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**An Analysis of Value-Added Taxes in Russia
and Other Countries of the Former Soviet Union**

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Abstract

Since the dissolution of the Soviet Union at the end of 1991, Russia and the other countries which were members of the USSR have adopted value-added taxes. The value-added tax now provides a very significant portion of total tax revenue in all of these countries. Ideally, the value-added tax will serve as a relatively efficient, neutral, revenue source at the national level. The Russian value-added tax, however, contains a number of unique provisions, reflected in the laws of many of the other transition countries, which cause it to fall short of this standard. These countries also must decide how their value-added taxes are to apply to trade among themselves. This paper describes several of the provisions unique to the Russian value-added tax and analyzes their probable effects. It then discusses the development of arrangements which have evolved to date with respect to applying the value-added tax to trade among the transition countries, and suggests possible answers to the vexing questions raised by this issue.

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Summary

Since the end of 1991, Russia and the other transition countries that were part of the Soviet Union have adopted value-added taxes (VATs). The VATs in Russia and in all the other countries (except Estonia, Latvia, and Lithuania) referred to in the paper as "the other transition countries," were originally almost identical to the VAT adopted by the Soviet Union in December 1991, upon the eve of its dissolution. Although the laws of the various countries have diverged over the past two and a half years, most of them still share certain features derived from the 1991 Soviet model.

In principle, the VAT is an efficient, neutral revenue source at the national level. And, in fact, these new taxes now generate a very significant portion of total tax revenues in Russia and the other transition countries. But large and growing arrears in the payment of interenterprise obligations correlate closely with declining revenue performance. This correlation arises in part because interenterprise arrears give rise to liquidity problems, which lead directly to tax arrears, and in part because timing asymmetries resulting from the unique structure of the Russian VAT reduce VAT liabilities (but not VAT credits) in the presence of interenterprise arrears.

The large number of exemptions and preferences found in the Russian VAT causes both a loss of revenue and economic distortions. The major structural anomalies found in the Russian VAT and in many of the laws of the other transition countries include (1) accounting for VAT liability on sales on a cash basis while allowing credit on inputs at the time the inputs are put into production; (2) calculating the tax at the manufacturing and production level on the credit/invoice method, and in the wholesale, retail, and service sectors based upon the taxpayers' gross margins; and (3) denying or delaying credits for the acquisition of capital inputs. The paper recommends that all taxpayers ultimately use an accrual basis for both credits and liabilities. The credit/invoice method should be extended through final sales to consumers in all sectors. In Russia, credit is now permitted for capital inputs, taken in installments over a six-month period. The paper recommends that the countries that have not yet allowed any capital input credits should begin to do so. Ultimately, all countries should give immediate, full crediting for capital inputs. Excess credits should be either refunded or, if carried forward, adjusted for inflation.

These transition countries must also decide how they will apply the VAT to trade among themselves. The paper discusses the effects of adopting an origin-method versus destination-method VAT as well as the issues raised by using the VAT at the subnational level. It analyzes how, since the inception of the Russian VAT, the approach to the problem of interstate trade has evolved. The paper concludes that although administrative considerations play a key role in how the VAT is applied, the basic choice between the origin or destination method must depend upon the sort of economic relationship the countries decide to establish among themselves.

I. Introduction

Before 1992, the Soviet Union imposed turnover and sales taxes on domestic sales of goods and services. The turnover tax was imposed at a variety of rates, and in many cases, the tax was simply applied to the difference between the administratively fixed retail and wholesale prices. In the absence of fixed wholesale prices, it was imposed in the form of an *ad valorem* tax on retail sales. Its base was far from comprehensive, and there were exemptions not only for certain products, but also for certain types of enterprises.

The sales tax, which was introduced in January 1991, applied at the rate of 5 percent to a broad range of goods and services. The tax had certain features of a VAT. For example, it took the form of a multi-stage tax that applied to manufacturers as well as wholesalers and retailers. While manufacturers charged tax on their full selling price, wholesalers and retailers paid the tax on their gross margins. Enterprises were allowed to claim a credit for the tax paid by them on their inputs, with the exception of depreciable capital goods. While in principle enterprises could claim a refund for any excess of credits for purchases over taxes collected on sales, in practice no such refunds were granted. The tax did not apply to imports or exports. Moreover, exemptions were provided for the domestic sales of food, medicine, passenger transportation services, tickets to theaters and other places of amusement, and certain other items.

While the application of the turnover and the sales taxes was limited to domestic sales, exports and imports were subject to tax under a separate statute. The primary purpose of the taxes on imports was to soak up the difference between the ruble price of imports, converted at the official exchange rate, and their domestic selling price. Import tax rates ranged from 20 percent to 1300 percent. Most items subject to import taxes were consumer goods. The tax did not apply to raw materials and most capital goods.

On December 6, 1991, the Supreme Soviet enacted a value-added tax to replace the turnover and sales taxes, effective January 1, 1992. With the break-up of the Soviet Union (officially, December 26, 1991), its newly independent former members set up their own tax systems. 1/ The new tax laws generally were based on the laws of the former Soviet Union. Each of the other transition countries adopted a value-added tax modeled after the tax enacted by the Supreme Soviet in December 1991.

The new value-added taxes, though not identical, shared many common features: (i) the rate of tax was 28 percent; (ii) the taxes applied to a broad base of domestic sales of goods and services; (iii) the taxes were imposed on a cash basis; (iv) manufacturers paid tax on their full selling

1/ In this paper, the countries which were members of the Soviet Union prior to its dissolution, other than the Baltic countries, are referred to as the "transition countries;" excluding Russia, the remaining 11 countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan) are referred to throughout as the "other transition countries."

price, but non-manufacturers (wholesalers, retailers, and service providers) paid on their gross margins; (v) enterprises were not allowed to claim a credit for tax paid on the purchase of capital equipment; (vi) exports outside the transition countries were zero-rated (or exempted), while those to transition countries were taxed as if they were domestic sales; and (vii) the taxes did not apply to imports at all.

Since January 1992, the VATs of the transition countries have diverged. Nevertheless, they are still quite similar in important ways. In practice, Russia apparently indirectly exerts considerable influence on changes in the tax structures of its neighbors; many changes adopted by Russia are followed, more or less exactly, by the other transition countries.

This paper reviews the VAT developments in Russia and the other transition countries, with primary focus on Russia. We concentrate on the major policy issues that need to be addressed if these VATs are to become taxes on domestic consumption collected at each stage of production and distribution. 1/

II. Revenue Performance

Table 1 sets out total tax revenue as a percentage of GDP for Russia, the other transition countries and the Baltics for 1992 and 1993, 2/ and the percentage of this tax revenue contributed by the VAT and old turnover taxes. Table 2, for purposes of comparison, presents comparable information for nine western European countries for 1992. 3/ Table 3 makes overall comparisons between all OECD European countries for 1992 and average revenue figures for 1992-93 for Russia, the other transition countries and the Baltics.

1/ And some of which are being addressed at present in Russia by the authorities.

2/ Excluding social contributions and miscellaneous payroll charges. Social contribution data is unavailable or unreliable for several of the transition countries.

3/ Belgium, France, Germany, Greece, Ireland, Italy, the Netherlands, Spain and the United Kingdom.

Table 1. Tax Revenue in Russia, Other Transition Countries
of the Former Soviet Union, and the Baltics, 1992-93

(In percent of GDP) 2/

Country	Total Tax Revenue 2/	VAT Revenue	Turnover Tax Revenue	Total, VAT Plus Turnover Tax	Percentage of Total Tax Revenue 2/ Derived From VAT and Turnover Tax
Russia					
1992	28.3	11.1	--	11.1	39
1993	25.1	7.0	--	7.0	28
Transition Countries					
Armenia					
1992	20.2	7.0	1.1	8.1	40
1993	12.8	5.1	0.1	5.2	41
Azerbaijan					
1992	39.0	8.0	--	8.0	21
1993	28.4	7.7	--	7.7	27
Belarus					
1992	28.5	12.0	--	12.0	42
1993	34.5	12.4	--	12.4	36
Georgia					
1992	9.1	2.4	0.4	2.8	31
1993	2.5	0.6	--	0.6	24
Kazakhstan					
1992	21.6	6.0	--	6.0	28
1993	14.7	3.5	--	3.5	24
Kyrgyz Republic					
1992	13.8	4.7	--	4.7	34
1993	7.6	2.5	0.4	2.9	38
Moldova					
1992	18.1	6.5	--	6.5	36
1993	15.3	4.4	--	4.4	29

Source: IMF FAD staff estimates, July 1994.

1/ Except as otherwise noted.

2/ Excluding social contributions and other payroll taxes.

Table 1 (continued). Tax Revenue in Russia, Other Transition Countries of the Former Soviet Union, and the Baltics, 1992-93

(In percent of GDP) 1/

Country	Total Tax Revenue 2/	VAT Revenue	Turnover Tax Revenue	Total, VAT Plus Turnover Tax	Percentage of Total Tax Revenue 2/ Derived From VAT and Turnover Tax
Tajikistan					
1992	24.7	6.7	--	6.7	27
1993	24.4	10.4	--	10.4	43
Turkmenistan					
1992	36.1	5.7	--	5.7	15
1993	13.8	3.3	--	3.3	24
Ukraine					
1992	23.9	11.9	--	11.9	50
1993	26.7	11.1	--	11.1	42
Uzbekistan					
1992	20.6	8.6	0.7	9.3	45
1993	29.7	10.8	0.1	10.9	37
Baltics					
Estonia					
1992	31.1	9.1	--	9.1	29
1993	29.0	9.9	--	9.9	34
Latvia					
1992	15.5	3.8	--	3.8	24
1993	19.1	6.1	--	6.1	32
Lithuania					
1992	23.0	7.3	4.0	11.3	49
1993	17.7	5.7	1.6	7.3	41

Source: IMF FAD staff estimates, July 1994.

1/ Except as otherwise noted.

2/ Excluding social contributions and other payroll taxes.

Table 2. Tax Revenue and Revenue from VAT for
Selected Western European Countries, 1992

Country	Tax Revenue Derived from VAT As a Percentage of GDP	Percentage of Tax Revenue 1/ Derived from VAT 2/
Belgium	7.1	24
France	7.7	32
Germany	6.5	27
Greece	10.2	36
Ireland	7.4	24
Italy	5.6	19
Netherlands	7.2	25
Spain	5.9	26
United Kingdom	6.9	24

Source:- Revenue Statistics for OECD Member Countries, 1965-93, and
calculations therefrom.

1/ Excluding social security taxes.

2/ And, in some cases, minor general consumption taxes.

Table 3. Average VAT Revenues 1/

Area	VAT and Other General Consumption Taxes As A Percentage of Total Non-Social Security Tax Revenue	VAT As A Percentage of GDP
OECD Europe 2/	25.5	7.4
Russia and Other Transition Countries 3/ 4/	31.2	6.8
Baltics	34.8	8.0
Memorandum Items:		
	Non-social Security Tax Revenue (As a percentage of GDP)	Social Security Tax Revenue (As a percentage of GDP)
OECD Europe	29.4	11.3
Russia and Other Transition Countries	23.1	8.5 5/
Baltics	22.4	9.6

1/ Unweighted.

2/ 1992 (Source: OECD 1994).

3/ Average, 1992-93 (Source: IMF: Staff estimates, July 1994).

4/ Including Russia, Armenia, Azerbaijan, Belarus, Kazakhstan, The Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan (when Georgia is included, corresponding figures are 30.9 percent and 6.8 percent).

5/ Including only Armenia, Azerbaijan, Belarus, Moldova, and Ukraine.

1. Comparison to Western Europe

Average tax revenue, excluding social security taxes, as a percent of GDP in 1992 for all European OECD countries was 29.4 percent. ^{1/} In contrast, for Russia and the other transition countries, ^{2/} the comparable number for the average of 1992 and 1993 was 23.1 percent of GDP. The comparable 1992-93 average for the Baltics was 22.4 percent of GDP. ^{3/} Most interestingly from the perspective of this study, the VAT on average contributes a significantly higher percentage of total non-social security tax revenue throughout the Baltics, Russia, and the other transition countries than it does in western Europe. ^{4/}

2. Trends in revenue performance in Russia, the other transition countries and the Baltics. 1992-93

Eleven of these 15 countries suffered reductions, many of them very significant, in non-social security tax revenue collected as a percent of GDP over the period 1992-93. Four of the countries improved their revenue performance over this period, with improvements ranging from 12 percent to 44 percent of the previous revenue collected as a percent of GDP. For the same period, there was a broad range of movement in both directions in the relative contribution of the VAT to overall revenue collections. There is no apparent correlation, however, between the change in or level of overall revenue performance and the importance or change in importance of the VAT as a percentage of total non-social security tax revenue.

In most instances, absolute VAT revenue performance declined along with total revenue. One thing which has probably hurt VAT performance in many of the transition countries is growing inter-enterprise arrears. Reasons for this linkage are explored in Section VI. While it can be said that several of the countries that relied on VAT to a greater degree than average had the best overall revenue performance over 1992 to 1993, this is not universally the case; Armenia and Lithuania, for example, collected significantly less

^{1/} Revenue Statistics for OECD Member Countries, 1965-1993 (Paris, 1994). See Table 3.

^{2/} Excluding Georgia which suffered a drastic decline in revenue performance in 1993 as a result of the civil war.

^{3/} Trends in the revenue performance of the transition countries are discussed in Subsection II.2 below.

^{4/} This does not appear to be largely attributable to differences in the significance of the excluded social security taxes in the overall revenue structure of the country groups. For the Baltics the 1992-93 average percentage of total tax revenues contributed by social security taxes was 30 percent, while for the European OECD countries it was 27.8 percent. For the five transition countries for which data was available, the comparable figure was 26.9 percent. Average VAT rates are higher in the transition countries, and the personal income tax contributes a lower percentage of total government revenue than in the OECD.

revenue as a percent of GDP in 1993 than in 1992, while relying heavily on the VAT.

III. Rates and Exemptions in the VAT

1. Rates

Table 4 sets out the initial VAT rates for Russia, the other transition countries, and the Baltics at the introduction of the tax. In general, the 12 transition countries which based their original taxes on the 1991 Soviet model began with a single rate of 28 percent. 1/ In these countries, there has subsequently been remarkably little rate proliferation. Russia, followed by Kazakhstan, introduced a lower rate, but the others have not. Seven of the other countries followed Russia in moving the standard rate downward to 20 percent. Two held at the original level, Belarus dropped its rate, but only to 25 percent, and Georgia reduced its rate to 14 percent. Russia has adopted a surcharge on the VAT which currently brings the standard rate to 23 percent, 2/ but none of the other transition countries have as yet followed suit.

2. Exemptions and preferences

Unfortunately, the relative stability and simplicity of the rate structures, compared to some of those in western Europe, is not mirrored in the breadth of the tax base. Exemptions, preferences and special cases were introduced originally and have subsequently proliferated. The history of the Russian VAT is examined here. 3/ 4/

As may be seen from Appendix I, the original December 1991 law contained a large number of exempted items, and more have been continually added. 5/ Some of these (for example, various types of financial services and charges, residential rents, educational and medical services) are common to most existing Western European VATs, either for reasons of the intrinsic

1/ With the exception of Uzbekistan at 30 percent, and Ukraine, which had a secondary lower rate of 22 percent along with its basic rate of 28 percent.

2/ Russian government plans presently call for repealing this surcharge.

3/ The treatment of exports and imports, which has varied considerably over the past three and a half years, is not discussed here; see Section V. below for an extensive analysis of this area.

4/ See Appendix I for a detailed listing of exemptions and preferences and their dates of introduction.

5/ Enterprise-specific exemptions have also proliferated. For example, the value added by the national gas company, Gazprom, is exempt from tax.

Table 4. VAT Rates At Introduction and In June 1994 1/

Country	Rate At Introduction <u>2/</u>	Rate At June 1994
Armenia	28	20
Azerbaijan	28	20
Belarus	28	25
Estonia	10	18
Georgia	28	14
Kazakhstan	28	0,13,20
Kyrgyz Republic	28	20
Latvia	10,12,14	6,18
Lithuania	18	18
Moldova	28	20
Russia	28	13,23
Tajikistan	28	20
Turkmenistan	28	28
Ukraine	22,28	28
Uzbekistan	30	20

Source: IMF, Alan A. Tait.

1/ Rates shown in bold type are so-called effective standard rates (tax exclusive) applied to goods and services not covered by other especially high or low rates.

2/ All VATs were introduced in January, 1992, other than Georgia (March, 1992) and Lithuania (January, 1994).

"merit" of the item or because of conceptual and practical difficulties in taxing them. 1/ The lower rate introduced for foodstuffs, while generally not applicable in Europe, 2/ is quite common to developing countries for reasons of progressivity. This, however, is generally considered a very poor way to achieve progressivity. The lower rate for foodstuffs is among the greatest revenue losers of the Russian VAT preferences. (The taxation of new real estate construction would also be an important revenue enhancer.) Public transportation is frequently exempted for VAT purposes, particularly in developing countries, as are folk arts and crafts. Exemptions for diplomatic personnel are also the norm.

Some of the other types of preferences listed in Appendix I are found in various VATs around the world, for better or worse, though the existing Russian legislation has borrowed a particularly large collection of these. Further, many of these preferences are found in European VATs but have been stated by the European Union to be unacceptable for its members. (For example, construction of new buildings, legal services, admission to athletic events, certain production of workshops for the disabled, funeral and cremation services. Provision of government goods and services for charges and fees are generally supposed to be subject to taxation.)

Even with all of this existing precedent for many of the existing exemptions, many others are included which, while they are apparently designed to respond to social or historical circumstances (such as stays in sanatoria, tours and excursions, which were typically provided to Soviet workers as part of the social infrastructure accompanying their industrial jobs), are indefensible as part of a true VAT on any grounds. They provide incentives for greatly inefficient allocation of resources. Others represent attempts to channel resources into redevelopment of the economy (for example, research and development funded from the government budget, work in connection with "economic agreements" by educational institutions, technical and scientific research instruments, goods and equipment imported to conduct joint research and development with foreign firms). These are dangerous both because, even if interpreted narrowly, such provisions are a very inefficient way to achieve the desired results, and, even more, because they are capable of widespread over-broad interpretation and abuse which will be most difficult for the overburdened tax administration to keep in check. 3/ 4/

1/ See Tait, 1986, for an extensive discussion of exemptions and preferences in value added taxes, and their costs and benefits.

2/ Other than in the United Kingdom and Ireland, both of which zero-rate many types of food, while taxing others.

3/ For example, in an analogous situation, it was recently noted that the customs tariff exemption for automobiles imported into Russia by charitable organizations has led to 80 percent of all imported automobiles being registered to such organizations.

In sum, the history described in Appendix I is disturbing for at least three reasons clearly seen from the foregoing. Most important is the sheer increasing number of exempted activities. The tax base has been narrowed more and more at a rapid rate. 1/ The increases in the number of items taxed at a preferential rate contributed to a decline in the effective weighted average Russian VAT rate from 26.5 percent in 1992 to 16.5 percent in 1993. 2/

Second, like many of the laws of Russia and the transition countries, many of the exemptions are vaguely worded in a manner which will lead to expansion of tax preferences even beyond where they were intended. This will contribute to the administration and enforcement problems faced by the State Tax Service. Finally, even preferences which seem clear on their face can be subject to abuse and provide opportunities for tax avoidance. And the greater the number of preferences, the greater the opportunity.

IV. Three Troublesome Structural Features of the VAT Laws of Russia and the Other Transition Countries

Three structural features of the VAT laws found in Russia and the other transition countries cause the taxes to fall short of the theoretical ideal of a broad based tax on all consumption. 3/ These are: (i) accounting for VAT liability on sales on a cash basis, while allowing credit on inputs at the time they are actually put into production; (ii) calculation of the tax at the manufacturing and production level on the credit/invoice method, and

4/ (...continued)

4/ However, in some cases, it is clearly extremely difficult to avoid the explicit or implicit negotiation of tax exemptions with potential foreign investors and, not least, donor organizations. (Examples of such issues may include the provision regarding joint development with foreign firms and the importation of books and periodicals for educational institutions.)

1/ In May 1994, another Presidential decree on the taxation system ordered that the government submit to the Duma by September 15, 1994, new legislation which would, among other things, introduce an additional (unspecified) list of products and services which would be subject to the reduced VAT rate of 10 percent. At this point, however, it appears that this base narrowing may be being stemmed; if adopted, proposals made by the government in August 1994, would broaden the VAT base at least to some extent. See Appendix II for a discussion of legislation on the Russian VAT pending in the Duma as of October, 1994.

2/ IMF staff estimates, based upon an unpublished study done with the Russian authorities in July 1994. The effective rate for the first half of 1994 was estimated at 19.5 percent, the increase resulting from the adoption of the 3 percent surcharge. The effective weighted average base is determined by dividing total revenue collected by the total taxable value added in the economy.

3/ Cross-border issues and the distinctions between destination based and origin based consumption taxes are discussed in Section V below.

at the wholesale and retail trade level based upon the taxpayer's gross margins; and (iii) the complete denial or delay of credits for the acquisition of capital inputs. 1/ This section concludes with a discussion of inter-enterprise arrears and their effect on tax collection.

In the discussion which follows, the VAT of Russia is described and used as the principle example. Examples from selected other republics are included where they may further elucidate either the present situation or theoretical points.

1. Mixed cash and accrual basis of accounting

Value-added taxes elsewhere in the world are generally calculated on an accrual basis. That is, the taxable event is generally defined as the "supply" of goods or services, 2/ rather than the receipt of payment by the supplier. This concept comports with the theory of the tax. The tax base is current consumption of goods and services, which presumably takes place when the goods or services are transferred rather than at the tangentially linked time of payment for them. (Administrative advantages, discussed below, also apply to the accrual method.) Nonetheless, the use of a true cash basis for the tax is possible. 3/

The use of the cash method of accounting in the new Russian VAT was based upon historic Soviet accounting conventions. 4/ All Soviet accounting was done on the cash basis; the concept of accounting income was

1/ The denial of input credits on capital purchases violates the principle only of a consumption based VAT. Most existing western VATs are intended to tax only value added currently consumed by households. (This is not true, however, with respect to the VAT laws of most Latin American countries.) In a transaction based VAT, on the credit invoice method, taxation of produced but unconsumed (i.e., saved) value added is eliminated by making all purchases of capital inputs to production tax-free, that is, through full immediate credits for their purchases.

2/ See, e.g., Sixth Council Directive of May 17 1977, "On the Harmonization of the Laws of the Member States Relating to Turnover Taxes--- Common System of Value Added Tax: Uniform Basis of Assessment," Official Journal No. L145 ("the Sixth Directive"), which provides that liability is incurred for the VAT upon the earlier to occur of: (i) the issuance of an invoice; (ii) making goods available to the customer or rendering the service; or (iii) receipt of payment. This test is generally used throughout the European VATs.

3/ And indeed is allowed for certain small businesses in the VAT laws of 12 of the 18 OECD countries which have a VAT.

4/ In the VAT, the cash method means that credits for purchase of inputs and liabilities for sales of outputs arise only at the time of actual payment, rather than at delivery or the time the liability for payment arose.

a purely monetary one, based upon the transfer of cash rather than, as in the West, the right to receive or obligation to pay cash.

a. Development of current structure--Russia

The Russian VAT has achieved an unsatisfactory mix of cash and accrual bases, resulting in a distortion of the tax base. The revenue effects of this are not even easy to measure under present conditions.

When first adopted on December 6, 1991, the tax law provided that the tax was owed based upon "turnovers." 1/ Turnover was defined, in general, to be the day that funds were received in cash or in a bank account in exchange for the goods or services sold, 2/ and VAT liability therefore accrued on a cash basis. 3/ The law stated that VAT due was equal to the difference between the sums of tax received from purchasers and total taxes paid to suppliers for items falling into production and circulation costs. 4/

1/ Law of the RSFSR, Value Added Tax, December 1991; Instruction No. 1 of the State Tax Service of the RSFSR of December 9, 1991--Concerning the Procedure for the Calculation and Payment of Value Added Tax.

2/ This is based upon Soviet accounting methods, which was based upon the transfer of cash from one account to another, rather than upon Western accrual accounting methods of determining financial income.

3/ Although taxpayers are permitted to choose the accrual method; however, fewer than five percent of the registered VAT taxpayers in Russia are estimated to have done so.

4/ Production and circulation/distribution costs do not include sums paid for fixed assets or intangibles. The issue of credits for capital goods is discussed in Subsection IV.3 below. Further, no offset of tax paid with respect to "non-production" costs is allowed. This concept also derives from the Soviet accounting system, in which the designation of items as related to "production" and their deductibility were essentially synonymous. Whether something is deductible, or, by derivation, creditable in the manufacturing level VAT, actually had an ideological basis in Marxism. Expenses were analyzed to determine whether they represented, directly or indirectly, labor costs relevant to society's needs. If not, they had to come from the profit and loss account (e.g., interest charges, start-up expenditures, some research and development costs). "Direct costs" were attributed to specific products (that is, specific items of production); other allowable costs were "indirect" and were accumulated, then allocated across specific items in proportion to the basic wage costs associated with those items. See Enthoven, et al. Thus, in some instances non-capital business inputs may not be credited in the Russian system. Such a system would resemble the "ring" type of retail sales tax used, for example, in many U.S. states. (In such taxes, items acquired for "resale," and selected other capital and non-capital inputs, may be acquired by the business free of tax; other business inputs which in a European-style VAT would be subject

(continued...)

This construction would seem to have placed both legs of the VAT calculation--liability on outputs and credits for inputs--on the cash basis. Russian taxpayers apparently, however, took the position that, while liability was only incurred upon receipt of payment for goods and services, credits could be offset on the accrual method. 1/

The Russian VAT statute was changed in response to this practice, by legislation of July 16, 1992. The change, however, was neither to a pure cash nor pure accrual based system for both liabilities and credits. Rather, liability was left, in general, on the cash basis, while credits are allowed (on items which are subject to credit at all) when the cost of inputs has been charged, for accounting purposes, to production cost. 2/ 3/ Thus, under this hybrid method, inclusion of inputs in

4/ (...continued)

to credit (such as napkins used in a restaurant) are treated as "used" by the business and therefore subject to payment of sales tax at the business level.) This of course builds cascading into the system, just as the "non-production" concept in the Russian system will do.

1/ Language in VAT Instruction No. 1 of December 9, 1991, provided that amounts of tax on creditable inputs could be deducted for the period in which settlement documents for them were received. In the Soviet system, the settlement document was an order to pay issued to the bank by the supplier. Since all enterprises and the bank were organs of the state, this was merely an accounting device. In form, the settlement document is similar to an invoice, but in function served the combined purpose of an invoice from the supplier and a check from the buyer. Thus, the intent of the language in Instruction No. 1 seems to have been consistent with the cash method of allowing credits for inputs, as in theory receipt of the settlement document would be synonymous with payment. In practice, however, the settlement documents in the present system are more like invoices, in that payment no longer results from receipt of the settlement document where no funds are available in the account. This is how large inter-enterprise arrears have been generated. In reality, then, provision for crediting on receipt of settlement documents would now be analogous to use of an accrual basis under the invoice method, where the settlement document functions as the invoice and time of supply is defined by its receipt.

2/ This concept is, again, directly linked to the Soviet accounting requirement that all deductible or creditable costs be directly linked to specific items of production, and accounted for on physical, not financial, concepts. (For analogous treatment in another planned economy, see the "Regulations Concerning the Value Added Tax of the People's Republic of China", effective October 1, 1984, which provided that the "deductible tax amount" (for the credit/invoice method of calculation) and "deductible value amount" (for the subtractive method of calculation) were to be calculated either by the quantity [of inputs] purchased in the current period or the quantity actually consumed [in production]. The tax authorities were to decide which applied, based upon the "circumstances of the taxpayer."

inventory is insufficient to entitle a taxpayer to take the credit for the input. The credit would arise only when the goods were removed from inventory and used in production (or, in the case of services, when under accounting rules the services could be charged to production).

VAT Instruction No. 1 provides the mechanism for making the calculations involved in implementation of the rule. 1/ The rule for determining credits for items of goods and services charged to production does not require tracking the actual VAT attached to individual inputs as they are charged to production. Rather, an average rate of VAT incurred with respect to the purchases of all items in the pool of previously acquired but uncharged items and currently acquired inputs is calculated on a rolling basis (monthly, if filing for the taxpayer is monthly or more frequently). This average rate is then multiplied by the value of all inputs charged to production in that period to arrive at a total credit figure allowable for the period. 2/ The example on the following page is based upon the sample VAT return included in Instruction No. 1, simplified to abstract from other issues.

The overall VAT calculation itself therefore does not require tracking the inventory beyond knowing total costs and total actual VAT paid with respect to the total costs. However, accurate implementation of this rule would require full inventory accounting for every VAT reporting period because the credit is calculated based upon applying the synthetic VAT rate for inputs to exactly what has been charged to production in the course of the month. 3/ This accounting would be necessary so that spot check audits by the authorities for VAT control could be carried out. Normally, for purposes of profits taxes such full inventory accounting would be needed only annually.

3/ (...continued)

3/ The Russian Ministry of Finance now plans to eliminate this hybrid method of accounting for input credits, placing the credit for inputs on the cash method as well as the liability for VAT on sales. There is apparently some uncertainty as to how the law on this point presently is supposed to be interpreted. It has been suggested that the proper interpretation now is that credit may be taken when payment for the input is made or when the input is put into production, whichever occurs later. Nonetheless, taxpayers may take the position that credit can be taken upon putting the item into production, even if payment has not been made. After the change, taxpayers will still have the option to use the accrual method for both legs of their transactions.

1/ Part VIII, Section 19 (December 9, 1991, as amended on August 28, 1992)

2/ If the reporting period is every 10 days rather than once per month, the credit figure arrived at for the month is simply divided by three and that amount is credited for each period within the month. Certain credits with respect to fixed assets and intangibles are added, as discussed in section 3 below.

3/ Line (4) in the above example.

	<u>Description</u>	<u>Turnover</u>	<u>Rate of VAT</u>	<u>Amount of VAT</u>
(1)	Balance at beginning of period of raw materials, other materials, components, etc.	360	---	90 (derived as shown at end from previous period)
(2)	Cost of raw materials, etc. purchased during reporting period	3600	23%	850
(3)	Total ((1) + (2))	3960	23.74% (940/3960)	940
(4)	Cost of [materials] written off during period	1600	23.74%	380 (1600 x .2374)
	Of which:			
	(a) On production:	1500	23.74%	356
	(b) On non-production (i.e., not creditable)	100	23.74%	24
(5)	Amounts of VAT incurred on fixed assets deductible in current period <u>1/</u>			200 (figure not derived above)
(6)	Total cost of goods, work and services sold which are assessable to VAT	10000	23%	2300
(7)	Amount of VAT charged to the budget (2300 - 200 - 356) (i.e., owed)			1744
(8)	Opening lines for next period:			
	Balance at beginning:	2360	**	560 (= (i) 940 - 380; or (ii) 2360 x .2374)

1/ See, Subsection IV.3 below.

b. Other transition countries

Ambiguity with respect to this issue characterizes many of the laws of the other transition countries. Characteristic problems can be seen in various examples.

• Belarus

The VAT law of Belarus does not utilize the credit-invoice method of calculation at all, but the subtraction method throughout all stages of production. Originally, the law provided that the cash method was to be used in calculating the tax owed. In July 1992, an attempt to change to the accrual method was made by legislation, but apparently a footnote in that law permitted the continuation of cash accounting. As of early 1993, it appeared that firms were mostly using the cash method, or a mixture of cash and accrual to suit their own advantage. Theoretically, strict inventory accounting was required, but some firms at least may have merely been deducting input costs on the date of purchase.

• Ukraine

The original Ukrainian law of December 1991, followed Russia in apparently basing both liability and crediting for VAT on the cash basis. 1/ This is apparently still the intention. 2/ No specific provision like that in Russia regarding the delay of input credits until incorporation into sold goods has been explicitly adopted.

• Tajikistan

At present, the law at least as applied in Tajikistan permits the VAT credit on inputs to be taken only as the inputs are materially incorporated into outputs, following the Russian model.

c. Distortions inherent in the current Russian system

This system of accounting for VAT input credits is distortionary in several respects: (i) the use of the cash method at all under the

1/ "The VAT amount that is subject to payment in respect of the budget shall be expressed as the difference between the tax amounts received from customers for sold goods (labor, services) and the tax amounts paid by [sic?] suppliers for material resources, fuel, labor, and services " Law of Ukraine on Value Added Tax, Article 7, paragraph 2, December 20, 1991.

2/ See Article 8, paragraph 2, as amended in August, 1993, in order to define the date of turnover as the date of receipt of payment. A series of earlier amendments to the this and another provision of the law created some ambiguity with respect to when the eligibility for VAT credit might arise, and the other provision (perhaps inadvertently) still does so.

circumstances prevailing in Russia; (ii) the mixture of the cash method for determining VAT liability on sale of output and the grant of credits on use in production; and (iii) the averaging of the tax rates applicable to inventories to derive credits, where tax rates are changing or there are multiple rates.

(1) Problems with the cash method itself

Due to very large arrears in inter-enterprise payments, lengthy, non-systematic, delays occur between delivery of goods and services and payment for them. 1/ Even if both liability and credits were on the cash basis this would distort the tax base, creating differences in effective tax rates between enterprises engaged in the same activities. 2/ Nonetheless, it may be advisable as a transitional step to place both legs of the calculation on the cash basis, as an improvement over the presently used hybrid method, until such time as the accounting capacity of both enterprises and the State Tax Service permits accrual accounting to be used consistently.

Many of the transition countries are experiencing relatively high rates of inflation. Even in the absence of inter-enterprise arrears, in the presence of significant inflation a reasonable delay between consumption ("supply") and the payment for the goods and services would reduce the value of the tax paid to the government below that which would be the case under the accrual method.

Finally, the cash method is inherently more difficult to administer than an invoice method VAT on the accrual basis. Evasion is facilitated because it is harder to establish whether funds have been received and to link them to a particular transaction than it is to establish that a delivery of goods or services has been made; cash payments are not linked directly to invoices but create another step in the chain of events which must be proven to establish liability. Ordinarily, the use of invoices to establish liability and create an audit trail is one of the major advantages of the credit/invoice method of implementing a VAT.

1/ A shift to the accrual method for VAT liability in the face of these large inter-enterprise arrears could pose transitional difficulties for enterprises. This would be mitigated by putting credits on a straight accrual basis as well. Nonetheless, there would be a sudden acceleration of VAT liability at the time of the shift, which would be worse for the enterprises which are the worst offenders in terms of inter-enterprise arrears. The most effective way to mitigate this one-time problem would be to reduce the requirements for advance payments as a transitional device.

2/ See Section VI.

(2) Problems with the hybrid system presently in use

The present VAT system in Russia establishes liability for VAT on supply only at time of payment, but allows a credit for inputs (in most cases) at the time when the goods or services are "charged to production" as an accounting matter. This creates several problems. First, as discussed previously, the "charged to production" standard, if implemented correctly, would require inventory accounting at least monthly (and thus would require the tax administration to be able to audit such accounting as well). This creates a lot of additional work, and the added complexity creates great opportunity for error and deliberate evasion.

Second, the fact that liability arises only after payment for supply of goods or services, and credits are allowed when inputs are put into production distorts the tax base. It creates non-neutrality in total effective tax burdens among different suppliers with the same value-added. The effect is worse in the presence of inflation and inter-enterprise arrears. 1/

Finally, this method could be considered inferior to the accrual method by virtue of the fact that manufacturing inventories are held on a tax-paid, rather than a tax-exempt, basis. Normally, a credit may be claimed when items are put into inventory, thus eliminating the VAT with respect to them (at least in a system which refunds excess VAT credits). Here, credits are not allowed until items are withdrawn from inventory. Under current law, this distortion in the theoretical base is somewhat offset by the use of the cash method to determine liability on sales. It is therefore very important to eliminate the hybrid method and ultimately to adopt the accrual method of crediting if the accrual method for liabilities is ever introduced.

(3) Effective rate of VAT on inputs incorporated in production from inventory

The system in use for allowing input credits upon charging to production does not rely upon pinning actual VAT paid with respect to each individual item to the credit taken when that item is used. Rather, in effect an average rate of VAT paid with respect to all items in inventory and currently acquired is applied to goods as they are removed from inventory and charged to production. 2/ This method could lead to further distortions of the tax base away from the theoretical norm which would exist if all inputs were credited immediately upon invoicing, if the VAT rate changes over time, or different rates apply to various items held in inventory. Use of the moving average pooled rate to determine the allowable

1/ See Section VI.

2/ For this purpose, all inputs which are subject to current credit are lumped together; separate inventories of, for example, raw materials and fuel, are not used to calculate separate average VAT rates.

current credit could allow credits to be taken faster or slower than they would be even under a pure implementation of the system of credit upon incorporation in production as it is written. 1/

2. Credit method for manufacturing, taxation of gross margin for wholesale, retail and service sectors

Many of the VATs of the other transition countries share with that of Russia the characteristic of using two different methods of calculating value-added tax at different stages of the production and distribution process. The credit/invoice method is applicable to manufacturing and production levels of economic activity, prior to wholesaling and retailing of goods and intermediation services. These latter activities and the service sector are, however, subject to value-added taxation on their "gross margins." 2/ The gross margin is, in theory, the firm's mark-up on goods sold. However, the margin used is not the actual difference between the amount paid for the goods and the price at which they are sold. Rather, the "margin" as derived under Russian accounting is a percentage defined in advance, sometimes also including so-called "trade discounts" or "increments" as well. 3/ 4/ This margin is calculated on a tax

1/ For example, assume that the only inputs were a 1000 ruble inventory of widgets, acquired at a 10 percent VAT rate in the previous year, and 1000 rubles worth of fuel oil, acquired in the current period at a 23 percent VAT rate. The only items actually charged to production in the current period are 500 rubles worth of widgets. The allowable VAT would be $500 \times .165 = 82.5$ rubles. The VAT paid by the taxpayer which actually attached to the widgets used would have been 50 rubles.

2/ Belarus does not mix the credit/invoice and gross-margin methods, but uses the gross-margin method at all stages of production.

3/ This system is derived from the old turnover tax in use in the Soviet system and other planned economies. Since all prices were set in the plan, margins were contrived and prices and margins bore no relation to supply and demand, let alone value added by any particular level of production. The turnover tax was applied at whatever rate was required to leave the planned amount of "profit" in each enterprise. Such taxes simply equilibrated the wedges at each level of production to that desired by the planners. Thus, literally hundreds of different "rates" of tax existed, differing on an enterprise to enterprise basis. Furthermore, in the Soviet accounting system, "planned" profits frequently were much lower than actual margins experienced, since projected costs were overstated. This had the dual benefit for the firms that actual profit performance of enterprises looked better than targeted, and that taxes were based on the lower, planned margins, rather than the actual margins. The present trading sector VAT methodology was apparently instituted in order to comport with these familiar accounting methods, and perhaps from an inability to wholly escape from the mentality of fixed consumer prices and "profit" margins. The VAT is thus still imposed on the planned margins.

inclusive basis, and the tax liability is the margin multiplied by the tax-inclusive rate of VAT.

There are a number of significant problems with the Russian gross margin method both taken alone, and in combination with the credit/invoice method at the manufacturing level.

a. Tax-paid inventories

The Russian VAT does not use a true subtractive method even at the retail level. Under the subtractive method, the costs of all business inputs acquired in the period are deducted from the sales receipts of all output sold in the period and the applicable VAT rate is multiplied by the difference to obtain the liability. The subtractive method differs from the credit/invoice method in that under the former, tax liability is derived from output less input itself, and under the latter, it is derived from tax owed on output less tax paid on input. Each is based upon liabilities and credits accrued in the current reporting period, however, and in each inventories are held on a tax-free basis. (Under the subtractive method, all currently purchased inputs are deducted, whether they have been used or resold currently or added to inventories.)

Under the Russian gross margin method, the margin is derived by deducting from sales not all purchased inputs, but only those removed from inventory. Those items remaining in inventory are therefore held on a tax-paid basis, increasing the financing costs of the inventory considerably under normal circumstances. Conditions of high inflation can make this rule work to the advantage of the firm, however. Because the planned margin, on which the tax is imposed, is not affected by inflation, the increased selling price of the goods as a result of inflation does not affect the firm's liability for value added tax when they are withdrawn from inventory. This inflation differential in the nominal price paid for the goods and the price at which they are sold is never taxed, as a result of holding them in

4/ (...continued)

4/ To the extent that the enterprises utilize goods or services in distribution which are not part of the goods sold, they are entitled to take VAT credits under the same methods and limitations applicable to manufacturing enterprises (described in Subsection IV.1 above).

inventory tax-paid. Thus, VAT receipts compared to what they would be under the more normal credit/invoice VAT are reduced. 1/

b. Inventory accounting

The same problem arises in the gross margin method as in the system of allowing credits only upon incorporation in production--since the tax liability is calculated based upon cost of goods sold in every VAT reporting period, inventory accounting to derive an accurate cost of goods sold is necessary for every such period. For taxpayers, and especially for the already overstretched tax administrations of the former Soviet Republics, this is an unnecessary and potentially impossible complexity.

In essence, given the when-charged-to-production credit system applicable to retailers and traders with respect to creditable inputs other than goods sold, such enterprises will be running at least two pools of VAT paid items which must be constantly accounted, with VAT charged or credited on them in two different ways.

c. Gaps in the tax base

If this system works as it should, the total VAT collected will be the same as that which would be collected if the credit/invoice method were used all the way through the final retail sale. For example:

Assume a retailer buys goods for resale at a cost of 100 plus 23 VAT paid to the wholesaler. It sells the goods for 160 total, to consumers. VAT liability of the retailer is equal to 160 minus 123 (VAT inclusive), times 18.7 percent (VAT inclusive equivalent of a 23 percent rate), or 7. Total VAT paid with respect to the goods therefore equals 30 (23 + 7). Under a pure credit method, total VAT would be the same, derived by calculating the retailer's liability by applying the 18.7 percent rate to 160 and giving a credit of 23 for the VAT paid on the purchase of the goods-- $((160 \times .187) - 23) + 23$ (collected and remitted by the wholesaler) = 30.

1/ For example, if an item goes into inventory at a value of 100, with a tax of 20 paid on the item at that time, and is projected to be sold at 240, tax inclusive, under the defined margin system, the final tax due on sale will be $(240 - 120) \times .166$, or 20. If there has been 50 percent inflation in the intervening time, so that the sale price is nominally 360, the nominal final tax will still be 20 in this system, thus reducing the value of the tax to the government. (The "right" answer would be 30; however, if indexing of the original cost were not allowed, use of "actual" (nominal) margins would give rise to a tax in this example of $(360 - 120) \times .166 = 40$, thus benefitting the government at the expense of the taxpayer.)

However, an important difference arises if the retailer does not pay VAT to the provider of inputs for some reason. Under the credit/invoice system, the retailer would still incur a tax liability of 30 on the sale at 160, but would not receive a credit for VAT paid to the provider. Thus, the entire 30 would be collected, all from the retailer. Under the Russian gross margin system, the retailer's gross margin would increase to 60 (160-100), and it would be liable to VAT of $60 \times .187$, or 11. Since no tax was paid at the provider's level, the total collected would be only 11, 19 less than actually owed with respect to the value-added. The gross margin method is not self-correcting as is the credit method.

Further, under the credit method, the retailer has every incentive to obtain an invoice from the provider showing that it paid the 23 VAT, in order to be able to offset the credit against its own liability of 30. In the gross margin method, on the contrary, the retailer has no such incentive, and depending upon the price being charged by the wholesaler, might have a higher profit as a result of the wholesaler's evasion. It would therefore have an incentive to collude in the evasion, which it could do while calculating its own VAT liability completely within the terms of the law. ^{1/}

From an administrative point of view, as well, this distinction between manufacturing or production and the non-manufacturing sector will be problematic. Experience elsewhere has shown that giving a satisfactory definition of wholesale price, for example, is extremely difficult. It is difficult to separate manufacturing, wholesale and retail activity. If one is favored in the law, businesses will simply arrange their affairs and their corporate structures accordingly.

^{1/} In the example given, where the wholesaler charged only the VAT exclusive price to the retailer when it did not intend to remit the VAT, the net result under the credit/invoice method is actually the same for the retailer as it would have been under the properly applied method--a net profit of 30. When the wholesaler, however, charges more than the VAT exclusive price but less than the VAT inclusive price, in order to increase his own profit through tax evasion, the retailer under the credit/invoice method would have the incentive to claim VAT credit, as otherwise its own net VAT liability would increase. For example, assume that the wholesaler charged 110 to the retailer but denominated none of it as VAT and remitted no VAT. The retailer would still be liable for VAT of 30 on its sale of 160, with no offsetting credit, under the credit/invoice method. This would reduce its profit to 20. Under the gross margin method, on the other hand, in this example the retailer would pay $50 \times .187 = 9.3$ in VAT, leaving it with a profit of $50 - 9.3 = 40.7$. This is still higher than the 30 profit which it would have made had the wholesaler charged the appropriate VAT of 23 on the VAT exclusive sale of 100. Thus the retailer under the gross margin method has the incentive to collude with the wholesaler's evasion, which it could do without any evasion of its own.

3. Treatment of capital inputs

To tax only consumed value-added, taxpayers must be allowed an immediate credit of the tax paid on the purchase of capital goods. 1/ The VAT law adopted throughout Russia and the other transition countries as of January 1, 1992 did not permit VAT paid with respect to fixed assets and intangibles to be deducted (i.e., credited) against taxpayers' VAT liability incurred on sales. 2/

a. Problems with the denial of credit on capital inputs

The effect of the denial of credits for capital inputs is to increase the effective tax rate on capital assets by comparison to that on other inputs. This changes the effective rate of VAT on different goods depending upon the capital intensity of their production, making the tax system non-neutral across industries and even enterprises. Different final consumption items thus are effectively subject to different rates of tax, distorting consumer choices.

If VAT paid on capital inputs is not eliminated from the production chain through current credits the VAT ceases to be a pure consumption tax, and includes a tax on capital income.

Failure to credit the VAT on capital inputs will act as a disincentive to export, as the VAT on capital is a built-in cost in the items to be exported. Even if exports are zero-rated, 3/ the VAT on capital, since it is non-creditable, cannot be eliminated. Thus, exporters will either

1/ Precedent does exist, throughout Latin America, for value added taxes which do not immediately credit capital inputs. Most of the Latin American VATs permit credit for capital inputs, but require that excess credits be carried forward, rather than refunded (e.g., Bolivia (carryforward with inflation adjustment); Chile (refunds on exports only, other net credits carryforward with inflation adjustment and, after six months, refund); Ecuador (carryforward, may apply for refund if it can be presumed that credit balance will not be exhausted after six months); Mexico (either carryforward or apply for a refund); Peru (carryforward indefinitely-- during high inflation in the 1980s, Peru permitted excess capital input credits to be taken in installments); Venezuela (carryforward indefinitely)). Brazil denies a credit for inputs of fixed assets altogether. Columbia exempts imports of fixed assets used in "basic industries," and until recently denied credits for VAT paid on inputs of other capital assets. Since 1992, the law has been amended to credit the latter against corporate income tax (with certain restrictions). Argentina permits capital input credits.

2/ Except in the case of agricultural enterprises.

3/ That is, VAT paid on their acquisition or production by the exporter is credited (and refunded if there are net credits) upon export, so that exports are free of VAT under the destination principle.

increase the price of the export items to cover this cost, making their products non-competitive with identically produced goods from other jurisdictions which do rebate the VAT on capital, or the exporters will have to bear the VAT on capital inputs themselves, reducing their profit on exports.

b. Subsequent developments

Russia changed its posture on VAT capital taxation in the legislation of July 1992. Effective January 1, 1993, deductions were allowed for VAT paid on fixed assets (i.e., depreciable inputs) and intangibles in 24 equal installments over two years. In 1994 this period was shortened to six months. It appears that the crediting period is to begin when the fixed asset is put into production. There is no adjustment of the carryforward amounts for inflation. In the case of imported fixed assets, credit may be taken when the assets are put into production. 1/

The rule regarding capital purchase credits now differs widely across the other transition countries. Some, like Russia, also use delayed crediting on investment goods, while others continue to prohibit all capital input credits. In Tajikistan, for example, the credit on investment is allowed over the useful life of the capital asset, as if it were being amortized. A similar rule obtains in Azerbaijan. 2/ The law of Kazakhstan still does not include any credit for capital purchases. 3/ The Ukrainian VAT, however, permits full crediting for capital purchases when they are put into production. 4/

c. Treatment of excess credits on investment

A second issue, in addition to the nominal creditability of VAT on capital inputs, may alter the effective tax rate on capital. In a pure consumption-type VAT, if allowable credits for any period exceed liabilities in that period, the excess credits would be refunded. This is how the VAT laws of the European countries operate. 5/ In most of the transition

1/ See Presidential Decree, December, 1993.

2/ As of March 1994, various tax reforms were being considered by Parliament, among them the crediting of VAT paid on the purchase of capital goods. It was anticipated that this change, if made, would be phased in over three to four years.

3/ The law as of mid-1993 did not permit such credits, and apparently the 1994 budget proposals as of December, 1993 did not include any amendment of this provision.

4/ However, such credits are not refundable and must be carried forward from period to period until fully utilized.

5/ As noted above, however, the carryforward of excess net credits is common in Latin American VATs. Where the credits are adjusted for inflation, the difference is simply the rate of real interest on the carryforward amount.

country VATs, however, immediate refunding of excess credits is not permitted.

For example, in Russia, excess credits from capital inputs are not refunded but are carried forward until whenever they are used. 1/ In contrast to the six month rule in the Russian law, in Ukraine the VAT on capital inputs is in theory immediately allowable. However, excess credits arising from capital inputs are required to be carried forward against VAT liability in future periods.

Required carryforwards with denial of immediate refunds have the same effect, though a more random one, as does the basic denial or delay of credits. For either reason, for some period of time the capital asset is held on a partially tax-paid, rather than a tax-free basis, thus increasing the effective rate of VAT with respect to products produced using the capital. This problem is exacerbated the higher the rate of inflation due to the erosion of the real value of the future credits.

The Ukrainian provision denies refunds with respect to excess credits arising from acquisition of capital assets, but allows them with respect to excess credits arising from the zero-rating of exports, and goods and services relating to four other zero-rated categories. 2/ At least where enterprises produce several categories of items, some of which are zero-rated and some of which are not, such a system would require stacking rules with the concomitant tracking of the sources of input credits from period to period. While this is certainly possible as a theoretical matter, 3/ the Ukrainian law does not specify the mechanism which would be necessary. Perhaps more importantly, the administrability of such a system under present circumstances in the transition countries is somewhat questionable.

V. Cross-border Issues in the VAT

As can be readily seen from the foregoing, Russia and the other transition countries face a good deal of work to achieve satisfactory domestic VAT systems. However, the preferred theoretical solutions, while perhaps difficult to achieve for broadly political or administrative reasons, are relatively clear. This section of the paper addresses a more intractable problem--how should the VAT be operated with respect to trade among the transition countries? This requires determining both how these

1/ The law and instructions are ambiguous on this point, as they provide that excess credits are either refunded or carried forward (without specifying which applies under what circumstances or who decides). However, practice is apparently to deny refunds and insist upon carry forwards.

2/ Diplomatic purchases, coal products, restoration and reconstruction of cultural buildings financed by donations, and Chernobyl clean-up costs financed from the budget.

3/ And indeed is found in some of the Latin American VATs.

countries wish to treat their common economic space as a substantive matter, and how their decision with respect to that question best can be implemented where effective border controls do not exist. 1/

1. Origin versus destination base

The use of the terms "origin" and "destination" with respect to taxes reaching across jurisdictional boundaries can be ambiguous. This subsection therefore sets up the theoretical framework regarding these terms in the VAT context, defines them for use in this paper, and discusses administrative considerations in the choice between origin or destination. 2/

a. Theoretical basis

There are two main parameters with respect to which the two terms are sometimes used: (i) the rate of tax finally applied; and (ii) the country which finally gets the revenue. 3/ "Origin principle," therefore, may mean that either or both of these parameters are those of the country of origin of the goods (or services), that is, the exporting country. Conversely, "destination principle" can mean that either or both of these parameters are met by the country of destination, that is, the importing country.

The Western European-style credit-invoice VAT has been based upon the "destination principle" in both senses used above. 4/ No tax is imposed upon goods exported by the exporting country. 5/ The importing country

1/ All of the following analysis and description is with respect to transactions between registered VAT taxpayers, unless otherwise noted.

2/ This Subsection relies heavily upon a summary and analysis contained in an unpublished manuscript by Ken Messere (1994).

3/ A third criterion, the site of the initial levy of the tax, is frequently used by tax administrators in categorizing taxes. Although the site of the initial levy of the tax affects what subsequent steps must be taken in order to achieve certain substantive economic effects of the tax, the site of the levy bears no necessary relation to these substantive effects. Therefore, in this paper the definitions and analysis proceed based upon the first two criteria (that is, the rate of final tax and the identity of the final beneficiary country). Various administrative procedures, including site of initial levy and subsequent adjustments, are described and analyzed within this substantive framework.

4/ Respecting transactions taking place outside the European Union.

5/ In the multi-stage VAT, all tax incurred in the exporting country on inputs into the export good is neutralized by rebating these taxes upon export.

levies its own VAT, at its own rate, on the goods as they enter the country, and keeps this revenue. 1/

This "pure" destination model equates prices received in any particular country by international producers. It eliminates tax-based advantages and disadvantages faced by domestic versus foreign producers for any particular good. 2/ For all sales of a given commodity in country X, country X will receive the same amount of revenue (and the producing country, if different, will receive no revenue). Correspondingly, consumption in country X will always be taxed by country X, at its own tax rate, and the revenue will accrue to the location of the consumption.

Conversely, the "pure" destination model does not equate the tax burden faced by consumers of a given commodity internationally. Consumers of the good in country X will pay tax on their consumption at country X rates; while those in country Y may pay tax on the same good (derived from the same producer) at very different rates. Producers will, thus, not make locational decisions based upon differential consumption taxes, under the destination principle. However, if consumption tax rates differ across jurisdictions, in theory reallocations of consumption across consumers could be made which would make some consumers better off without making others worse off.

The opposite is true under a "pure" origin principle. As defined here, such a principle would mean that the country of production would receive the revenue from the VAT applicable to exported goods, and such revenue would be calculated based upon the rates effective in the exporting country. The importing country would receive no revenue for the goods except for that generated by additional stages of production and distribution performed in the importing country. Under this system, identical goods produced in different jurisdictions would incorporate different tax burdens within their prices (other things being equal). This would mean, for example, that producers in a country with a 20 percent VAT rate would face negative protection with respect to goods of producers in a trading partner with a 10 percent VAT rate. However, with respect to goods of a particular producer, consumers across all countries would face the same tax burden. 3/

1/ This model traditionally required that border controls exist between the importing and exporting country, so that VAT could be imposed at customs points upon entry of the goods into the importing country. Administrative mechanisms and implications are discussed below.

2/ This is why, under GATT, the rebate of domestic indirect taxes upon export is permitted.

3/ The foregoing assumes that there are no exchange rate effects.

b. Administrative considerations

(1) Destination basis

The administrative steps necessary to achieve a pure destination based credit-invoice VAT are relatively straight-forward as long as effective border controls exist. With physical checks at the border, the exporting country can verify that goods which are claimed as zero-rated actually leave the country. And the importing country can impose tax at customs when the goods physically enter the country, making it much harder for taxpayers to avoid the VAT on imported goods. 1/

Where no border controls exist, other methods of administering an interjurisdictional destination based VAT must be found. This is the situation now faced by the European Union. The remainder of this section explores this issue, and the question of how a pure origin based VAT could be implemented.

A fundamental premise of the European Union is the elimination of borders between the member states. Presently, the EU still operates its VATs upon the destination basis for intra-Union trade. Beginning on January 1, 1993, with the abolition of effective borders for much trade among members, the VATs have been operated on what is sometimes referred to as a deferred or postponed payment method. Exports are exempted, as under the standard (with border) destination method, but documentary evidence of export, rather than border clearance, is necessary for the zero-rating of the export. Imports are not charged with VAT at the border. Upon the first sale in the importing country the whole value-added to that point is taxed.

After 1996, a decision will be made as to whether to stay on the destination basis or move to the origin basis for intra-Union trade. A move to the origin basis would have substantial economic effects, due to the positive and negative protection issue which would arise as between producers from different member states unless all member countries harmonize their VAT rates.

If the European Union retains the destination basis for this reason, it will adopt either the presently applicable deferred payment mechanism or a "clearing house" mechanism. The latter implements the destination basis VAT by levying tax on exports initially on the exporter. The importing country would, at the first transaction of the good in the importing country, collect the full VAT and allow an offsetting credit for the VAT actually paid to the exporting country with respect to the good. The clearing house would generate a claim against the exporting country for

1/ Of course, if the import is an intermediate good, and no tax were paid at import, the full tax would theoretically be picked up at the next stage of production. In fact, this method is an alternative to border controls. However, evasion becomes easier with each eliminated stage of taxation.

the VAT collected by it on the exported good, and a credit for the importing country (since it permitted a credit to the manufacturer for VAT paid to the exporting country). The exporting country would pay the claim to the importing country, and the two would be in the same positions as if the export had been zero-rated and the importing country had collected the VAT. The claims and credits between all members of the participating group of countries would be netted, and settlements of the net amounts made periodically. These net adjustments could be calculated either by looking at the actual accounts of individual importing and exporting taxpayers in each country, or, as has been suggested for the European Union, by looking at aggregate trade data.

The most salient advantage of the clearing house mechanism over the deferred payment mechanism is said to be the tighter control that is achieved by imposing the VAT on export rather than waiting for the subsequent transaction of the imported good in the importing country.

(2) Origin basis

A pure origin based VAT can be implemented by imposing VAT in the producing country on all sales, regardless of destination. No tax would be levied on import by the importing country, and no special steps would be taken with respect to export. If the imported item were an intermediate good, incorporated into a further stage of production in the importing country, only the additional value-added in that country should, in theory, be taxed in the importing country (including any additional value-added from the retailing function in the importing country). To achieve this result under a credit-invoice method tax, a credit would be given to the importer for the tax which would have been paid in the importing country at its rate. 1/ This would retain the effect of the rate of the country of

1/ This method entails valuation problems, however. Since there is no linkage between the administration of the VAT imposed on the value added through the export stage (taxed by the exporting country), and the value added after the importation of the good (taxed by the importing country) the self-policing aspects of the credit/invoice method are lost at that point.

origin in the final price, 1/ equating the position of consumers of the

1/ Assume that all consumption taxes are passed fully forward to consumers in the price. Depending upon market conditions, however, discrepancies in rates across jurisdictions under the origin method could result in different rates of profit for manufacturers or traders instead, in part or in full. Examples follow:

Facts:

Country A--VAT rate = 20 percent	Country B--VAT rate = 25 percent
100 of value added	60 of value added

Product is sold from manufacturer in A to one in B; under the origin method, as defined, country A should ultimately receive 20 in VAT, country B should receive 15; total tax burden (reflecting this) borne by the consumer of the product should be 35. (Under the destination method, all value added would be taxed at the rate of the location of the consumption, for a total tax of 40, received by B.)

Destination Method--Credit/Invoice:

Product sold to manufacturer in B for 100 (no VAT attached; product is zero-rated on export from A). VAT of 25 levied by B at import at the border. 60 of value is added by manufacturer. Product sold in B for 160, plus tax of 40. Credit for 25 of tax paid on input at border. Net additional tax of 15 paid by B manufacturer. Total tax levied - 40, all accruing to country B. This is the same result as would have obtained if the original 100 of value had been produced in B. rather than in A.

Origin Method--Credit/Invoice:

Product sold to manufacturer in B for 100 plus 20 of country A VAT (this 20 levied by and retained by A). 60 of value added in country B. Product sold for 160 in B, plus 40 of VAT. Credit of 25, the amount of VAT which would have been paid on the input of 100 if it had been purchased in B rather than in the lower-taxed A. This leaves a net tax of 15 paid to country B, the correct result for 60 of value added. However, the importer/manufacturer is now better off by 5 than if he had purchased the 100 input in country B. Thus, either (i) the importer will pocket the 5 (and prefer to buy inputs from country A); or (ii) the final price will fall to 155, and consumers will prefer to purchase the goods which incorporate foreign inputs rather than domestic ones. In effect, where country B has a higher VAT rate, under the origin principle it experiences negative protection.

If country B had a rate of 20 percent, and country A a rate of 25 percent, the opposite result would occur. In the foregoing example,
(continued...)

good across countries, and discriminating within the importing country based upon country of production. This is the appropriate result under a pure origin method.

2. Development and current status of the law regarding VAT on traded goods in Russia

a. Development of the system

The original VAT legislation of December, 1991, did not apply the VAT to any imports into Russia, whether from within or without the former Soviet borders. Exports to countries other than the transition countries were zero-rated (and, by implication, those to them were taxed). Thus, the cross-border system with respect to the other transition countries was on the origin basis, 1/ and that with respect to other countries was a worst-case combination from a revenue standpoint--imports were not taxed but neither were exports.

Apparently, under the regime of exempting imports from the transition countries, credits could be taken with respect to such goods for VAT paid to the exporting country, 2/ but only up to the amount which would have been paid as tax under the then-applicable Russian VAT. Thus, this system was a sort of modified origin basis system. 3/ If the exporting country had a lower VAT rate than that in Russia, the credit was apparently given for actual tax paid to the exporting country (though this is not entirely clear), as opposed to the amount which would have been paid at the applicable Russian rate. If the exporter's rate was higher than the Russian rate, credit was taken at the Russian rate, as in a pure origin system.

1/ (...continued)

the importer would either have to raise the price by 5, or reduce its profit by 5 (of course, changes in profit rates or price in either case alter the VAT actually collected). Domestic goods would be favored over imported ones.

1/ As defined in Subsection V.1 above.

2/ See Ministry of Finance letter dated June 11, 1992, in which the Ministry directed that VAT paid with respect to these imports in excess of 28% (the then-prevailing rate in the Russian Federation) must be "charged to production" (the Soviet accounting term for non-deductible or creditable items).

3/ Under the criteria spelled out in Subsection V.1 above, a "pure" origin system would entail: (i) taxing value added in the country of creation, not consumption; and (ii) taxing value added at the rate applicable in the country of creation, not consumption. The system described in this paragraph met the first criterion, but did not in all cases meet the second, where credit for intermediate imports was given at the rate applicable in the exporting country, rather than that which would have been applicable in Russia.

This retained the protection of the lower Russian VAT under the origin system, when it was lower with respect to that of the trading partner. Failing to credit the higher Russian rate where the exporting country's rate was lower, and only crediting actual tax paid, also offset to some degree the negative protection arising under the origin method with respect to lower taxed exporters to Russia.

The law was changed in December 1992, effective January 1, 1993. After this date, all imports from outside Russia were explicitly made taxable. Exports outside Russia were correspondingly zero-rated. Thus, two fundamental changes appeared to have been made--all imports were to be taxed, and exports to other transition countries were to be zero-rated as those to third countries had been all along. 1/ If fully applied, this would have put Russia on a pure destination basis system for all cross-border transactions. Despite the nominal taxation of imports, however, specific exemptions for imports have proliferated since this change, so that in fact relatively little revenue appears to be raised from value added taxation of imports as of late 1994. The destination system for trade with non-transition countries is thus not complete.

b. Trade with the transition countries

The law, however, also contained a provision stating that the application of these principles to businesses elsewhere in the transition countries was to be regulated by international agreements, and, if none such existed in any case, by the principle of reciprocity.

In May 1992, an agreement among the transition countries was signed, providing that VAT with respect to goods passing between them would be levied in the exporting country, and not in the importing country. 2/ On April 4, 1993, a Russian Ministry of Finance regulation was issued setting up the following rules: (i) a 20 percent (the then generally applicable Russian rate) VAT was to be levied on all exports to the transition countries, 3/ even if the item would otherwise be exempt from VAT under Russian legislation; and (ii) imports of intermediate inputs (as opposed to final goods for resale, apparently) were to be subject to credit of

1/ Instruction No. 1 states that exports by intermediaries are only allowed a credit [under zero-rating]: (i) if, appropriately, the correct documentation showing that the goods crossed the border is provided; and (ii) more idiosyncratically, not more than one year has passed since the VAT was paid with respect to the acquisition of the goods exported.

2/ However, as of mid-1993, the Ukrainian State Tax Service was asserting that Russia began imposing VAT on imports from Ukraine in February 1993.

3/ The Baltics, Georgia and Azerbaijan were specifically excluded.

20 percent VAT paid to the country of origin on the export, as if they had been acquired in Russia and subject to the domestic VAT. 1/

Up to this point, this regulation would have the effect of implementing a pure origin based VAT, under the criteria set forth above. However, the export charges and import credits with respect to Belarus and Uzbekistan were to be at the rate of 25 percent, and those with respect to Tajikistan at 28 percent, the rates applicable in those countries. With respect to credits on imports, this apparently reverses the earlier position described above, and effectively negates the effective protection afforded under the origin system with respect to goods imported from higher taxed countries. Application of the higher rates on exports would, other things being equal, place Russian goods at a disadvantage relative to a pure origin system, under which they would have borne a VAT lower than that of domestic products of Belarus, Uzbekistan or Tajikistan. The advantage of simplicity of the origin system, in which it is unnecessary to distinguish goods by their intended destination, is also lost here. Not only must goods for export be identified, but their ultimate destination must also be correctly known and verified.

c. Federalism issues within Russia

As described above, exports outside the transition countries are supposed to be zero-rated, under the destination principle. However, in practice there are at least two problems with this scheme, as implemented in Russia. First, at least as of October, 1993, refunds on exports apparently simply were not being given in significant amounts. Second, and perhaps related to this, is the complexity which arises as a result of the revenue sharing mechanism between the federal government and that of the regions in Russia. VAT is supposed to be allocated at each stage between the relevant regional government and the federal treasury. Thus, for example, if an intermediate good is produced in Vladivostok and shipped, at a tax-

1/ These rules regarding imports apply only to intermediate goods. Presumably, this is because goods imported for resale by wholesalers or retailers fall under the gross margin method of calculation, just as do domestic goods sold at wholesale or retail. That is, the importers in these cases will pay tax on the imported good in the country of origin, then pay tax to Russia on the tax inclusive spread between the import price and the sale price. For example, importer pays 100 for an item for resale from Kazakhstan. Tax of 20 is paid to Kazakhstan treasury. Tax inclusive acquisition cost is therefore 120. Resale price, inclusive of Russian VAT, is 240. VAT due is 20. ($240 - 120 = 120$. Tax inclusive rate = 16.67 . $120 \times .1667 = 20$). Under this system, there is no need to credit the earlier VAT regardless of where it was paid, or to worry about the rate at which it was paid. This is perhaps the sole positive feature of the use of the gross margin method of taxation at wholesale and retail trade-- if an origin method VAT is used, this system automatically segregates the value added prior to the wholesale or retail stage, which may occur after import.

exclusive price of 100, to Moscow for incorporation into a final good, the VAT of 20 would go (using a hypothetical split of 70/30) 14 to Vladivostok and 6 to the federal treasury. Assume the item is incorporated into a final good which is destined for export to Sweden, at a tax exclusive price of 200. The manufacturer would be entitled to a credit of 20 for the VAT paid on the component, in order to ship the good tax-free under zero-rating. Apparently, the federal treasury is presently refunding the entire 20 (to the extent it is refunded at all), despite the fact that 14 of the 20 ruble VAT paid on the input incorporated into the exported item actually went into the Vladivostok treasury. 1/

This problem is merely one example of the complexity which arises when value-added taxes are allocated to a sub-national level of government. A complete examination of the fiscal federalism issues faced by Russia is beyond the scope of this paper. However, it can certainly be said that both in theory and in practice schemes for the use of VAT (as opposed for example to retail sales taxes or personal income taxes) at the sub-national level in federal systems are likely to be extremely unsatisfactory. If the inter-state, sub-national system is operated on the origin basis, then, just as in the case of extra-national regions such as the transition countries or the European Union, producer states will benefit and consumer states will lose revenue. This may lead to tax competition along some dimensions, even where certain basic parameters such as rates are set at the national level. Further, there may be political demands for amendments and special provisions to benefit regions which are net losers under the inter-state system. All of these things have in fact happened in Brazil, the country which has perhaps the most highly developed sub-national VAT system. 2/

The VAT is particularly unsuitable for regional level use in an integrated economy because of its multi-stage character. Where intermediate products are produced throughout a country and shipped from one region to another for processing, the inter-regional crediting issues become not only politically difficult but administratively complex. While some competition does arise with sub-national retail sales taxes (as in the border regions of U.S. states), there is much less complexity than in a multi-stage tax.

VI. Inter-enterprise Arrears and Timing Issues

In Russia, and in many of the other transition countries, large and growing arrears in the payment of inter-enterprise obligations have arisen

1/ Of course, if the total VAT on import into Russia collected at the border is retained by the federal treasury, rather than being split with the treasury of the region for which the import is destined, the revenue effects of the export problem would be offset at least to some degree as between the central government and the regions taken as a whole.

2/ For a detailed discussion of the Brazilian experience, see Longo (1994).

in conjunction with the change to a market driven economy. These inter-enterprise arrears are frequently cited as a cause of poorer than expected revenue performance from the value-added tax. This section addresses this issue.

In a properly structured and functioning VAT, inter-enterprise sales should have no impact upon VAT revenue. This is because each tax liability arising upon the sale of an item by an enterprise in the chain of production and distribution is offset by the credit (equal to the liability) claimed by the purchasing entity. 1/ Net VAT liability arises only upon the final sale for consumption. It appears, then, that inter-enterprise arrears should not have any impact upon revenue collections from the VAT. Moreover, inter-enterprise arrears do not reduce the liquidity or income (whether measured on a cash or an accrual basis) of the enterprise sector as a whole. Nonetheless, a correlation clearly does exist between growing inter-enterprise arrears and declining revenue performance, at least in Russia. This correlation arises in part because the inter-enterprise arrears give rise to liquidity problems which lead directly to tax arrears, 2/ and in part because timing asymmetries resulting from the unique structure of Russian VAT reduce legal VAT liabilities (but not VAT credits) in the presence of inter-enterprise arrears.

1. Inter-enterprise arrears in an accrual based credit/invoice system

In a European-style VAT based upon accrual accounting for both credits and liabilities inter-enterprise arrears could have a direct effect upon VAT receipts as a result of the liquidity problems that they cause, particularly if the payment of other obligations have a higher priority than payment of tax obligations. 3/ Credits and liabilities for tax will arise upon delivery ("supply") of inputs and outputs between enterprises, and these

1/ Under many European VATs, there are exceptions to this rule. Enterprises are treated as final consumers with respect to some purchases, for example, vehicles. In this situation the selling enterprise has a liability but the purchasing enterprise has no credit.

2/ There is a vicious circle here. One enterprise's liquidity problem gives rise to delayed payments to other enterprises, and this in turn creates liquidity problems for those enterprises, giving rise to further inter-enterprise arrears.

3/ In the old Soviet system, tax liabilities had first priority among enterprise debts and obligations, and were paid by means of the banks making direct accounting transfers, essentially from one government account to another. Payments to suppliers had a lower priority in the system, and enterprises did not have any means to contravene this. At present, however, enterprises as a matter of practice frequently put their tax liabilities as the lowest priority, after the payment of workers, which comes first, and payments to suppliers. Although the latter also remain unsatisfied to a great extent (hence the growth of inter-enterprise arrears), when cash is available it will tend to be used for this, rather than tax debts.

will be offsetting, regardless of when or if payment takes place between the taxpayers at any stage. However, delayed payments throughout the inter-enterprise chain could put enterprises into such a cash starved state that they have insufficient funds to pay all of their obligations. Thus, selling enterprises will not pay the VAT liability which arises upon their delivery of goods to the next enterprise, because they cannot do so, but the purchasing enterprise will claim a credit for its purchase, on the accrual basis, even though it has not paid the supplier. It will then offset this credit against its own VAT liability for sales, reducing that liability. 1/ Thus, inter-enterprise arrears can translate directly into tax arrears--unpaid legal VAT liabilities.

2. Inter-enterprise arrears in a cash method credit/invoice system

If all enterprises determine both VAT liability and entitlement to input credits on the cash method, in a credit/invoice system, inter-enterprise arrears should have no effect upon the collection of net VAT liabilities. As under the accrual method, in inter-enterprise transactions, liabilities and offsetting credits arise simultaneously, in this case upon payment rather than delivery of the goods. Under the accrual method, credits could be claimed for inputs purchased even if no payment to the supplier had been made. If the cash method applies, however, no credit can arise until payment is made for the input purchased, and the claiming of credits and payment of liabilities will not become asymmetric.

3. Inter-enterprise arrears in the Russian system of the cash method for determining VAT liability combined with the used-in-production standard for claiming credit

The existing Russian system permits credit to be taken when inputs are used in the production process, whether or not they have been paid for. VAT liability with respect to sales arises upon the receipt of payment. In this situation, inter-enterprise arrears may reduce VAT collections by introducing asymmetry into the creation of credits and liabilities-- credits can arise before the offsetting liabilities at the intermediate stages of production. 2/ For example:

Producer A sells an input to producer B for 100, plus VAT of 20. B uses the input in its production, and takes a corresponding VAT credit of 20 against its total VAT liability for the period. However, B does not pay A

1/ For a discussion of the effect on enterprises in an excess credit position, see Subsection VI.5.

2/ Note that this differs from the negative effect on revenue of arrears in a pure accrual based system. There, legally the credits and liabilities did offset one another, but the liabilities could go unpaid, giving rise to tax arrears, while the credits were claimed. Here, the liabilities may legally arise (long) after the credits are legally claimed.

for the input. Thus, A incurs no current liability to pay the 20 in VAT to the government. Nor does B incur any current liability when it, in turn, sells its own output, incorporating A's input, to C for 200 (net of VAT). C, however, will claim a current input credit of 40 when it uses B's output. Even if the payments are ultimately made, the government has lost the revenue in the meantime. The value of this timing discrepancy is even higher in the presence of inflation.

4. Inter-enterprise arrears when the credit/invoice method is used at the manufacturing level and the gross margin method at the trading level

If this "mixed system" functioned exactly correctly and no asymmetries were introduced, net VAT liability would be the same as if the credit/invoice method were extended through final sale to the consumer. 1/ Inter-enterprise arrears between the production sector and the trading sector will, however, result in a loss of VAT revenue under the existing Russian system. Because of the use of the gross margin as the basis for liability, traders are, in effect, allowed to take credit for purchases for resale, whether or not they have been paid for. This creates the same legal asymmetry in credits and liabilities as does the use of the cash method for liabilities and the used-in-production standard for the claiming of credits at the manufacturing level, as just described in Subsection VI.3. For example:

Assume that a retailer buys goods directly from the manufacturer at a cost of 100, plus VAT of 20. The retailer then sells the goods for 240, inclusive of VAT, to the final consumer. The consumer pays the retailer for the goods, and the retailer correctly remits its VAT liability under the gross margin method of 20 $((240 - 120) \times .166 - 20)$. However, if the retailer did not pay the producer for the goods originally, the producer has incurred no legal liability to pay its own VAT of 20. The government has collected only 20 in VAT on a final sale of 200 (net of VAT), rather than the 40 which should be paid. However, because of the use of the gross margin method in the presence of inter-enterprise arrears the legal VAT liability generated to this point is only 20, or 10 percent, rather than 20 percent of total value-added.

1/ See, Subsection IV.2 above.

5. Excess credits

The revenue losses caused by asymmetries introduced by inter-enterprise arrears will be offset to the extent that the enterprises claiming credits in the foregoing examples have excess VAT credits. Since such credits are not refunded under the Russian VAT, they must be carried forward. The government benefits from this because it reduces the use of credits by purchasers and therefore reduces the extent to which credits are used before the corresponding liabilities are paid.

VII. Conclusions

The Russian value-added tax, and the value-added taxes of the other transition countries, have several problems which must be addressed if the taxes are to serve their intended function--raising a significant portion of the revenue needed by these republics in a relatively neutral manner by taxing consumption. These problems include: (i) a rapidly narrowing tax base; (ii) the mixture of cash and accrual accounting (with unique variations) in the accounting of most enterprises for their VAT liability; (iii) discrepancies caused by the application of two different methods of taxation at the production and wholesale/retail stages of commerce; (iv) a lack of immediate full crediting for purchase of capital inputs; and (v) the question of how to treat cross-border transactions among Russia and the other transition countries.

Most of these issues have obvious solutions. If the tax base is not to collapse, the accelerating trend toward adding exemptions and preferences must be reversed, despite the political difficulty of doing so. The credit/invoice method should be extended through the retail level. This is in large part a problem of education of policy makers, requiring that old habits and command economy methods of accounting among both taxpayers (particularly state enterprises) and administrators be overcome. The law and administration must clearly provide, and effectively enforce, consistent use of accrual accounting by taxpayers (with the possible exception of an optional, consistent, cash method for small traders). 1/

1/ A sudden shift from the cash method of determining liability to the accrual method could result in a cash flow crisis for taxpayers. This could be mitigated by reducing the requirements for advance payments. Presently, large taxpayers are required to make advance payments three times during the month, before determining their final liability for the month after the period is over. (This system protects the government from inflation to some extent.) As a transitional measure at least the advance payment requirement could be reduced to a single payment or even eliminated to mitigate the cash flow problems caused by concurrent liability for past sales and current sales.

The issue of allowing VAT credits for capital inputs has been largely addressed already in Russia, since credits have been gradually introduced and are now permitted there over only a six month period. Ideally, this trend will ultimately result in immediate crediting, with refundability for excess credits. 1/ This problem, while originally quite serious, is now probably a less important source of distortion in Russia than are the other issues discussed here. In fact, the system now resembles those of many Latin American countries which have been quite successful with the VAT. It is not clear that the benefits of an immediate change to complete refundability from the present position would outweigh the short-run revenue loss which would arise. Introduction and gradual acceleration of crediting for capital inputs should also be adopted in other republics which have not caught up to Russia in this respect. In general, the laws should provide the framework for crediting of capital inputs in the short term, with the timing of the credits dependent upon individual circumstances.

The final issue, the treatment of cross-border transactions among Russia and the other transition countries, is much more difficult from a tax policy and administrative perspective. If border controls existed between the republics, and, just as importantly, complete economic separation of all of the republics had been agreed upon, clearly a standard destination-based system with zero-rating of exports and taxation immediately upon import would be simplest, most consistent with the rest of the world, and most reflective of this hypothetical policy choice made regarding the economic space of the transition countries. However, neither of these conditions exists at present.

Two things can be said, nonetheless, in light of which the policy makers' decision on this point should be made. First, the republics apparently do not have the collective capacity for effective border control at this point, and certainly do not have the administrative capability to operate a clearing house mechanism. Thus, if a destination basis were to be adopted, the delayed payment mechanism presently in use in the European Union would be the easiest method to administer, despite its theoretically lower degree of control over fraud. In order for this system to work appropriately, without the addition of certain adjustment mechanisms introducing additional complexity, it would be necessary for the credit/invoice method to be extended through the retail level. Otherwise, transactions involving the import of goods for resale (rather than as production inputs) would fail to be taxed on the full value-added in the product.

1/ Carryforwards of excess credits, adjusted for inflation, could serve almost the same function (with the loss to the taxpayer of the real interest value of the carryforwards for the period until they are fully utilized) with less administrative complexity, by avoiding the administration of the refunds and the abuses to which they would be subject.

The current system is closer to the origin method. However, the rates of credit for imported intermediate goods are not always correct, as discussed in Section V. above. A pure origin system could be introduced relatively easily starting at the present point, if these credit rates were adjusted so that credit for imported inputs was always given at the rate of the importing country. As also noted, the use of the current gross margin method at the wholesale/retail level is actually an advantage in this respect; however, adoption and consistent application of the appropriate credit rates on all imports, including those for resale, would also achieve the correct result for imported final goods even under the credit/invoice method. In light of the other disadvantages of the present mixed systems, this would be more desirable.

Thus, the decision as to which system to adopt is partially an administrative one--which system could be administered more accurately, an (appropriately adjusted) origin basis one, or a delayed payment destination basis?--and partially, and perhaps ultimately more importantly, an economic policy choice. The latter decision depends, of course, upon the political leaders' visions of the joint economic environment of the transition countries and upon the revenue effects arising from the choice.

If all VAT rates were identical across all the countries and the tax covered exactly the same base everywhere, 1/ the decision would have no differential effects on either consumers or producers in the various republics. However, in the real world of differential rates and bases, adoption of the origin system affords positive and negative effective protection to producers, depending upon the relative tax rates of the exporting and importing countries. The tax of origin stays with the goods, and consumers of the same good in different countries all face the same tax burden with respect to it. Conversely, in the destination system, consumers in any given country always face their domestic tax burden on all goods, imported or domestic, and no protection arises for producers.

Perhaps more important from a practical point of view than these considerations is the fact that revenues would be shifted among the countries depending upon whether the origin or destination method was chosen even if all tax rates were the same, unless all trade was exactly balanced among all trading partners. It is possible that it is this which will drive (and has driven) the choice of system by the various countries, and in particular Russia. From a revenue standpoint, countries with a positive balance of trade would benefit from the adoption of the origin method, under which VAT revenue accrues to the country of production. And adjusting the credit rate for intermediate imported goods away from the domestic rate could be used to offset or enhance the effective protection afforded by the VAT to domestic producers. 2/ For the moment, at least, this is the choice which has more or less been adopted by Russia and the other

1/ And there were no exchange rate effects.

2/ As would be used in a "pure" origin system discussed in Section V.

transition countries; the basic decision in the future may be based more upon political/economic fundamentals than upon tax policy and administrative concerns. Will this joint economic space consist of 12 separate, independent partners, treating each other as they do the rest of the world (and thus adopting a destination based model), or will the considerations of an interdependent economic block result in constant negotiation based upon economic advantage and disadvantage? In light of the fact that the European Union has had such a difficult time addressing the question of origin or destination basis for the VATs of its member states, it is small wonder that these newly independent countries have not been able easily to resolve the issue in only two and a half years.

Exemptions and Preferences Introduced into the Russian VAT

December 1991 Statute

Goods and services for diplomatic use, official or personal, and urban and non-urban passenger transportation (other than taxicabs) were zero-rated. At least 15 other categories of transactions were exempted, including the following:

- Residential rent (including hostel lodgings).
- New housing construction.
- Purchase or lease of privatized government enterprise properties.
- Insurance; issuance and transfer of loans.
- Transactions "relating to the circulation of currency."
- Securities.
- Actions of government agencies for which fees are charged.
- Legal services.
- Translation services.
- Turnover of casinos, coin-operated gambling games, and racetrack betting.
- *Services in the sphere of public education, including sports and hobby training, preschools.*
- Services in the care of the aged or infirm.
- Issuance of patents, copyrights and licenses.
- Services of funeral homes, crematoria, etc.; rites and ceremonies of religious organizations.
- Services rendered by institutions of culture, art, theater; athletic, educational, entertainment events including videos.
- Research and experimental design work funded from the government budget.
- Work regarding "economic agreements" by educational institutions.

1992 Statutory Changes

During 1992, the exemption for translation services was eliminated, but numerous others were added. Most additions were made in a series of three amendments to the law, in May, July and December, 1992, including:

- "Subsoil charges" (apparently defined in the Instructions to the law as turnover from sales of ore, precious metals, scrap containing metals, to the State Fund).
- Contract guard services of the Ministry of Internal Affairs.
- Goods made and sold by labor rehabilitation workshops for psycho-neurological patients, and public organizations of disabled persons.
- Goods made and sold by enterprises at least 50 percent of whose workforce is disabled.
- Own products of collective or state farms used for self-catering or as wages in kind for current or former employees.
- Self-catering services in institutions of public education (broadly defined) or institutions for the care of the elderly or disabled.
- Folk arts and crafts of "recognized artistic value."
- Imported humanitarian aid.
- Lease of official or dwelling premises to foreign persons accredited in Russia when there is reciprocity by their government or a treaty provides for this exemption.
- Turnovers from the sale of confiscated or ownerless valuables.
- Medical services; payments for stays in sanatoria or rest homes; tours and excursion places; medicinal substances; orthopaedic devices.
- Technical rehabilitation devices, including specially adapted automobiles.

Also in 1992, housing rents and payments for privatized government property were changed from being exempted to being zero-rated.

1992 Exemptions Apparently Added by Instructions

Three exemptions appear to have arisen in amendments to the Instructions to the law during 1992:

- Transfer of facilities from the Councils of Peoples' Deputies to private ownership, including kindergartens, clubs, sanatoria, residences, etc.
- Fixed assets for non-production purposes, except for any mark-up on the sale over the acquisition cost.
- Technical and scientific research instruments (February, 1993).

January 1993. Addition of a Preferential Rate of Tax

As of January 1993, a lower rate of 10 percent was introduced, to apply to the following:

- Foodstuffs (other than excisable foodstuffs).
- Raw materials for their production.
- Children's goods.

December 1993. Presidential Decree

In December 1993, this narrowing of the tax base continued, this time by Presidential decree rather than legislative action. One portion of a sweeping decree on tax policy by President Yeltsin included a large number of additional exemptions to the VAT (and reiterated a few that already seemed to be in the law):

- Production equipment, parts and materials imported for the manufacture of immunological/biological preparations for the treatment of infectious disease to combat epidemics.
- Goods and production equipment imported as part of free technical assistance or to conduct joint research with foreign organizations and firms.
- Books, periodicals, study materials brought in for educational institutions.
- Sale of goods produced by collective or state farms and other agricultural enterprises to old-age or disability pensioners currently or formerly employed by them.
- Goods produced and sold by psycho-neurological, tuberculosis treatment or social protection or rehabilitation institutions.

- Production of enterprises whose work force consists of at least 50 percent disabled persons.
- Fees for issuance of licenses for activities and title to land documents.
- Continuing through 1994 an exemption begun in 1993 for the sale of military equipment and services of military units where the funds are used to promote the welfare of the personnel and their families.
- Transactions of sole proprietors.

Legislative Changes Submitted to the Duma, September, 1994

A substantial package of general tax reform legislation was presented to the Duma by the Russian Government in September, 1994. These changes, if adopted, would be effective January 1, 1995. Changes in the value added tax include a rate reduction, substantial base broadening, and the elimination of a portion of the structural anomalies described in this paper.

Rates:

- The three percent surcharge will be eliminated, leaving the standard rate at twenty percent, and the preferential rate at ten percent.

Structural Changes:

- The credit/invoice method will be extended through the wholesale sector, leaving only the retail trading sector using the gross margin method of calculating the tax;

- The hybrid use of the cash method to determine the accrual of VAT liability on sales and the put-into-production method to determine eligibility to take credit on inputs will be eliminated, and both sides of the transaction put onto the cash method. Liability for tax and eligibility for credit will both arise upon payment.

Base Broadening Measures:

- Exemptions will be eliminated for: new construction; entertainment; research and development; casinos and gambling; and security services of the Ministry of Internal Affairs. Agriculture continues to be exempt.
- Many exemptions now applicable to imports, including foodstuffs, will also be eliminated. Exemptions do apply, however, to: technical aid from foreign donors; grants; goods financed by credits from international financial institutions and bilateral aid; and import of capital equipment by owners of enterprises.
- Coverage of the ten percent preferential rate will be reduced. However, this reduced rate will continue to apply to a long list of basic foodstuffs, and will apply to imported foodstuffs.

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