BOPCOM-00/27

Thirteenth Meeting of the
IMF Committee on Balance of Payments Statistics
Washington, D.C., October 23–27, 2000

Identifying Challenges Associated with Evaluating Foreign Trade Transactions in Illegal Drug Trafficking

Prepared by Mr. Sergei Shcherbakov
Central Bank of the Russian Federation

Identifying Challenges Associated with Evaluating Foreign Trade Transactions in Illegal Drug Trafficking

Currently, major concern is placed by Russian statisticians around problems of getting an insight into the shadow economy activities and evaluating its scale.

Russia's national accounting and balance of payments practices have so far been restricted in terms of finding practical solutions to these problems and, in fact, confined to those unofficial activities that are not prohibited by law but for some reason failed to be officially registered by respective registering authorities. Though challenging, such evaluation is quite feasible to implement because at some stage the results of informal activities within the production cycle become legalised. For instance, goods concealed by the producer for tax evasion purposes or smuggled into the country are brought to the market and sold along with officially declared ones. In this case, comparing consumption against production and official imports will indicate that the latter are understated. The ultimate consumer generally remains unaware of the origin of good bought and has no interest in concealing the actual results.

Despite public recognition of the existence and scale of illegal activities, all efforts to evaluate the scope in various areas have so far been merely theoretical.

One such effort is the Bank of Russia's model developed jointly with law enforcement agencies and intended for evaluating illegal drug trafficking and traffic-related resources.

Through consistent iterations, this model makes it possible to implement the following evaluations:

- volume and market value of narcotic drugs trafficked for marketing;
- volume and market value of narcotic drugs consumed by occasional drug users and drug addicts;
- volume and value of Russian-made drugs;
- volume and value of drugs imported from the CIS and other countries;
- value of drugs brought into the country from abroad in average prices of the countries of origin.

The main sources of information for making evaluations are: the Interior Ministry's quarterly statistics, namely the "Report on Illegal Trade, Production

and Use of Narcotic Drugs"; Public Health Ministry's data on registered addicts to narcotic, mood-changing and highly intoxicating substances; experts' estimates by the Interior Ministry, the Federal Security Service and Public Health Ministry's Drug Abuse Research Institute; estimates made by experts specialising in drug addiction and non-governmental organisations of former drug addicts.

However, none of the abovementioned sources can be said to provide reliable and exhaustive data; information is largely based on indirect data that require significant adjustments through expert analysis.

There are a number of alternative approaches used to increase the accuracy of calculations.

The total volume of drugs used, on the one hand, is estimated as a sum total of drugs consumed by drug addicts and occasional users based on average daily doses; on the other hand, it can be estimated as narcotic drugs quantity seized by law enforcement authorities and adjusted to the latency ratio.

On the first approach, estimates are based on data on drug addicts officially registered by the Public Health Ministry and on additional experts' estimates by the Interior Ministry of occasional drug users and latent addicts. It is significant to note that adjusted data exceed official figures by 8-9 times. Primary data on the number of drug users are computed by Russian region consistently with the Consumed Natural and Synthetic Drugs Classification broken down by 13 enlarged subgroups. Average periodic consumption rates (daily, quarterly and yearly) are calculated based on minimal estimates made by experts in by drug-abuse experts. According to information provided by drug addicts undergoing treatment or recovered after treatment, actual consumption rates are somewhat higher for certain drugs. In both cases, only the pure narcotic component is taken into account.

The seized drugs evaluation approach presents quite a simplified model because the actual amount of confiscated drugs should be multiplied by the internationally accepted latency coefficient equalling 10. This implies just one-tenth of total drugs sales are detected by law enforcement agencies.

The discrepancy in these models-based evaluation results does not exceed 20%, and resultant figures in the first case are smaller than in the second case because, as noted above, minimal consumption rates are applied.

Drug seizure statistics help identify sources of trafficking drugs into the Russian market, specifically due to the fact that drugs are often seized at airports and railway terminals once they arrive in Russia. However, these data also require

revisions by expert adjustments for identifying the country of seized drugs origin. By experts' data, only 10% to 50% of soft herbal drugs brought in from the CIS countries are produced in these countries. Generally, a quarter of all drugs in the Russian illegal drug market are currently produced in Russia, one-tenth are brought in from other CIS countries and two-thirds are smuggled in from non-CIS countries, mainly from the so called "Golden Crescent" and the "Golden Triangle" regions. This by-country breakdown may be somewhat distorted since Russia along with other CIS countries have recently become a transit point for drugs trafficked from Asia to Europe. Due to that, part of drugs intended for re-export to Europe gets included in the national statistics.

The next important stage is to value the turnover and imports of drugs in market prices, as well as drug imports in the source country's FOB prices.

The Interior Ministry data on domestic market prices is extensive and regionally differentiated. A major problem in using this information is to relate a specific price for each drug to a pure substance standard content. For example, pure heroin in a standard "street" dose is known to vary from 1% to 10%. Besides, calculating average prices for each sub-group appears to be extremely difficult since drugs are recorded on the basis of the extended Drug Groups Classification. The problem is still more aggravated by an ever-extending range of narcotic substances to be classified, and the consumption profile within each enlarged position is changeable. By law enforcement bodies data, for instance, price increases in imported drugs after the 1998 ruble devaluation caused a significant increase in demand for wild mushrooms across Russia's northern regions.

In practice, valuation is made for each of the eight phytogenous narcotic drug sub-groups and their derivatives based on the weighted average regional price by a number of registered drug addicts. Valuation for the five consolidated sub-groups of synthetic narcotics was made based on weighted average price of the mostly consumed drug in the respective group.

We face great difficulties in estimating drug imports in the prices of the source country. Primary data are provided by law enforcement authorities, obtained from their foreign counterparts within international co-operation framework. However, these data, are very limited and often controversial. Apparently, this can be attributed to peculiarities of pricing practices across various regions even within one country due to the involvement of intermediaries. According to available data, the average price of 1 kilo of pure heroin in Thailand's capital Bangkok is 2-2.5 times higher than in that same country's provincial centres. Nevertheless, we calculate average FOB prices as the weighted arithmetic mean, i.e. the average price in a producer country is weighted by the same country's imports share. The

latter figure is estimated and reported by the Russian Interior Ministry jointly with its research institutions.

This methodology was used for making experimental calculations for 1998, meanwhile calculations for 1999 are being finalised and will be released shortly. In 1998, illegal drug trafficking in Russia is estimated at US$1.5 billion, of which imported drugs in domestic prices amounted to US$1.2 billion. In FOB prices, drug imports are estimated at US$600 million. These figures cannot yet be regarded as official and, therefore, cannot be included in the macroeconomic statistics frameworks of the SNA and balance of payments.

We are convinced these efforts must be continued and more relevant Russian agencies should be involved. We particularly hope that our national accounts colleagues will join us in these efforts. Along with that, there are major hopes on international cooperation in exchanging data and expert practices.

In further tackling these problems, we intend to expand the model not only by gathering more detailed and extensive data, but also by applying a set of indicators featuring imports of services related to intermediation and drugs trafficking to the Russian border, as well as payments for imports. The significance of these indicators became evident after making the initial estimates on imports were completed. The available model showed the domestic market prices for selected drugs exceeded FOB prices of a producer country by 20 to 40 times. A considerable part of this difference can, obviously, be attributed to delivery payments. Besides, third countries nonresidents are known to be involved in this business.

Estimates of financial flows related to international drugs trafficking constitute a specific problem since such transactions are largely made legally via official bank channels and, consequently, get implicitly included in the balance of payments already at this stage. In fact, it is getting obvious that “Errors and Omissions” item in the balance of payments is getting “heavier”. Further progress in this respect are believed to be made after Russia subscribes to the Council of Europe’s Convention “On the Laundering, Identification, Seizure and Confiscation of Proceeds from Criminal Activities” (the Strasbourg Convention), and after the respective federal law is passed.

The range of issues outlined in the paper has not covered export activities because drugs exports are less important for Russia. Moreover, experts do not forecast any significant increase in this kind of transactions in the future. However, there is every reason to expect greater involvement of Russian residents in transit transportation of drugs. This situation will certainly require adequate statistical coverage.

DRAFT METHODOLOGY FOR ECONOMIC EVALUATION OF ILLEGAL DRUG TRAFFICKING

Version No. 1: Based on the Number of Drug Users

TABLE 1.1. TOTAL AMOUNT OF DRUGS CONSUMED BY INDIVIDUALS PRACTISING NON-MEDICAL USE OF NARCOTIC SUBSTANCES

		Unit of measu-rement	Total number of individuals practising non-medical use of narcotic, mood-changing and highly intoxica-ting* substances, thousands of persons	Total number of drug users (Interior Ministry's expert estimates), thousands of persons	Total number of drug addicts (Interior Ministry's expert estimates), thousands of persons	Average quarterly consumption rate per user, units	Average quarterly consumption rate per addict, units	Total drugs consumed by drug users, thousands of units	Total drugs used by drug addicts, thousands of units	Total drugs consumed, thousands of units	Adjusted total drugs used, thousands of units**	Average market price of drug, US dollars per unit	Total cost of drugs consumed, millions of US dollars
		1	2	3	4	5	6	7	8	9	10	11	12
Total	1												
of which:													
opium	2												
morphine	3												
heroin	4												
other opiates, including synthetic opiates	5												
cocaine	6												
hemp derivatives	7												
barbiturates and tranquillisers	8												
amphetamines and other stimulants	9												
LSD and other hallucinogens	10												
other narcotic and mood-changing substances	11												
two drugs and substances and more	12										0	x	x
highly intoxicating substances	13												

* Hereinafter: drugs

** In column 10 all lines, except 1 and 12, are calculated through the following formula: column 10=column 9 x (line 1 in column 9)/(line 1 in column 9-line 12 in column 9)

COMPLEMENTARY TABLE 1.2 CALCULATION OF AVERAGE MARKET PRICE OF DRUGS

		Average price per unit, US dollars (Pci) on each of 7 territorial zones				Each zone's share in total number of people practising non-medical use of drugs (Qi)				Weighted average price per unit, US dollars*
		1	2	3	…	8	9	10	…	15
Total	1									
of which:										
opium	2									
morphine	3									
heroin	4									
other opiates, including synthetic opiates	5									
cocaine	6									
hemp derivatives	7									
barbiturates and tranquillisers	8									
amphetamines and other stimulants	9									
LSD and other hallucinogens	10									
other narcotic and mood-changing substances	11									
highly intoxicating substances	12									

$$\frac{\sum_{i=1}^{7} Pci * Qi}{\sum_{i=1}^{7} Qi}$$

Version No. 2: Based on Interior Ministry Data on Drugs Seizure

TABLE 2.1 AMOUNT AND COST OF DRUGS IN ILLEGAL TRAFFIC

		Unit of measurement	Total narcotic, mood-changing and highly intoxicating substances seized *, thousands of units	Grossing-up ratio, times	Total illegal drug traffic, thousands of units	Average market price per unit of drug, US dollars	Cost of drugs seized, millions of US dollars	Cost of illegally trafficked drugs, millions of US dollars
		1	2	3	4	5	6	7
TOTAL	1			x				
of which								
opium poppy	2							
raw opium	3							
morphine	4							
heroin	5							
other opiates, including synthetic opiates	6							
cocaine	7							
marijuana	8							
hashish	9							
hashish oil	10							
barbiturates and tranquillisers	11							
amphetamines and other stimulants	12							
LSD and other hallucinogens	13							
other drugs and mood-changing substances	14							
highly intoxicating substances	15							

* Hereinafter: drugs

COMPLEMENTARY TABLE 2.2 CALCULATION OF AVERAGE AMOUNT AND COST OF ILLEGALLY TRAFFICKED DRUGS

		Solution 1		Solution 2		Arithmetic mean of the solutions		Geometric mean of the solutions	
		Total of drugs consumed, thousands of units	Cost of drugs consumed, millions of US dollars	Total illegal drug traffic, thousands of units	Cost of illegally trafficked drugs, millions of US dollars	Total illegal drug traffic, thousands of units	Cost of illegally trafficked drugs, millions of US dollars	Total illegal drug traffic, thousands of units	Cost of illegally trafficked drugs, millions of US dollars
		1	2	3	4	5	6	7	8
TOTAL	1								
of which									
opium poppy	2								
raw opium	3								
morphine	4								
heroin	5								
other opiates, including synthetic opiates	6								
cocaine	7								
marijuana	8								
hashish	9								
hashish oil	10								
barbiturates and tranquillisers	11								
amphetamines and other stimulants	12								
LSD and other hallucinogens	13								
other drugs and mood-changing substances	14								
highly intoxicating substances	15								

TABLE 2.3 ILLEGAL DRUG IMPORTS

		Unit of measurement	Share of drugs imported from non-CIS countries in total illegal drug traffic, %	Total drugs imported from non-CIS countries, thousands of units	Share of drugs imported from CIS countries in total illegal drug trade, %	Total imports from CIS countries, thousands of units	Average source-country price of drug per unit (non-CIS countries), US dollars	Average source-country price of drug per unit (CIS countries), US dollars	Cost of drugs imported from non-CIS countries, million US dollars	Cost of drugs imported from CIS countries, million US dollars	Total cost of imported drugs, millions of US dollars
		1	2	3	4	5	6	7	8	9	10
TOTAL	1										
of which											
opium poppy	2										
raw opium	3										
morphine	4										
heroin	5										
other opiates, including synthetic opiates	6										
cocaine	7										
marijuana	8										
hashish	9										
hashish oil	10										
barbiturates and tranquillisers	11										
amphetamines and other stimulants	12										
LSD and other hallucinogens	13										
other drugs and mood-changing substances	14										
highly intoxicating substances	15										

COMPLEMENTARY TABLE 2.4 CALCULATION OF AVERAGE DRUG PRICES IN NON-CIS SOURCE COUNTRIES

		Average price per unit in source country (Pi)			Countries' share in imports from non-CIS countries, % (dQi)			Weighted average price, US dollars per unit**
		5-7 countries with total share of imports of more than 50%			5-7 countries with total share of imports of more than 50%			
		1	2	…	8	9	…	15
TOTAL	1	x	x	x	x	x	x	x
of which								
opium poppy	2							
raw opium	3							
morphine	4							
heroin	5							
other opiates, including synthetic opiates	6							
cocaine	7							
marijuana	8							
hashish	9							
hashish oil	10							
barbiturates and tranquillisers	11							
amphetamines and other stimulants	12							
LSD and other hallucinogens	13							
other drugs and mood-changing substances	14							
highly intoxicating substances	15							

** $$\frac{\sum_{i=1}^{7} Pi * dQi}{\sum_{i=1}^{7} dQi}$$

Note: when data for calculating weighted average price is unavailable, it should be calculated as non-weighted arithmetic mean.

COMPLEMENTARY TABLE 2.5 CALCULATION OF AVERAGE DRUG PRICES IN THE CIS SOURCE COUNTRIES

		Average price per unit in source country (Pi)			Countries' share in imports from non-CIS countries, % (dQi)			Weighted average price, US dollars per unit**
		5-7 countries with total share of imports over 50%			5-7 countries with total share of imports over 50%			
		1	2	…	8	9	…	15
TOTAL	1	x	x	x	x	x	x	x
of which								
opium poppy	2							
raw opium	3							
morphine	4							
heroin	5							
other opiates, including synthetic opiates	6							
cocaine	7							
marijuana	8							
hashish	9							
hashish oil	10							
barbiturates and tranquillisers	11							
amphetamines and other stimulants	12							
LSD and other hallucinogens	13							
other drugs and mood-changing substances	14							
highly intoxicating substances	15							

** $$\frac{\sum_{i=1}^{7} Pi * dQi}{\sum_{i=1}^{7} dQi}$$

Note: when data for calculation of weighted average price is unavailable, it should be calculated as non-weighted arithmetic mean.

TABLE 2.6 CALCULATION OF ILLEGAL PRODUCTION AND EXPORTS OF DRUGS

		Amount of Russian-made drugs seized, units	Grossing-up ratio, times	Total Russian-made drugs, thousands of units	Russian average market price, US dollars per unit	Total cost of drugs produced in Russia, millions of US dollars	Share of exports in production, %	Total illegal exports, millions of US dollars
		1	2	3	4	5	6	7
TOTAL	1				x		x	
of which								
opium poppy	2							
raw opium	3							
morphine	4							
heroin	5							
other opiates, including synthetic opiates	6							
cocaine	7							
marijuana	8							
hashish	9							
hashish oil	10							
barbiturates and tranquillisers	11							
amphetamines and other stimulants	12							
LSD and other hallucinogens	13							
other drugs and mood-changing substances	14							
highly intoxicating substances	15							

TABLE 2.7 PAYMENT TRANSACTIONS RELATING TO ILLEGAL DRUG IMPORTS

		Cost of drugs imported from non-CIS countries, million US dollars	of which paid for, millions of US dollars		Cost of drugs imported from CIS countries, in millions US dollars	of which paid for, millions of US dollars		
			in foreign cash	As barter transactions in goods and services		in foreign cash	in cash rubles	as barter transactions in goods and services
		1	2	3	4	5	6	7
TOTAL	1							
of which								
opium poppy	2							
raw opium	3							
morphine	4							
heroin	5							
other opiates, including synthetic opiates	6							
cocaine	7							
marijuana	8							
hashish	9							
hashish oil	10							
barbiturates and tranquillisers	11							
amphetamines and other stimulants	12							
LSD and other hallucinogens	13							
other drugs and mood-changing substances	14							
highly intoxicating substances	15							

COMPLEMENTARY TABLE 2.8 EXPERT ESTIMATES OF MEANS OF PAYMENTS PROFILE IN IMPORT TRANSACTIONS

		Means of payment for imports, in % to imports from non-CIS countries		Means of payment for imports, in % to imports from CIS countries		
		Foreign cash	Barter transactions in goods and services	Foreign cash	Cash rubles	Barter transactions in goods and services
		1	2	3	4	5
TOTAL	1					
of which						
opium poppy	2					
raw opium	3					
morphine	4					
heroin	5					
other opiates, including synthetic opiates	6					
cocaine	7					
marijuana	8					
hashish	9					
hashish oil	10					
barbiturates and tranquillisers	11					
amphetamines and other stimulants	12					
LSD and other hallucinogens	13					
other drugs and mood-changing substances	14					
highly intoxicating substances	15					