*, the largest gas corporation in Russia. In the middle of 1992, he was promoted to Fuel and Energy Minister. In December 1992, he replaced Egor Gaidar at the position of Prime Minister of Russia.

> out an indexation of the enterprises` basic assets and to regulate prices for selected commodities."[13]

All these projects (ie. the increase in the government spending, the subsidies granted to (state-run) firms having soft budget constraint, and the financing of an indexation mechanism for firms` assets), in addition to being highly inflationary for the reasons expressed in the various chapters of this work, unavoidably lead to a fall in the exchange rate which itself is inflationary. But the reasons why a depreciation of the ruble leads to a higher price level will be discussed later. Now, let us continue with the analysis of the various factors that causes the exchange rate to fall by studying the impact of a fall in output and productivity on the ruble.

b) Fall in output and productivity

When an economy observes a fall in its output and productivity levels, it has to make a choice between one of the two following alternatives (or a combination of the two): to reduce its consumption or to import goods that were previously domestically produced[14]. If the latter choice is adopted, an increase in imports will inevitably put downward pressures on the exchange rate since most of the transaction will require Russian importers to buy dollars on the exchange market. However, in cases where either the former alternative or a combination of the two is selected, Russian exports are likely to be affected by a

[13] *Commersant*, January 19, 1992:12.

[14] We assume here a constant stock level.

production slump. This means a lower supply of dollars on the exchange market and thus, a depreciation of the ruble.

Table V.1 Monthly Physical Volume Index of Industrial Production, January-November 1992 (1989=100)

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept	Oct.	Nov.
Index (%)	78.2	83.3	81.3	81.3	75.3	73.1	71.5	66.9	69.4	72.4	71.9

Sources: *Commersant*, January 12, 1993, p.14.

Table V.1 shows the Russian`s monthly index number of industrial production for the year 1992 (1989=100). Within a very short period of time, the index made a dive of more than 25% in average. Export firms did not escape from the trend. Though the productivity cannot be considered the only element that affects Russian exports, the latter have nevertheless fallen from 80,9 billion $ in 1990, to 45,0 billion $ in 1992 (a fall of 44,4%)[15]. Then, for the reason mentioned in the preceding paragraph (ie. a rightward move of the dollar supply curve in the currency market), this situation has certainly contributed to the depreciation of the ruble vis-à-vis the dollar.

c) Imports paid in hard currency

According to the more recent literature, an increasing share of Russia`s imports is paid in hard currency (IMF (1992b), *Commersant*, January 19, 1993 and February 2, 1993). As a matter of fact, Western

[15]The 1990 figure is from IMF (1992b); the 1992`s one is an estimate published in Commersant, February 9, 1993. In regard to imports, they fell by 49,3%, from 82,9 billion $ in 1990 to 42,0 billion $ in 1992.

trading partners are getting an ever higher share of the total Russian imports, implying payments in hard currency. Also, many former CMEA members (Council of Mutual Economic Assistance) that used to trade in transferable rubles, now prefer to do business in convertible currencies (mostly in dollars), thus increasing the demand for them on currency markets.

d) Influx of rubles from countries of the Commonwealth

Many members of the CIS have already established their own currency system (e.g. Ukraine and Lithuania), or are about to do so (e.g. Belarus). This generates inflows of rubles from these countries to Russia and pushes the value of the Russian currency down. In cases where an agreement (such as the one signed between Ukraine and Russia) forces the country introducing its new currency to hand over all the ruble cash to the Central Bank of Russia, the impact on the exchange rate is minimized (to the extent the CBR does not inject this cash into the Russian economy). However, the impact can be relatively important in the period that precedes the official introduction of a new currency abroad. Expecting the reform of their country`s monetary system, non-Russian citizens can immediately offer their rubles for dollars and thus provoke a fall of the value of the Russian currency. Such a situation was reported in *Commersant* (October 20, 1992:16): large amounts of rubles flew from Lithuania to Russia after an unofficial report mentioning the possible introduction of the lit, the Lithuanian currency.

e) Expectation of a domestic currency depreciation

A last phenomenon that puts pressures on the demand for the dollar is the expectation of a domestic currency devaluation due, for instance, to a stop of the government`s interventions to stabilize the exchange rate (Beckerman, 1992:45). Such a situation can occur when people believes that the state`s international reserve is decreasing at such a rate that the government will not be able to intervene much on the exchange market. This may induce people to shift their rubles into dollars. This is exactly what happened in Russia at the end of the summer of 1992. As mentioned in note 9 of the present chapter, massive Central Bank interventions during the first half of the year emptied the stabilization fund and forced the state to play a much less important role, opening the way to further expectations of a eventual depreciation of the currency.

Depreciation Leads to Inflation

In the above analysis of the principal factors (including dollarization) leading to a depreciation of a country`s exchange rate, we saw that the Russian ruble faces strong downward pressures caused by many elements that are very characteristic of a former socialist country in transition to a market economy[16]. This sub-section will now try to demonstrate how such a currency depreciation can be translated into inflation.

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[16]The factors studied in the last sub-section are common to all TSCs, except factor "d" (Influx of rubles from countries of the Commonwealth) which is peculiar to Russia.

Depreciation of the currency tends to be inflationary since it directly affects the prices of the goods and services purchased from abroad as well as the prices of domestic goods into which imported goods are inputs (Beckerman (1992:44)). Also, depreciation increases the payments of the external debt denominated in foreign (hard) currency, enlarging the public deficit and thus creating additional pressures on the domestic price levels (Kolodko et al. (1992:36)). In Russia, these two latter theoretical arguments are highly relevant to explaining the persistence of inflationary pressures. In fact, it is more than probable that an increasing share in the total Russian imports (and debt) will come from Western countries at least for two reasons: first, Russia wants an access to the latest expertise and technology in order to modernize its national infrastructure and its production methods; second, many of its former major trading partners (ie. the members of the CMEA) are now facing the same problems of modernization and restructuring that make Russia rather dependent on the Western assistance. In this regard, Kiguel and Liviatan sum up with great clarity and simplicity the mechanisms by which inflation is generated by a depreciation of the value of the currency:

> "[...] because the devaluations increased the cost of servicing the foreign-denominated debt and raised the cost of imported inputs, they led to larger deficits of public sectors enterprises. Ultimately the [Central Bank of Russia][17], as lender of last resort, financed these losses, printing money to keep the

[17]In their paper, Kiguel and Liviatan were discussing the National (Central) Bank of Yugoslavia. However, since a similar situation is observed in Russia, it can be replaced by the Central Bank of Russia.

> enterprises functioning, a measure that was reflected in a higher level of seigniorage."[18]

The exchange rate is nothing but *a price*, the one paid out to buy foreign currency (say, dollars). Therefore, as with any other good, the dollar will see its price (denominated in rubles) increasing as a result of the inflationary process in Russia. Here, not only we have seen how the use of dollars in the Russian domestic economy pushes price levels up through a higher government budget deficit, but we have also noted how any depreciation of the ruble can itself become a source of inflation. In regard to this latter observation, one can state that inflation gives rise to depreciation and depreciation to a new round of inflation, showing the inertial component of the phenomenon and above all, the strong interdependence between all the factors that generate pressures on the price levels (c.f. Figure A of the introduction). Therefore, because of the *dynamic* aspect of the inflationary process, it would be irrelevant to try to find independent and unrelated solutions to the various diseases diagnosed through this work. Recommendations based exclusively on the theoretical aspect of economics are also irrelevant if they neglect the political forces that are in play. Keeping this in mind, the following concluding chapter will use the various results of our previous analysis of the inflationary process in Russia: 1) to set out the general preconditions for price instability to cease; and 2)

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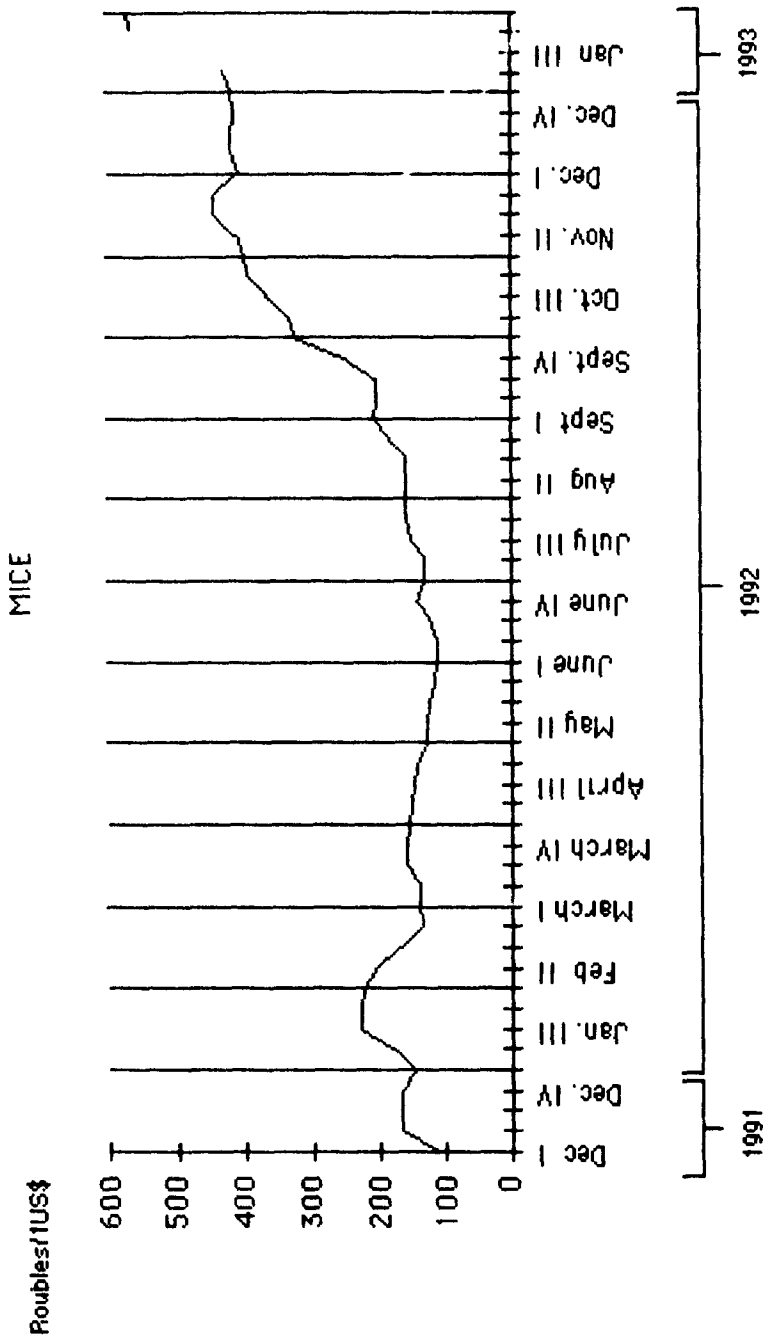
[18]Kiguel and Liviatan (1992:91).

to define what role Western assistance has to play in helping the current transition process to be the least inflationary possible.

Chart V.1
Evolution of the Exchange Rate of the Ruble between December 1991 and February 1993 (MICE Rate)



Notes: Numbers beside the months correspond to the weeks
Data for Jan III 1993 were not available

Sources: Various issues of *Commersant*, except for date between Dec I 1991 to March II 1992 IMF (1992b)

CONCLUSION

For the inflationary dynamic to be stopped, Russia needs first and foremost a political consensus. Up to now, the country has been the witness of too many confrontations between, on one side, the team of reformists of the executive led by President Boris Yeltsin, and, on the other side, the members of Parliament (most of whom were elected during the former regime), led by Ruslan Khasbulatov, who are less inclined to support a radical change of course towards a market economy. In fact, on several occasions, the members of the executive have blocked the enactment of new laws or presidential decrees. They have even forced Yegor Gaidar, the father of the Russian economic reform who had successfully obtained the confidence of the Western financial milieu, to leave his position of Prime Minister, and they replaced him by a more «traditionalist» person.

The failure of the Russian reform program to bring inflation under control originates from the inability of the government to escape from political pressures in a period when it still benefited from a relatively strong popular support, ie. in early 1992. In this work, we saw how these pressures did not allow the industrial and the financial sector to rapidly adjust in order for them to be able to respond to the various market signals. In fact, a vast majority of firms and banks still function

under a soft budget constraint and thus depend on the government credit for their financing. Up to now, this government has refused to face the massive unemployment (and the destabilizing popular dissatisfaction that comes with it) that would result from a rigorous implementation of its transition program. It has protected the labour force by perpetuating its policy of backing insolvent institutions with cheap credit (thus, keeping them alive but at the same time, removing any incentive for them to adjust to market signals), while other more promising types of safety net (e.g. the organization of a vast training program), could have been implemented at a cost assuredly less than the one generated by the current persistent inflation. Moreover, all these policies of debt clearing, subsidy granting, and soft credit issuing end up by being financed by seigniorage, the government still being unable to use other means of financing (e.g. domestic or foreign bond issuings) in the present inflationary context.

For this inflationary dynamic to stop, the government needs to be able to make its bankruptcy law a *real* threat to insolvent economic agents, and it should use both tax-payment and government-bond indexation to stabilize its revenue inflows and to reduce seigniorage. By doing so, downward pressures will be exerted on the price level, thus contributing to relaxing inflationary expectations, to reducing the inflation-feedback mechanism and to stabilizing the value of the ruble on the exchange market.

Western countries also have a role to play to help Russia in its fight against inflation. Training programs for the staff members of the various financial and state institutions, as well as technology transfers in both the industrial and the financial sector will assuredly facilitate the adaptation of the latter to the new economic environment, and thus make them respond (at least a bit) more like mature market-oriented institutions. Direct financial supports to the Russian government should be provided under the condition that the Russian government harden its credit policy vis-à-vis the various insolvent (state) firms. Finally, to the extent Russia keeps moving towards democracy, Western countries should provide it with political support, thus helping to relax destabilizing expectations, foreign investors` reluctance to come to the country, and inflationary pressures.

In the light of the above analysis, one can understand why, in Figure A of the introduction, political pressures head up the entire inflationary dynamics in Russia. Through the chapters of this thesis, we identified the different factors that are responsible for the disequilibrium of the price level, and explained the mechanisms by which such a situation persists. Measures to eliminate the problem were proposed. However, one must be conscious of the limit beyond which economic theory leaves the place to political activism. Therefore, a bad political context can prevent government authorities from fully implementing scholars` recommendations. Most of the time, even a partial implementation does not bring results different from the ones otherwise obtained under *status quo*. This affects the reformists`

credibility and contributes to making the implementation of a "second attempt" even more difficult.

On the date of submission of the present work (March 1993), a procedure of dismissal (adopted by the Parliament) has been undertaken against President Yeltsin. Uncertainty is thus complete in regard to the pursuing of the economic reform, at least until April 25th when the population will be asked to vote in favor of either a presidential or a parliamentary Republic. A popular disapprobation of the President will certainly open the way to a system in which modern economic theory has a fair chance not to play its full role. However, if Boris Yeltsin ends up the winner of this political war, he will henceforth benefit from a democratic popular support that will allow him to undertake a "second attempt" with much more political power, and thus, with better chances for making not only an eventual anti-inflationary program, but the entire reform process a success.

APPENDIX 1

The Rate of Inflation in USSR and Russia, 1981-92[1]

Annual Rates for USSR

	1981-5	1986	1987	1988	1989	1990	1991
Inflation (%)	4,6	8,5	9,8	6,4	7,9	18,9	86,0

Sources: Åslund (1992).

Rates for Russia since January 1992 (in percent)

Month	Monthly terms	Annual terms	Cumulative index
January	570	1,2 X 10[11]	5,70
February	51	13 952	8,61
March	57	22 328	13,51
April	39	5 102	18,78
May	41	6 075	26,48
June	52	15 110	40,26
July	93	267 009	77,69
August	61	30 233	125,09
September	55	19 130	193,89
October	40	5 569	271,44
November	66	43 682	450,59

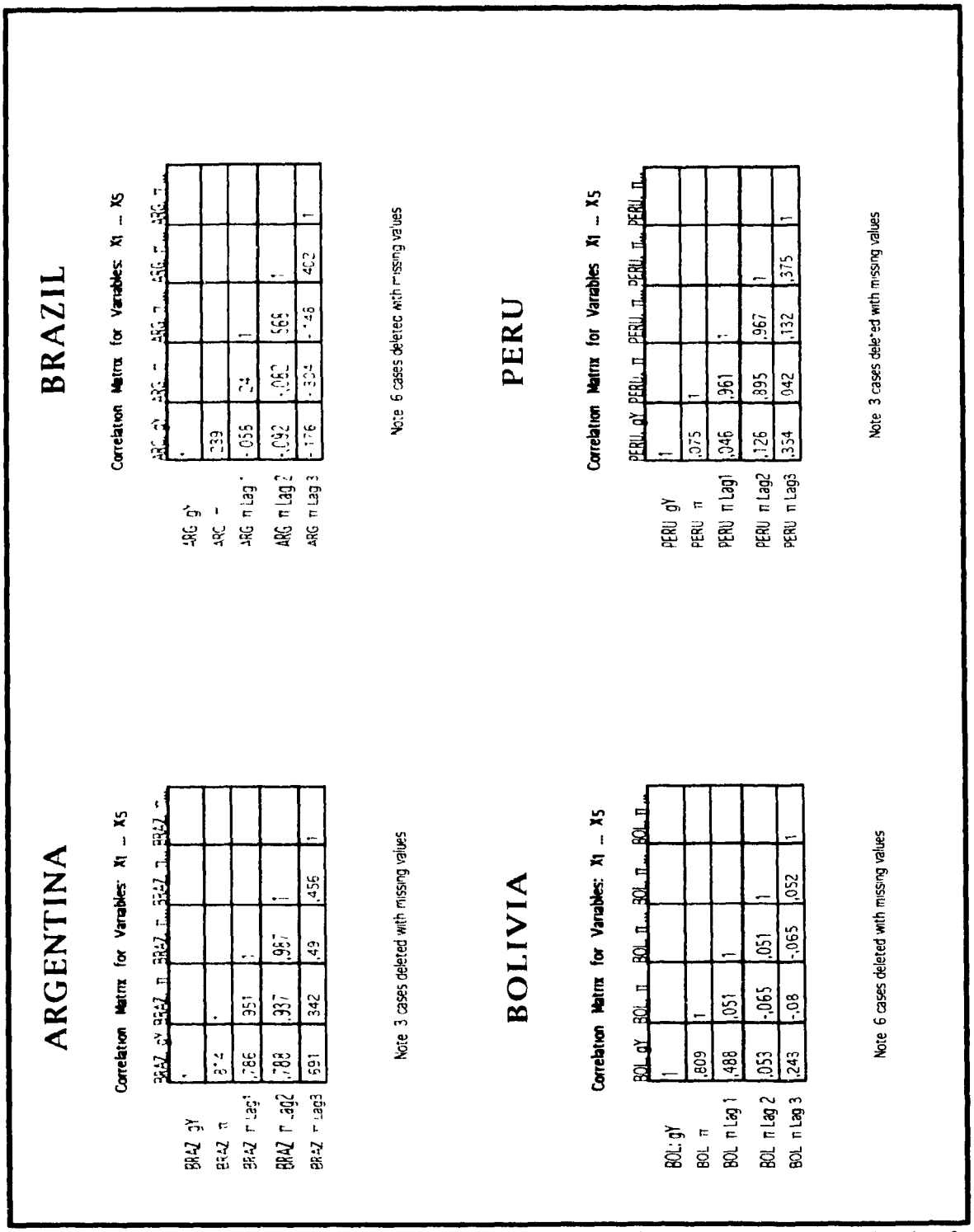
1. The rate of inflation is calculated taking into account the price growth and the increment in the hot money mass.

Sources: Various issues of *Commersant.*

Increase in the price level from January to November:		45 059%
Average monthly increase	-for the same period:	102,3%
	-excluding January:	55,5%
Cagan's (1956) classic definition of hyperinflation:		12 875%/year
	or	50%/month

APPENDIX II

Rates of Correlation between Inflation and Deficit for various Countries: 1970-91



NOTE: Lag 1, 2 and 3 denote variables that are one, two and three periods ahead, respectively. For example, π Lag 1 compares gY_t with π_{t+1}.

Sources: Various issues of *International Financial Statistics*

APPENDIX III

Russian Bankruptcy Law Highlights

An enterprise shall be deemed insolvent or bankrupt if such fact is recognized by the court of arbitration or if the debtor itself announces its voluntary liquidation.

The debtor shall be subject to reorganization or liquidation procedures, as well as to an amicable settlement presupposing an understanding between the debtor and its creditor on a deferment of payments due to them, on such payments to be made on an instalment plan or on a debt rebate.

The grounds for instituting insolvent (bankruptcy) procedure with respect to an enterprise shall be constituted by the appropriate statement from the debtor or a creditor or again from the public prosecutor.

The debtor, a creditor and the owner of the debtor enterprise may file an appeal for rehabilitation [of the debtor enterprise] with the court of arbitration prior to its passing of the final judgement in the case.

The grounds for undertaking rehabilitation shall be constituted by the real possibility of restoring the solvency of the enterprise to enable it to continue its operations through financial assistance to be provided to such enterprise by the proprietor thereof or third parties.

The recognition of a debtor as insolvent (bankrupt) shall mean that the court of arbitration shall decide on forced closure of the enterprise.

The court of arbitration shall advice the workforce [of the enterprise], local self-management agencies, local finance agencies, and banking institutions catering to the debtor, of the commencement of competitive bidding for appropriate production.

Source: *Commersant*, November 17, 1992, p.27.

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