Perestroika and Ruble Convertibility

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Introduction

Perestroika and ruble convertibility are intimately connected. Successful restructuring of microeconomic allocation mechanisms and the attainment of monetary and fiscal stability are necessary preconditions for reaping rewards from trade liberalization. Conversely, ruble convertibility can contribute to the efficacy of structural reforms. Convertibility exerts competitive pressures on domestic producers to improve efficiency; promotes gains from trade through the exercise of comparative advantage; and provides access to foreign imports, capital, and technology.

This promising synergism is, however, also fraught with danger. If perestroika fails to establish effective market allocation mechanisms and fiscal and monetary balance, ruble convertibility could aggravate wasteful resource use, swell imports, encourage capital flight, and fuel inflation. In short, ruble convertibility is a two-edged sword that should not be approached casually. Under appropriate conditions, it can cut through inefficiencies and yield productive results. In the absence of these conditions it can deepen pre-existing wounds, causing further hemorrhage to the economic system.

Recent theoretical work on the dynamics of structural reform suggests that when trade is liberalized under conditions of severe micro- and macroeconomic imbalance, it is unlikely to achieve its salutary objectives and may actually exacerbate instability (Choski and Papageorgiou 1986).[1] The Soviet Union now suffers from severe systemic

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[1]Edwards (1989) contains a critical review and evaluation of this literature. Although much of the literature on stabilization dynamics deals with the experience of Southern Cone countries, the evidence is salient for the Soviet Union because of the existence of micro- and macroeconomic imbalances. Wolf (1990) contains a brief review of the experience of centrally planned economies undertaking market-oriented reforms.

imbalances (Ericson 1989). Recent empirical evidence on failed trade liberalization programs supports the view that macroeconomic stability is among the most important factors influencing the outcome of trade reform.[2]

Since the potential costs and benefits of ruble convertibility are conditioned by the environment in which convertibility proceeds, any practical proposal for convertibility must first address and answer a broader and deeper issue, namely: what is the appropriate nature, sequence, and timing of the structural reforms required to create a suitable and sustainable environment for successful trade liberation?[3]

The interdependence between ruble convertibility and perestroika suggests that the design, implementation, and predicted consequences of any ruble convertibility scheme must be informed and guided by (1) a coherent vision of the nature and ultimate destination of perestroika, (2) a road map of transitional structural reforms whose sequence and timing are designed to maximize the likelihood of stable progression toward the ultimate destination, and (3) the potential costs and benefits of alternative types and sequences of ruble convertibility reform.

In order to create the optimal macroeconomic conditions for successful ruble convertibility, while avoiding distributional inequities, the Soviet Union will need to undertake a radical program of structural economic reforms including a major redistribution of state assets to Soviet citizens. The requisite microeconomic environment for trade liberalization calls for the elimination of monopoly power and the liberation of the price mechanism to perform its information and incentive signaling role (Hewett 1988). This is best accomplished speedily, in a "constrained big bang" reform. Domestic ruble convertibility requires the elimination of all exchange restrictions that now cripple the domestic two-circuit (currency-credit) payments system by extending the right of private property to all citizens. Their ability to freely exchange rubles for domestic real and financial assets promotes macroeconomic stability, microeconomic efficiency, and lends credibility to the reform process. Once the foregoing reforms are securely in place, it is safe to proceed with foreign ruble convertibility, first on current account, then on capital account.[4]

[2]Choksi and Papageorgiou (1986), Corbo and de Melo (1987), Edwards (1989).

[3]Feige (1990b) contains a more detailed description of the proposed set of broader reforms that are believed necessary to achieve propitious conditions for ruble convertibility to succeed.

[4]Krueger (1981, 1984) has suggested that the availability of foreign funds can reduce the adjustment costs that arise during major structural reforms. In the Soviet case, even if such funds were available, it is doubtful that they would be put to productive use

Domestic and Foreign Ruble Convertibility

In the context of Soviet institutions it is necessary to draw attention to the distinction between *domestic* and *foreign* ruble convertibility. Full domestic ruble convertibility is established when all economic agents have the unrestricted ability to exchange rubles (currency) into other domestic means of payment (non-cash bank credits) and into domestic goods, services, real assets, and financial assets. Analogously, full foreign ruble convertibility is established when all economic agents have the unrestricted ability to exchange rubles into foreign goods (current account) and foreign capital and currency (capital account).

Convertibility can also be partial, with the degree of convertibility depending on the nature and extent of the restrictions placed on exchange. Restrictions can apply to transactors or to particular types of transactions.[5] When the restrictions apply to transactors, they often take the form of limitations on private property rights. The extension of property rights is therefore analogous to liberalization of convertibility.

Money in Market Economies

In market-oriented economies, money serves three vital functions simultaneously. It is a unit of account, a store of value, and most important, a medium of exchange that facilitates trade in free markets. Although money has little or no intrinsic value, it is widely accepted in exchange because of public confidence in the legal institutions that sanction and enforce contracts and property rights and in the central banking institution charged with the responsibility of maintaining macroeconomic stability. Exchange between final means of payment (currency and checkable deposits) is unrestricted. Individuals, firms, and government agencies are free to use money to purchase domestic and foreign goods, services, capital, and financial assets. Money represents generalized purchasing power and is the lubricant of trade. Its unrestricted exchange promotes division of labor and specialization, thereby promoting efficient production and low-cost

until *after* market-determined prices provided sufficient incentives to efficiently utilize existing unused capacity (see Shmelev and Popov 1989, pp. 142–44). McKinnon (1973, 1989) has argued that restrictions on capital accounts should only be relaxed after microeconomic distortions have been eliminated, fearing that real exchange rate appreciation would deprotect the tradables sector. This insight is particularly germane to the Soviet Union whose potential tradables are well below world standards in quality (see Shmelev and Popov 1989, chap. 7).

[5]Partial convertibility can also involve multiple exchange rate structures like those in the Soviet Union.

distribution. Restrictions on the monetary mechanism are largely limited to macroeconomic control of the aggregate money supply. Appropriate limits on the rate of monetary expansion maintain the exchange value of money by minimizing its depreciation through inflation.

Money in the Soviet Union

The inconvertible ruble's monetary functions are very different. The Soviet Union's two-circuit payment system consists of cash and non-cash rubles. Cash rubles (currency) cannot be exchanged for non-cash rubles (bank credits) and neither can be freely exchanged for foreign goods, assets, or currencies. Individuals cannot use rubles to freely purchase real or financial domestic assets,[6] essentially because of the limitations to private property ownership. Enterprises are restricted to using currency to purchase labor services and often find their excess non-cash credits confiscated through taxes to subsidize less efficient enterprises. In short, the ruble as a monetary unit is highly restricted in its domestic and foreign exchange functions with asymmetric constraints on economic agents and types of transactions.

The stark contrast between the unrestricted acceptance and exchangeability of money in Western nations and the domestic and foreign constraints on monetary exchange in the Soviet Union is largely due to the different functions that money is designed to serve in market-oriented as distinct from centrally planned economies. In the Soviet Union, money has functioned as a policy instrument to facilitate the micro- and macroeconomic objectives of central planning. It is the very restrictions placed on domestic conversions, between different forms of money and between money and domestic goods, services, and assets, that enables planners to accomplish material balances, production quotas, and planned allocations of factors and products.

The Soviet Union has chosen for decades to maintain both domestic and foreign inconvertibility. Given the system of state ownership of resources and centrally planned administration, inconvertibility served a state purpose. It enabled planners to maintain Soviet self-sufficiency by treating foreign trade as a low risk and largely passive adjunct to Soviet domestic plans. Imports were employed as "a way of plugging the holes in an economy that was unbalanced, and exports

[6]The exceptions are certain forms of personal property, savings bank deposits, and some government savings bonds.

were seen as the unpleasant but unavoidable cost of imports" (Shmelev and Popov 1989, p. 221).

This policy of ruble inconvertibility, however, was not without cost. It isolated Soviet industry from foreign competitive pressures, precluding the discovery, development, and exercise of comparative advantage.[7] It excluded the nation from integration with the expanding world economy, depriving it of the benefits of imported technology, foreign capital, and trade.

The Soviet Union now contemplates a substantial economic transformation intended to replace centrally planned administrative control over resource allocation with market mechanisms. It also desires to make the ruble a convertible currency. The experiences of other centrally planned economies with reforms of this nature have not been unqualified successes. Most of them suffered severe inflation and external imbalances (Wolf 1990). The problem then is to structure a sequence of reforms that is politically consistent with the social mores of the Soviet Union, economically coherent, and transitionally sound, in the sense that it avoids the dynamic pitfalls of lost credibility, time inconsistency, and the competition of instruments problem.[8]

Goals and Problems of Soviet Reform

Mikhail Gorbachev's call for a "humane democratic socialism" is at once a critique of the systemic failures of the Soviet experiment and a vision of the unfulfilled ideals of socialism. Gorbachev's perestroika aspires to create a cooperative society characterized by democracy, social justice, security, prosperity, and equality of opportunity.[9] The political freedoms of speech, expression, and travel have been extended by glasnost. But genuine democracy requires the grant and guarantee of a *dual franchise,* the right to vote with ballots *and* the right to vote with economic resources. Both rights are meaningless in the absence of alternatives from which to choose.

[7]Traditionally Soviet exports have been largely energy and raw materials, but the aim of ruble convertibility is to shift exports toward higher value-added products. This, in turn, will require aggressive ruble devaluation.

[8]See Edwards (1989) for a review and elaboration of these issues.

[9]These goals have been reaffirmed in the Abalkin Committee Report to the All-Union Conference: "The ultimate goal of a radical economic reform is sound economics able to ensure a highly efficient production, to reach the living standard compatible with modern living standards, to ensure social justice and a possibility to solve most urgent ecological problems. Only then can we speak about the completion of perestroika and the success of the reform. Only then will the prerequisites for the development of the Soviet society be created in conditions of freedom and democracy. Only then will the ideals and standards of socialism be established" (Abalkin 1989, p. 4).

No easy formula can assure equality of opportunity in the exercise of economic freedoms. The problem arises because every exercise of economic freedom affects the distribution of economic resources, and any attempt to impose equality of outcomes necessarily compromises economic freedom (Friedman and Friedman 1980, pp. 134–35). Although it is impossible to assure equality of outcomes, it is possible to create a level playing field by establishing full rights to private ownership and an egalitarian distribution of economic resources with which citizens can cast their economic votes.

From the Soviet perspective, the communist experiment has achieved a reasonable degree of security and equality, but at a great cost to democracy and efficiency.[10] Soviet leaders view Western capitalism as suffering from the reverse problem, having achieved democracy and efficiency at a great cost to equality and economic security. The challenge is to conceive a novel form of economic and political organization that eliminates the apparent contradictions between capitalism and socialism in order to capture the most salient advantages of each. How, then, can a communist nation reconcile socialism with capitalism?

Redistributing the Wealth

My central thesis is that the highest principles of socialism can be attained by undertaking a program of "socialist privatization," an egalitarian redistribution of the state's custodial assets to its citizens as a prelude to the introduction of market reforms. Socialist privatization would begin with the granting of private property rights. A second stage would call on the state to relinquish its stewardship of the means of production and redistribute the nation's wealth to its citizens.

Small-scale state enterprises, apartments, and small agricultural plots would be sold to citizens in order to absorb the ruble overhang. The assets of large-scale state enterprises would be assumed by a state mutual fund, which in turn would issue "citizen shares." A large part of these income-earning assets would be distributed freely to all citizens.

[10]In fact, the Soviet system has established equality of poverty for roughly 85 percent of its population who earn less than 200 rubles per month and whose consumption opportunities are constrained by the shortage of consumer goods and services. Roughly 10 percent of the population can afford to live at "middle class" standards while the remaining 5 percent constitute an economic elite. Since official earnings are maintained in a relatively narrow range, the two prime interrelated sources of inequality are the "privilege system" of goods distribution and illegal earnings in the underground economy (Kuteinikov 1990).

The public's newly acquired earning assets would form a wealth-based safety net to cushion the economic dislocation that is bound to accompany any radical transformation of economic institutions. The sterilization of receipts from the open market sale of assets would restore monetary balance. Monopoly power is rampant in the highly concentrated industrial structure of the USSR. The combination of shortages, lack of competition, and soft budget constraints increases the power of concentrated enterprises to charge high prices by restricting output. An essential feature of reform must be the breakup of these monopoly elements. Only then would the stage be set for the rapid introduction of market-oriented reforms.

Relative prices would then be set free to seek their market-clearing levels. In one "big bang," the price mechanism would be liberated to perform its information and incentive signaling role. The "diktat" system of centrally planned administration must then step aside to permit the price mechanism to perform its resource allocation function. The explosive forces of the big bang are contained by a stable macroeconomic environment and the shock absorber safety net put in place prior to the release of prices. This particular sequence of reforms is the one most likely to assure a sustainable stable transition path to Gorbachev's vision of a "humane democratic socialism."

A Share Economy

The outright redistribution of the nation's wealth to its citizens creates the broad foundation for the establishment of a free-market economy. Private property rights[11] form the democratic basis for the effective functioning of market mechanisms.[12] The aim of an equitable distribution of property is to establish a share economy in

[11]Private property guarantees the titled owner the rights to retain, invest, sell, distribute, disperse, transfer, and mortgage his property. It also entitles the owner to any income that derives from the property. Voluntary contracts enabling exchange between rightful owners of property are sanctioned and enforced by law.

[12]The Abalkin Reform proposals recognize the fundamental importance of property rights, and make allusions to the "de-nationalization of property." According to the report:

> One can venture to outline the principal features of the model of a new economic system within the framework of socialist options. First—diversity of forms of social property, their equality in rights and competition as the basic platform and guarantee of economic freedom of citizens, ensuring their possibility to make best use of their own faculties and creating powerful individual and collective economic motivations. The diversity of forms of social property is in no way a transitional, but normal state of the economy. It opens the possibility of doing away with alienation of the working people from the means of production, from power and participation in managing economic affairs [Abalkin 1989, p. 2].

A summary of these reforms is found in Hewett (1989).

which citizens, in their dual roles as workers and capitalists, have an equal and direct stake in the outcome of the reform process.

Operationally, socialist privatization would distribute titles to state assets among the central, regional, and local governments; managers; laborers; and foreign investors, with the largest percentage being equitably distributed directly to the nation's citizens. State enterprises and collectives would be reorganized into smaller viable competitive firms and incorporated, with newly issued equity shares representing titled rights to ownership as well as claims to income.

A portion of these enterprise-specific shares would be earmarked for purchase by the workers, managers, and foreign investors responsible for the operation of specific corporations. They would be given the right of first refusal to acquire shares in their enterprise at prices determined by public auctions. The remaining shares would be bundled into "citizen shares" and distributed to the general public, the central government, and regional and local governments.

Socialist privatization achieves several microeconomic and macroeconomic objectives simultaneously. The unbundled shares of an individual enterprise that are earmarked for its workers, managers, and foreign investors are intended to provide them with direct incentives for efficient management. This distribution establishes both self-management and direct ownership.[13] These shares would be priced at public auction, thereby creating a mechanism for individual equity valuation.

The public share distribution would create the occasion to register and title property in the name of each citizen. Once legal title is established, each citizen is given an income earning asset that provides security against transitional dislocations. Risks of specific corporate failures would then be pooled and dispersed over the entire population. The procedure for distributing citizen shares to the public is designed to establish a rudimentary banking system with deposit and lending facilities. The open market sale of small-scale state assets for rubles would absorb the state's excess outstanding

[13]Self-management alone, creates a "rent-seeking" incentive for workers and managers to appropriate the rents of capital in the form of higher wages, salaries, and bonuses. The failures of the Yugoslavian experiment attest to the dangers of providing workers and managers with incentives to maximize short-term returns in the form of wage payments and bonuses at the expense of reinvestment of profits. The granting of direct ownership rights establishes the ability of workers and managers to accumulate, sell, and transfer equity shares. Direct ownership therefore eliminates the incentive to decapitalize the enterprise. It creates positive investment incentives since owners of shares now have an incentive to maximize the value of the equity holdings, which represent the discounted value of expected future income.

financial liabilities which, when sterilized, would eliminate the threat of an increase in the general price level.

The central government share allocation would create a revenue source for the financing of public expenditures, without direct taxation. The government would simply collect dividend payments on its citizen shares in lieu of taxes. The shares would appear as assets on the government balance sheet, and the government could issue its own liabilities against its assets. These fully backed government liabilities could be sold to banks and the public, enabling the central bank to exercise monetary stabilization policies through conventional open market operations. The full-backing requirement places limits on monetary expansion. Asset distributions to regional governments play a similar role, creating an autonomous revenue base for local authorities to determine a politically acceptable pattern of decentralized public expenditures.

Finally, the distribution of shares to government would create a unique structure of parallel economic incentives for public agents and private citizens. Government actions are motivated and monitored by both the political process and the common economic incentives that government now shares with its citizens. The state and the public share comparable stakes in the outcome of reforms and therefore have compatible inducements to assure their success.

Transition Obstacles

To succeed, economic reforms must overcome several critical obstacles that now menace the fragile transition. These include (1) the "ruble overhang" that threatens any price decontrol program with a massive initial increase in the general price level; (2) the budget deficit, whose financing through money creation implies continued inflation; and (3) the transitional unemployment created by reallocation of labor and capital resources.

The ruble overhang is the cumulative result of past failures of central planners to create a monetary balance between the aggregate demand for consumer goods and the aggregate supply.[14] An important

[14]The problem can be illustrated by a simple example offered by Paul Gregory and Robert Stuart (1981, p. 145). The output plan calls for the production of Q_1 units of consumer goods and Q_2 units of military and investment goods. L_1 man years of labor are required to produce Q_1 and, similarly, L_2 man years of labor are required to produce Q_2. If workers are paid wage rates W_1 and W_2, respectively, then the annual gross wage income paid in rubles is $W_1L_1 + W_2L_2$. The total monetary demand for consumer goods and services (D) is then:

$D = W_1L_1 + W_2L_2 - T - R$, where T denotes personal taxes and R denotes personal savings. Given the existing consumer price level (P_l), the total supply of consumer goods at established prices (S) is the total value of consumer goods (P_1Q_1) so that: $S = P_1Q_1$. If the consumer price level (P_l) is fixed and personal taxes are given, then source of this chronic macroeconomic imbalance is the disproportionate allocation of total output to military and investment goods at the expense of the production of consumer goods. Soviet workers are paid in cash (rubles) to produce the entire national output, but their options for spending their earnings are limited by the relatively small percentage of aggregate output devoted to the production of consumer goods and services.

The inability of Soviet planners to match after-tax cash earnings with the value of available goods and services creates a chronic shortage of consumer goods and, consequently, an excess stock of rubles (the ruble overhang) that is accumulated in the form of household cash hoards or savings deposits. Both cash and savings deposits are poor stores of value since controlled nominal returns are less than inflation, making real interest rates negative. At the present time household savings deposits total R338 billion[15] and the unknown quantity of currency in circulation in the hands of the public is believed to range between R100 billion and R300 billion.[16] These figures suggest that the stock of rubles is presently between 1.1 and 1.6 times the annual retail sales of the Soviet Union.

Empowering the Ruble with Full Domestic Convertibility

Unlike fully convertible currencies in Western nations, the ruble is an archaic pseudo-currency. Its medium of exchange function is severely circumscribed by both foreign and domestic inconvertibility. Its convertibility into domestic goods and services is severely restricted by the inequitable and inefficient dual distribution system that plagues the Soviet economy. Access to many goods and services is determined by privilege, not rubles.

Enterprises also face an inconvertibility problem because rubles can only be used to make wage payments. All other enterprise expenditures must be made on a non-cash basis, through the use of credits

in each year, "forced" savings $(R) = W_1L_1 + W_2L_2 - T - P_1Q_1$, namely the difference between after-tax wage earnings and expenditures on consumer goods. The "ruble overhang" represents the summation of "forced" savings over all years.

[15]Reported in *Pravda*, 28 January 1990.

[16]Despite glasnost (openness), the Soviet Union remains one of the few countries in the world that does not publish the amount of currency in circulation with the public. This statistic is readily calculated by summing the annual difference between note issue and note destruction. Issue and destruction statistics are normally among the most readily available and reliable statistical data collected in any nation, owing to the security precautions that must be undertaken when notes are printed and redeemed from circulation. Any estimate of the inflation potential of price reform requires data on currency in the hands of the public.

of the state banking system. Enterprise credit funds are themselves largely inconvertible since they must be used in accordance with the central plan, and if thought to be excessive, are often taxed away. Aggregate monetary imbalance and inconvertibility induce the hoarding of consumer goods, capital equipment, and the forced savings of rubles (Birman 1980).

It is now well understood that macroeconomic balance assuring stability of the general price level must precede the introduction of market mechanisms and price reforms (McKinnon 1989). Otherwise, relative price signals would be swamped by general price increases, robbing them of their information and allocation function. The elimination of the ruble overhang must therefore be the prelude to price reform. The traditional recessionary method of absorbing excess rubles is inflation or higher taxation. Taxes can be explicitly levied on incomes and savings deposits or implicitly imposed by wage reductions. Neither is a politically acceptable alternative in the Soviet Union because both involve expropriation. How then can monetary equilibrium be achieved without permitting massive inflation?

A direct solution is to enhance the ruble's status to that of a fully functioning monetary instrument, that is, to make it fully convertible domestically. To attain the status of a normal currency, the ruble must be permitted to serve as a genuine medium of exchange, fully convertible into goods as well as real and financial assets. The problem of the ruble overhang is not that there are too many rubles; it is that there are too few goods, and more important, too few assets that rubles can purchase.

The most direct and efficacious means of eliminating the ruble overhang is to change the institutional arrangements governing property rights in the Soviet Union. Extending ownership rights to real and financial assets would increase the demand for rubles for the purchase of such assets and decrease the demand for inventories of goods and real capital assets as stores of value. These idle stocks would then be available for consumption and use in production. Making the ruble a truly functioning monetary unit would facilitate monetary balance by increasing the demand for rubles while simultaneously reducing their supply. The elimination of domestic currency restrictions, therefore, can stabilize the general price level even as relative prices are freed to seek their market-clearing levels.

Fiscal Balance

To avoid future inflationary pressure, the USSR will also have to achieve fiscal balance, that is, the reduction or elimination of fiscal deficits. Deficit reduction requires increased revenues and reduced expenditures. In the program described below, the government retains a share of the nation's assets in order to provide it with a non-tax revenue source that increases *pari passu* with the success of reforms. These revenues may need to be supplemented with a general value-added tax, special excise taxes, and pollution taxes.[17]

Expenditure reductions will require smaller investment and military outlays. The replacement of central planning with market mechanisms will significantly reduce expenditures by cutting government payrolls, suspending subsidies to unprofitable enterprises, and eliminating existing subsidies on goods.[18] These changes alone might be sufficient to eliminate the current deficit.

Mechanics of Socialist Privatization

The programmatic design of socialist privatization must be consonant with long-term macroeconomic and microeconomic objectives. These include: the achievement of monetary and fiscal balance, the efficient provision of public and private goods, and an equitable distribution of income and wealth.

It is essential to create a central bank for overall monetary control and an extensive network of retail and commercial banks to provide the nation with the financial services required by a fully functioning monetary system. The creation of a banking system would be accelerated by enlisting the expertise and participation of established foreign banks and international financial organizations. Since political time horizons are short, the provision of rudimentary banking services can initially be established through the postal system, which reaches every populated area of the Soviet Union. The post offices can become the foundation of a branch banking network offering basic deposit and loan services.

The banking system's initial functions would be to establish private ownership titles to assets distributed by the state, provide deposit facilities, and grant loans against newly acquired privately held collateral assets. The state's small-scale enterprises and assets would be sold at nominal prices while citizen shares representing the assets of the large-scale enterprises would be freely distributed to all citizens. As reforms progress and true asset values become

[17]Income taxes should be kept to a minimum both to avoid supply-side disincentives and to reduce incentives for non-compliance.

[18]Food subsidies are estimated to cost the government some 60 billion rubles per year, roughly the size of the 1988 budget deficit (CIA 1988, p. 12). By 1989 these subsidies amounted to 110 billion rubles.

established, asset appreciation would permit the gradual expansion of loans (fully secured by asset collateral) to cushion any dislocation engendered by the reform process.

Citizen Shares

The socialist privatization of some 46,000 state enterprises requires that they be reconstituted as corporations with limited liability. Corporate ownership would be evidenced by title to tradeable equity shares in each of the currently operating enterprises, entitling the owners of the shares to full participation in dividend distributions and capital appreciation of the enterprise. The shares must also be saleable on equity markets.

For simplicity of exposition, we shall initially consider a bundle of equity shares consisting of an equal fractional ownership share in each and every large state enterprise. We shall call this bundle a "citizen share." The distribution of citizen shares constitutes the most essential feature of socialist privatization, the rational pluralization of property.[19]

I suggest distributing the bundled citizen shares in the following manner: 10 percent to the central government; 20 percent to the sovereign republics; 50 percent divided equally among all Soviet citizens. The remaining 20 percent are unbundled, with individual enterprise voting stock allocated to workers, managers, and foreign investors. The initial distributions between citizens and public authorities could be subsequently modified by public referendums.

A simple instrument for evaluating the adequacy of public goods provision by government authorities would be to grant citizens the periodic right to vote for a marginal increase or decrease in the allocation of citizen shares to central and regional authorities. This mechanism would be designed to give the public an opportunity to vote to increase or decrease taxes while maintaining a balanced budget constraint. Citizens would, in effect, democratically determine the degree of economic privatization they desire by voting to change the allocation of citizen shares between the government sectors and the private sector.

[19]The socialist privatization scheme involves a separation of ownership and control similar to that found in most Western economies. Two mechanisms provide significant ownership groups with the ability to monitor management. First, a portion of the initial distribution is earmarked for managers, workers, and foreign investors with direct stakes in individual enterprises. Second, the plan anticipates the emergence of mutual funds that specialize their asset portfolios. The mutual fund managers, acting as agents for citizens, will have direct incentives to exercise their proxy ownership rights to oversee management decisions.

The allocation of 10 percent of citizen shares to the central government enables the state to discharge its monetary and fiscal responsibilities. The asset side of the government's balance sheet would consist of its portfolio of citizen shares. These assets would provide the backing for the issue of interest and non-interest bearing government liabilities that can be sold by the central bank to commercial banks and the public.

Being fully backed by the real assets represented by citizen shares, these government liabilities establish a sound basis for executing monetary policy through open market operations by the central bank. Moreover, the equity shares in government hands provide a source of fiscal revenues that reduces reliance on other distorting taxes. Under this scheme the government would use its dividends from citizen shares[20] and other tax revenues to provide national defense, central government services, and debt service. Fiscal discipline is imposed by requiring that government debt be fully backed by the government's reserves of citizen shares. In short, the central government's holdings of citizen shares provides both a source of government revenue and a real asset-based anchor for monetary issue.

In capitalist fiscal systems, government revenue is assured by granting the government the coercive power to appropriate a portion of the future income streams accruing to its citizens in the form of taxes. Under socialist privatization, the government is granted the right to own titles to a portion of the nation's assets outright, thereby providing it with an independent revenue source. Essentially, the government's portfolio of equity holdings represents the capitalized value of the income stream it would otherwise have to appropriate from its citizens in the form of taxes.

Similarly, in capitalist monetary systems, the creditworthiness of the government is established by lenders' perceptions of the government's ability to sustain its coercive power to appropriate sufficient income from its citizens to service its debt. Under the socialist privatization program, the government's creditworthiness is assured by its outright title to a portfolio of national assets that serves as direct backing for its issue of government liabilities.

The 20 percent of citizen shares distributed to regional governments is stipulated to provide those authorities with a national revenue base for public expenditures. These social expenditures would include health, education, welfare, environment, and infrastructure, with the composition and amount to be determined through the

[20]The revenues yielded by the shares held by the central and regional governments is estimated to be between 84 billion and 135 billion rubles per year (see Feige 1990c).

democratic political apparatus governing each of the republics. Each republic would be encouraged to allocate a portion of its shares to local authorities. This would permit diversity in the choice of public goods and services and assure local citizen control over those services that most directly affect their well-being.

Gaining Monetary Equilibrium and Public Confidence

Socialist privatization envisions that 50 percent of all citizen share bundles will be distributed in equal shares to each and every citizen. The value of the citizen shares distributed to the average Soviet family is estimated to be between three and four times average family income (Feige 1990c). Each citizen will receive his or her share entitlement through a nationwide share registration program, and also be permitted to purchase small-scale assets. The nominal cost of these assets would be set at the lowest possible price consistent with the achievement of monetary balance.[21] The idea is to use the asset distribution to absorb and sterilize a sufficient amount of excess rubles to restore the monetary equilibrium required for overall stability of the price level.

Given the current level of earnings and the skewed distribution of wealth in the Soviet Union, many citizens may not have sufficient liquid savings to directly purchase assets even at the low nominal price.[22] Citizens without requisite means would be entitled, upon registering their shares, to establish a bank deposit account and receive a loan to aid in the purchase of small-scale assets. The citizen share or the purchased asset would serve as loan collateral.

The interest rate on the loan would have to be set above the interest rate on ruble deposit accounts but below the expected rate of appreciation of the citizen share. This rate structure would provide an incentive to pay for shares with available rubles rather than through the loan mechanism.

The proposed citizen share distribution serves several reform goals simultaneously: (1) It institutes a painless ruble absorption mechanism for establishing monetary balance without having to resort to

[21]The sale of agricultural capital and the housing stock would be more than sufficient to absorb the ruble overhang (Feige 1990c). Citizen shares could then be freely distributed.

[22]Soviet sources suggest that the present distribution of savings deposits is highly skewed, with 3 percent of the population holding 50 percent of savings deposits. Seven out of eight Soviet citizens are reported to have no savings at all (CIA 1989, p. 6, n. 14). However, Soviet statistical reports suggest that in 1988 there were almost 200 million deposit accounts (State Committee on Statistics 1989, p. 69).

inflation or direct taxation. (2) It establishes an egalitarian asset distribution, providing each member of society with a direct stake in the successful outcome of the reform process, while providing each citizen with income-earning assets that serve a safety net function to cushion the dislocation effects of reform. (3) It facilitates the institution of a nationwide banking system that provides basic deposit and loan services. Consequently, it performs an indispensible function of introducing and educating the public in the use of basic banking facilities.

Management Incentives, Foreign Investment, and Equity Valuation

Three interdependent problems remain to be solved. First, how are citizen share equity values to be determined? Second, how can we assure adequate incentives for workers and management to strive for productive outcomes if management and ownership are largely divorced? Finally, how can we achieve ruble convertibility for international currencies?

Each of these issues is addressed by the proposed distribution of the remaining 20 percent of the nation's citizen shares. In an economy without any history of equity markets and hence no experience in share valuation, it is necessary to enlist the talents of those individuals most likely to possess relevant information and skills appropriate to the task of asset valuation. It will be recalled that each citizen share is composed of a bundle of disparate shares of separate economic entities. The shares of each separate entity, therefore, need to be priced before it is possible to determine a composite market valuation for a citizen share.

Market pricing of unbundled equities of specific firms can only take place after financial and price reforms have been enacted. Financial reforms require the elimination of subsidies to unprofitable firms by the earnings of successful firms. This necessitates the replacement of "soft budget constraints" by "hard budget constraints."[23] Under these circumstances, some of the enterprises represented in the citizen share bundle will no longer be viable, and bankruptcy provisions must be established for these enterprises.

Successful firms, no longer burdened with the taxes required to subsidize ailing firms, will show increased profits and new entrants will be attracted to these lines of business. Reforms must therefore provide for exit of failing enterprises and entry of new firms into

[23]See Kornai (1986) and McKinnon (1989).

profitable business areas. Ownership rights in any new firms that substantially benefit from the dissolution, reorganization, or asset sales of existing firms must be distributed in accord with the initial socialist privatization plan. This assures that neither the government nor the public will suffer a dilution of its equity interests as a result of dynamic industrial reorganization. Newly established companies with independent sources of capital would be encouraged to compete with existing enterprises in order to eliminate residual monopoly profits.

Proper valuation of equity shares requires that investors have sufficient information to form reasonable expectations about present and future profits. This in turn requires projections of input costs and output prices. While central planning authorities already establish relative prices for goods and factors of production, these prices do not reflect true scarcity values or opportunity costs. Nor do they flexibly respond to changing economic circumstances. If relative prices are to convey both appropriate information and incentive signals, major efforts must be undertaken to break up existing monopolies into smaller competitive enterprises. Once this is accomplished, centrally controlled prices must be set free to clear markets. This strategy represents a constrained big bang approach to reform. Prices of goods regularly traded on international exchanges could initially be set to conform with international market prices so as to minimize the distorting effects of residual monopoly power in some industrial sectors of the USSR. All other prices should be set free to seek their market-clearing levels.

Price controls are best eliminated all at once rather than by the more timid, and more distorting, method of step-by-step reform. This is particularly true when price reforms are preceded by a program of socialist privatization, which serves both to speed and buffer the adjustment process. The prior establishment of monetary balance permits market-determined relative price changes to quicken the pace of resource reallocation since relative price signals are not contaminated by increases in the general price level.

The elimination of central planning directives and bureaucratic controls significantly reduces transaction costs of exchange. The dispersed holdings of property rights pools risk and provides an asset buffer that enables individuals to withstand the disruptive consequences of transitional unemployment. In short, socialist privatization helps to speed the adjustment process initiated by the big bang while cushioning its transitional impact. It is the newly distributed asset shock absorber and the established monetary stability that contain the explosive forces of the big bang.

With relative prices of goods and factors approaching, however roughly, their market-clearing values, it is possible to value equity shares. Initial equity prices of individual enterprises would be established at public auctions of the undistributed shares representing 20 percent of the original share issue. The richest source of information relevant to the pricing of equity shares of any particular enterprise resides with its managers and workers. The richest source of skills for valuing equity shares is to be found in the international financial and entrepreneurial community. It is therefore essential that both of these sources be given incentives to enlist their knowledge and skills to attain appropriate share valuations at the public auctions.

Managers and workers in particular enterprises serve an additional vital function. It is their specific efforts that will determine the efficiency with which enterprises operate. It is therefore essential that they be provided productivity incentives that contribute to the public interest (as represented by the shareholders of the initial distribution). To enlist their information advantage, and to stimulate their operational talents, workers and managers of every separate enterprise should be given a right of first refusal to purchase 10 percent of their enterprises' outstanding shares at the prices determined by public auctions. Similarly, international financial entrepreneurs should be offered an inducement to participate in the share-pricing process by giving them the right to purchase up to 10 percent of the remaining outstanding shares at the public auction prices.

The proposed procedure would accomplish the three interdependent goals: the nation's equities would be priced by engaging the talents of those most able to assess their market value; management and labor of particular enterprises would have an equity incentive to increase the efficiency, productivity, and profitability of their enterprise; and foreign investors would be given an incentive and opportunity to purchase shares of particular enterprises, giving them a direct interest in the sound restructuring of management practices and the introduction of new capital and new technologies.

Foreign investors would be required to purchase shares with rubles, which in turn must be purchased with foreign currency. Since most of the excess rubles will already have been soaked up by the sales of assets to Soviet citizens, the foreign demand for rubles to purchase Soviet assets will raise the international value of the ruble. The foreign currency reserves created through the sale of assets to foreigners, in combination with the asset backing of the ruble, should be sufficient to establish the ruble as a *de facto* internationally convertible currency.[24]

[24]Wayne Angell (1989) and Daniel Gressel (1989) have proposed specific plans for

Creating Confidence and Credibility

As soon as initial equity values for specific shares have been established by auction, the Soviet stock exchange would open for public trades. The daily stock exchange index value of a "citizen share"—the Soviet equivalent of the Dow Jones index—would be prominently published in every Soviet newspaper and serve as a visible indicator of the progress of perestroika reforms. Confidence in the reforms will be bolstered by rising share values and a steady stream of dividend payments to shareholders.

During this crucial period, the aggregate value of citizen shares is expected to appreciate substantially. This appreciation is assured by the low initial cost, the elimination of current mismanagement practices,[25] and the efficiency and productivity gains brought about by the improvement in information and incentive systems. Every upward movement of the citizen share index will help to build confidence in the success of the reforms. The confidence will be reinforced by permitting gradual increases in loans that can be used to acquire other sources of real property such as land, apartments, capital, and equities.

Initially, all enterprises would be required to pay out their profits in the form of dividends. Firms' investment requirements would be financed by loans through the banking system whose function is to provide intermediation services between savers and investors. Both the equity and debt markets will establish positive real interest rates, thereby creating a meaningful channel for the allocation of savings to investment.

Continued confidence in the success of reforms will also require a visible reduction in shortages of consumer goods and services. Demand will be reduced by the elimination of the ruble overhang and the use of rubles to purchase available stocks of real assets. In addition, there must be an increase in the supply of consumer goods and services. Partial ruble convertibility will discourage the hoarding of inventory stocks and improve prospects for imports of consumer

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establishing international ruble convertibility. The Angell plan involves a gold backing for the ruble to provide an internal monetary anchor. The Gressel plan involves a foreign currency fund reserve for the ruble, thus providing an external anchor. The socialist privatization program represents a hybrid solution. A ruble backed by the real assets of the Soviet economy as evidenced by citizen shares represents another type of internal anchor. The sale of enterprise shares to foreigners establishes a domestic fund of foreign currency reserves that can be used to allow profit repatriation in much the same manner as an external anchor.

[25]A major efficiency improvement will result from the elimination of redundant inventories that are now rampant in Soviet enterprises.

goods. Increased imports of consumer goods could play an important short-term role in gaining public support for the overall reform effort. However, a premature import policy could diminish the urgency of structural reforms and leave the Soviet Union with a considerable debt burden, without the export ability to reverse it. In this regard a gradual, more credible, policy that can be sustained over the longer term is to be preferred to a "quick fix" solution that risks longer term policy reversal.

The reallocation of military and investment expenditures to consumer goods will also help to improve available supplies. Unconstrained market prices will provide information and incentive signals for the entry of new enterprises into consumer markets. Private ownership rights and price incentives are likely to induce improved productivity in both industry and agriculture.

Partial Convertibility Measures

The caution expressed with regard to the timing and sequence of trade liberalization does not preclude a policy of "institution building" to pave the road for eventual convertibility. Ruble auctions can be usefully employed, and deepened in terms of participation, both as a test of the ruble's international exchange value and as an indicator of the confidence engendered by structural reforms.[26] In this setting, partial liberalizations would include extending participation in auctions to a wider group of economic agents. These should include newly formed cooperatives and joint venture companies. This market deepening must be accompanied by liberalization of restrictions on the use of hard currencies obtained through auctions.

The implicit devaluation, signaled by recent ruble auctions, provides considerable export incentives, particularly for the traditional exports of energy and raw materials. What is necessary, however, is that incentives be sufficient to induce the production of exportable goods with higher value-added content (Vanous 1988). If further restrictions are required along the way, theory and experience suggest that tariffs are preferable to quantitative controls.

Conclusion

My proposal for attaining ruble convertibility must of necessity go well beyond the convertibility question. Convertibility is inextrica-

[26]At present, many firms bidding for hard currencies are not subject to hard budget constraints and, therefore, are able to bid artificially high ruble prices for dollars. Auctions will only be a meaningful market test after instituting hard budget constraints.

bly bound to structural reform, but the relationship is not entirely symmetrical. Macroeconomic stability and well-functioning microeconomic allocation and distribution mechanisms are crucial for the success of trade liberalization. Conversely, while expanded trade can reinforce other reform efforts, its overall contribution is likely to be small in comparison with more fundamental systemic restructuring.

We are witnessing a historically unprecedented reform effort, both in its nature and scope. If convertibility is to be attained and maintained, the structural reforms must succeed in establishing macroeconomic stability and microeconomic efficiency. This success depends critically on the sequence, timing, credibility, and coherence of the overall reform package. Step-by-step approaches have been tried and have only worsened stagflation, lengthened queues, and stiffened resistance to further reform. Credibility and public support are already at a low ebb. These tendencies can only be reversed by a radical program of restructuring that is seen to be economically and politically coherent. The greatest danger of a rapid move toward market mechanisms remains the ruble overhang. The Soviet political consensus is weaker than that of Poland, and there is likely to be less tolerance for deeper economic hardship. Socialist privatization, as a prelude to allocation reforms, minimizes this danger by absorbing excess rubles and providing a secure safety net for the general public.

Narrower solutions to the ruble convertibility problem, like those relying on gold or foreign currency backing of the ruble, are not inconsistent with the foregoing proposal. However, their credibility will be sorely tested unless the broader problems of macroeconomic and microeconomic imbalances are first resolved.

On the basis of Soviet realities, theoretical conjecture, and historical experience, it seems reasonable to conclude that macroeconomic imbalances and the systemic failure of domestic allocation and distribution mechanisms are so pervasive that they preclude a major role for ruble convertibility in the near term. Domestic convertibility is seen as the best hope for aiding perestroika reforms in the short and medium term. To avoid damaging their credibility, Soviet reformers should defer foreign convertibility to the final stages of the overall restructuring process. The cost of such delay is the sacrifice of some near-term potential gains from external competitive pressures and from trade. The more compelling benefit of postponement is the avoidance of political, inflation, and real exchange rate risks that threaten premature foreign convertibility with reversal and failure. The introduction of hard currency auctions is a useful step for establishing a barometer of the credibility and success of broader reforms in the international market. Similarly, the dissolution of the state's monopoly on foreign exchange transactions creates an opportunity for other economic agents to gain experience in foreign exchange operations.

The communist experiment sought to establish a cooperative, equitable, democratic, and prosperous society by placing ownership of the means of production in the hands of the state and directing the economy bureaucratically according to a central plan. It is now increasingly acknowledged that the experiment did not succeed in attaining its goals. Yet paradoxically, the failed experiment has created a unique opportunity to salvage its goals by now undertaking a reform program of socialist privatization. By overseeing the return of state custodial property to citizens and initiating market-oriented price reforms, perestroika can directly effect an egalitarian distribution of wealth and create the requisite environment for ruble convertibility to become a reality.

The conceptual framework outlined here attempts to sketch a final destination for perestroika and a road map for transition that anticipates and circumvents the most serious obstacles along the way. The particular sequence of reforms and their wholehearted execution are crucial to their success, as well as to the ultimate hopes for full ruble convertibility.

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