TRANSITION TO PAYMENTS FOR RUSSIAN GAS IN RUBLES: ONE STEP BEYOND

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Abstract: *Russia has long dominated in the supply of gas to many European countries, at the same time being heavily dependent on the foreign currency revenues from gas exports to cover its foreign currency demand. Therefore the Russia-Europe gas trade was considered mutually beneficial. Geopolitical tensions of spring 2022 changed this status quo. Russia required gas to be paid in rubles. The paper lays out an analytical framework for understanding the reasons and consequences of this drastic move based on the combination of macro- and micro-level challenges. We argue that the new mechanism of the Russian gas payments introduced in 2022 should be considered transitional to a potential future radical overhaul of the payments for Russian exports.*

Keywords: *gas, international trade, payments.*
JEL: *E42, F14, F32*

1. Introduction.

Western sanctions in spring of 2022 posed big problems for Russian trade: many Russian banks became disconnected from the international banking payment system SWIFT, foreign accounts of many Russian companies and banks were frozen. This in turn led to the worsening situation on the Russian financial markets and provoked devaluation of the ruble. The crisis situation in the foreign exchange market forced the Ministry of Finance and the Central Bank of the Russian Federation to made Russian exporters sell 80% of their foreign exchange earnings since February 28 2022. The subsequent sale of foreign exchange earnings by exporters helped ease the pressure on the ruble, but did not solve the fundamental problem of the increased vulnerability of Russian exporters to sanctions imposed on them. To support one of the largest Russian exporters playing a key role in the Russian economy, Gazprom, a special decree of the President established the transfer of payments for Russian gas supplies for export to "unfriendly" countries into Russian rubles. Some buyers of Russian gas agreed to switch to a new gas payment scheme. For those who refused, gas supplies were cut off.

The ongoing changes have caused great discussions in scientific and business circles. The opinions of the participants in the discussions of this problem were divided. Some see the new payment mechanism as a revolution, believing that from now on, Russian participants in foreign economic activity will be completely protected from foreign sanctions. Others, at the same time, believe that nothing fundamentally new has happened.

The purpose of this paper on a micro-level is to demonstrate the impact of the ongoing changes in the procedure for Russian exporters to receive revenue from Russian gas supplies abroad on the balance sheets of all the participants in these deals in comparison with existing, new, and also promising methods. This will allow a better understanding of the complex nature of the ongoing changes and a more detailed understanding of this important topic. On a macro-level the paper addresses the issue of a dedollarization of Russian trade and the international use of ruble.

Russian gas export to Europe.

Over the past decades Russian gas has been an important part of Russian exports. Though its export volume and value have varied significantly (Table 1). The biggest total volume of Russian gas exports was recorded in 2018 at 223 bln cubic metres, the smallest in 2014 at 174,3 bln cubic metres. Since gas price varied a lot too, the highest value of Russian gas exports was recorded in 2008 at 69107,1 mln USD the lowest in 2002 at 15897,3 mln USD. What is constant during these years is that the bulk of Russian gas exports went to countries other than the Commonwealth of Independent States (CIS).

Table 1. Natural Gas Exports of the Russian Federation in 2000-2020

	Exports				Growth rate in % to previous period				*Memorandum: average export price , USD/1000 cubic metres*
	Total		of which:		Total		of which:		
			to non-CIS countries	to CIS countries			to non-CIS countries	to CIS countries	
	volume, bln cubic metres	value, mln USD	volume, bln cubic metres	volume, bln cubic metres	volume	value	volume	volume	*Total*
2000	193,9	16644,1	134,0	59,9	94,4	146,6	102,2	80,6	*85,84*
2001	180,9	17770,0	131,9	48,9	93,3	106,8	98,5	81,7	*98,25*
2002	185,5	15897,3	134,2	51,3	102,6	89,5	101,8	104,8	*85,69*
2003	189,4	19980,9	142,0	47,3	102,1	125,7	105,8	92,3	*105,51*
2004	200,4	21853,2	145,3	55,1	105,8	109,4	102,3	116,4	*109,05*
2005	209,2	31670,5	161,7	47,5	104,4	144,9	111,3	86,3	*151,36*
2006	202,8	43806,2	161,8	41,0	96,9	138,3	100,0	86,3	*216,00*
2007	191,9	44837,4	154,4	37,5	94,6	102,4	95,4	91,4	*233,66*
2008	195,4	69107,1	158,4	37,0	101,8	154,1	102,6	98,6	*353,69*
2009	168,4	41971,4	120,5	47,9	86,2	60,7	76,1	129,5	*249,27*
2010	177,8	47739,3	107,4	70,4	105,6	113,7	89,1	147,1	*268,48*
2011	189,7	64290,1	117,2	72,5	106,7	134,7	109,2	102,9	*338,88*
2012	178,7	62253,3	112,7	66,0	94,2	96,8	96,1	91,1	*348,33*
2013	196,4	65971,6	138,0	58,4	109,9	106,0	122,5	88,4	*335,87*
2014	174,3	54685,1	126,2	48,0	88,7	82,9	91,5	82,3	*313,81*
2015	185,5	41778,7	144,7	40,7	106,4	76,4	114,7	84,8	*225,26*
2016	198,7	31189,7	164,7	34,0	107,2	74,7	113,8	83,4	*156,95*
2017	213,0	38660,7	178,7	34,3	107,2	124,0	108,5	100,9	*181,49*

2018	223,0	49752,9	186,4	36,6	104,7	128,7	104,3	106,7	*223,11*
2019	220,7	41460,8	182,5	38,2	99,0	83,3	97,9	104,4	*187,86*
2020	202,5	25682,9	167,3	35,2	91,7	61,9	91,7	92,1	*126,84*

Source: CBR (2022b).

Russia has long dominated in the supply of gas to many European countries, which made it a powerful actor in the European gas market in spite of changes in the Russian national market and geopolitical tensions of the last decade. Lunden, Lars Petter et al. (2013) state that Gazprom has long remained the leading gas producer and exporter in the Russian federation and though the Russian gas market was undergoing some transformations and non-Gazprom gas producers (NGPs) increased their share of the Russian domestic gas market, the interests of Gazprom and the NGPs may be complementary or may be pitted against each other, but those of the Russian Federation were in any case likely to be better fulfilled than in the past. Finn Roar Aune et al. (2017) pointed out the conflict of interests between Russia and EU in gas relations in which Russia wanted to sustain, or increase, its exports to Europe, whereas the EU wanted to make sure that the market functioned well and that no country became vulnerable to pressure from Russia. The recent IMF Working paper (Galen Sher et al. (2022) estimates that the potential impacts on the German economy of a complete and permanent shutoff of the remaining Russian natural gas supplies to Europe could lead to serious gas shortages, reduced GDP and higher inflation.

At the same time Russia had been heavily dependent on the hard currency revenues from gas exports to cover its hard currency demand - over the past decades, Russian gas had been sold abroad for foreign currency. For a long time it had been sold to Europe predominately in dollars. Gradually it started to be sold in Euros, the remaining part in dollars. The exact composition of the currency choice for Russian foreign gas contracts remains confidential business information and is not publicly disclosed in any official Russian statistical publications.

Only recently international standard setting bodies started to promote the need for upgrading Balance of payments statistics to include the currency composition of international trade in goods and services accounts (IMF (2021). The Central bank of Russia (CBR) provides such information since year 2013. CBR's data shows that the role of euro is indeed rising as a means of payment for Russian goods and services sold to Europe (table 1).

Table 2. Currency composition of settlements for Russian exports of goods and services (percent of total)

	2013	2017	2021
EU countries total	100	100	100
Russian Ruble	6,8	10,4	11,0
US Dollar	73,0	51,8	42,2
Euro	18,1	34,0	45,5
Other	2,1	3,8	1,3

Source: CBR (2022a).

Demertsiz M. and Papadia F. (2022) describe the details of payments for Russian gas up to spring 2022 as follows: an EU buyer was able to pay for Russian gas in euros through a direct transfer from its designated account in a European bank to a Gazprom's designated account in

a European bank, acting as a correspondent bank for Gazprombank; payment was considered completed once the euros in question had been credited to Gazprom's account in the European bank. Alternatively, an EU buyer was able to pay through a direct transfer to Gazprom's euro account in Gazprombank itself.

The Russia-Europe gas trade had been therefore considered mutually beneficial. Geopolitical tensions of spring 2022 changed this status quo. Western financial sanctions levied on Russia threatened the future of Russian exports in general and gas exports in particular. Though EU did not go as far as blocking payments for Russian gas through Gazprombank, in which Gazprom has its accounts Russian authorities decided to implement some precautionary measures. Russian President signed the decree March 31 2022 requiring EU buyers to pay in rubles for Russian gas via a new currency conversion mechanism.

2. Mechanism of transition to settlements in rubles.

Financial terms of contracts in international trade include many important aspects, such as the procedure for determining the currency in which prices are set and in which payments are made, forms of payment, and various currency clauses. Typically, prices are set in the most stable currencies. Moreover, many markets have established the practice of setting prices in certain currencies, most often in US dollars or Euros. The currency of payment is the currency in which payment for goods and services under the contract is made. Due to various features of transactions, the "payment currency' may differ from the "price currency" (see Crowley, M. A. et al. 2020. and Andres Drenik et al. 2018).

There is, however, another important financial aspect of international trade of, which is purely professional in nature, falls within the competence of the financial management of the company and is rarely reflected in macroeconomic analysis - the place of storage of funds received from the export of goods, namely, accounts in national banks or accounts abroad. Though technical in nature, this aspect may become crucial for the overall financial stability of the exporter.

In order to better understand the possible risks and vulnerabilities of the current practice, we will consider five options for obtaining export earnings: the three most common options; the scheme introduced in the spring of 2022 and, finally, the scheme, which, in our opinion, would ensure the independence of Russian export supplies from foreign sanctions to the greatest extent.

For the convenience of analysis, we will assume that post-payment by a simple bank transfer is used as a form of payment (typically Gazprom demands payments through letters of credit). According to the first three methods, we will assume that the currency of the price and the currency of payment are euros. According to the fourth method, the currency of the price and the currency of payment under the contract are euros, but at the request of the Russian

authorities, the final payment must be made in rubles. According to the fifth method, the currency of payment under the contract is rubles, the price currency is either euros or rubles.

Here are the options (scenarios) for crediting proceeds to the account of a Russian gas exporter to Europe: 1. In euros in a foreign bank.
2. In euros in a Russian bank.
3. In rubles in a Russian bank (traditional).
4. In rubles in a Russian bank (payment option for gas in rubles, spring 2022).
5. In rubles in a Russian bank (the option of paying for gas in rubles, promising).

Let's start our analysis with the simplest way for a Russian exporter to receive foreign exchange earnings for gas sold abroad - the proceeds are credited to the Russian exporter's euro account in a foreign bank. Let's reflect the movement of money in this option on the balance sheets of the participants in this operation (fig. 1). After receiving the goods, the foreign importer will instruct his bank to make a payment in Euros to the Russian exporter. To do so, a foreign bank will debit the foreign importer's account and credit the account of the Russian exporter. There will be a change in assets in the balance sheet of the Russian exporter - instead of gas, there will be funds in Euros on its account in a foreign bank.

Figure 1. First scenario of receiving payment for Russian export of gas

Russia		**Foreign Country**			
Russian exporter (RE)		Foreign Bank (FB)		Foreign Importer (FI)	
assets	liabilities	assets	liabilities	assets	liabilities
Gas ↓ € account at FB ↑			€ account of the FI ↓ € account of the RE ↑	€ account at FB ↓ Gas ↑	

Source: compiled by the author.

It is obvious, that this option of receiving foreign exchange earnings leaves them abroad. Less obvious is the impact of this operation on Russia's balance of payments (BOP). Many believe that selling goods abroad always results in money flowing into the country. The paradox of this case is that there is an outflow of funds from the financial account of the BOP. The funds, not arriving in Russia, immediately "materialize" abroad on the bank account of the Russian company[1]. In the Russian international investment position (IIP), there is an increase in assets (foreign claims of Russian residents to non-residents). If a Russian exporter is disconnected from the SWIFT system, it will be more difficult for him to manage his funds in a foreign bank, and if sanctions are imposed on them, these funds will be frozen or lost. Such option of receiving foreign exchange earnings was not used in real life since Russian financial regulations required all export proceeds to be transferred to Russia (though now Russian authorities consider this option to be allowed too).

[1] A more understandable analogy can be given - as if a Russian exporter collected several million euros in cash, brought them to Germany and deposited them in a German bank account. This situation is more intuitively understandable as an outflow of capital from the Russian Federation than the transfer of export earnings to a foreign account, but in fact both of them are basically the same in terms of their impact on the Russian BOP.

Let us now analyze the second way for a Russian exporter to receive foreign exchange earnings for gas sold abroad - the proceeds are credited to the Russian exporter's foreign currency account (in euros) in a Russian bank (fig. 2). After receiving the goods, the foreign importer will instruct its bank to make payment to the Russian exporter. To do this, a foreign bank will debit the account of a foreign importer and credit a correspondent account of a Russian exporter's bank. In the Russian exporter's bank, these funds will appear in assets, and at the same time they will also be reflected in bank's liabilities on the foreign exchange account of the Russian exporter. This particular option can be used in real business practice if the exporter is not required to exchange foreign exchange earnings for gas into rubles.

Figure 2. Second scenario of receiving payment for Russian export of gas

Russia				**Foreign Country**			
Russian exporter (RE)		Russian Exporter's Bank (RB)		Foreign Bank (FB)		Foreign Importer (FI)	
assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities
Gas ↓ € account at REB ↑		€ corresp ac. at FB ↑	€ account of the RE ↑		€ account of the FI ↓ € corresp ac. of REB ↑	€ account at FB ↓ Gas ↑	

Source: compiled by the author.

Note that with this option of obtaining foreign exchange earnings, it is no longer so obvious where the "real" money is – in Russia or abroad. However, this is easy to find out. In case of imposition of sanctions on the corresponding account of the Russian exporter's bank in a foreign bank, it will not be able to use these funds. The impact of this operation on the financial account of the BOP and IIP of Russia will be similar to the previous case.

In the third option for receiving foreign exchange earnings by a Russian exporter, the currency of the price and the currency of payment are euros, but the proceeds themselves will be credited in rubles to the ruble account of the exporter in a Russian exporter's bank (fig. 3). This particular option is used in real business practice if the exporter has to exchange its foreign exchange earnings for gas into rubles either voluntarily or mandatory by law. It is clear that even in the absence of the mandatory exchange, the exporter is forced by standard business practice to convert a significant part of his foreign exchange earnings into rubles to pay for his ruble expenses.

For the convenience of analysis, let's introduce some numbers. Suppose, the value of goods according to the contract is 50 million euros. We will take the euro to ruble exchange rate at 70 rubles per euro. The first transaction will almost completely repeat the previous options we have just considered (only the exporter's revenue will not be on the euro account, but on his transit currency account). Next, the Russian exporter's bank needs to sell the received currency on the Russian foreign exchange market (transaction 2). To do this, it instructs its foreign correspondent bank to transfer the currency from its correspondent account to the correspondent bank account of the second Russian bank (the one who buys euros, probably in the interests of a Russian importer). To buy euros the second Russian bank will transfer to the first one its reserves in rubles in the Central Bank (the balance of the Central Bank is not

reflected in the table). We believe that "real money" is still abroad and subject to sanctions pressure since it is sitting in a corresponding account of a second Russian bank.

Figure 3. Third scenario of receiving payment for Russian export of gas

Russia						**Foreign Country**			
Russian exporter (RE)		Russian Exporter's Bank (REB)		Russian Bank 2 (RB2)		Foreign Bank (FB)		Foreign Importer (FI)	
assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities
Gas in RuR (1) – 3500 € transit account at REB (1) +50 (2) -50 RuR account at REB (2) +3500		€ corresp ac. at FB (1) +50 (2) – 50 RuR corresp ac. at CBR (2) +3500	€ transit account of RE (1) +50 (2) -50 RuR account of the RE (2) +3500	€ corresp ac. at FB (2) +50 RuR corresp ac. at CBR (2) -3500			€ account of the FI -50 € corresp ac. of REB (1) +50 (2) - 50 € corresp ac. of RB2 (€) (2) +50	€ account at FB -50 Gas in € +50	

Source: compiled by the author.

Let's now consider a new option for a Russian exporter to receive foreign exchange earnings for gas sold, approved in Russia in the spring of 2022. Recall that the currency of the price and the currency of payment remain are euros (previously concluded contracts do not change), but the proceeds themselves will be credited in rubles to the ruble account of the exporter in a Russian bank directly by the foreign importer (which is de-facto a new add-on to the existing contract).

As Yafimava, Katja (2022) puts it, the Russian presidential "decree has changed the payment mechanism by mandating several additional steps both by an EU buyer and Gazprombank. It required the EU buyer to open two new "K" accounts in Gazprombank – one in euros and another one in rubles – and make payment in euros to the buyer's new euro account. It also required Gazprombank, acting on instructions from the buyer, to convert these euros into rubles (by selling euros and buying rubles at the Moscow Exchange), credit them to the buyer's new ruble account, and make a transfer to Gazprom's ruble account in Gazprombank. Once all of these steps have been made, payment is considered completed".

Let's track the changes on the balance-sheets. As fig. 4 shows, after receiving the goods, the foreign importer will instruct its bank to make a payment from his account in euros to his euro account in a Russian exporter's bank (called type "K-euro" in the new regulations). To do this, a foreign bank will debit funds from the bank account of the foreign importer and credit them to the corresponding bank account of the Russian exporter's bank. In a Russian exporter's bank, these funds will appear in assets, which will also be reflected in Russian exporter's bank's liabilities on the euro account of the foreign importer (which the foreign importer has to open). Next (transaction 2), the foreign importer must exchange euros for rubles on the Russian foreign exchange market. To do this, the Russian exporter's bank will sell euros on the market to the second Russian bank. Funds on the correspondent accounts of

the Russian exporter's bank in a foreign bank in euro will be transferred to the second Russian bank, and its funds in rubles from a correspondent account in the Central Bank - to the first.

After that the funds will be transferred from the foreign importer's account type "K-euros" to the account type "K-rubles". Finally (transaction 3), the foreign importer must transfer funds from its ruble account to the ruble account of the Russian exporter. This will be considered the final payment for the export supply of Russian gas to a foreign importer.

Figure 4. Forth scenario of receiving payment for Russian export of gas (Spring 2022)

Russia						**Foreign Country**			
Russian exporter (RE)		Russian Exporter's Bank (REB)		Russian Bank 2 (RB 2)		Foreign Bank (FB)		Foreign Importer (FI)	
assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities
Gas in RuR (3) – 3500 RuR account at REB (3) +3500		€ corresp ac. at FB (1) +50 (2) -50 RuR corresp ac. at CBR (2) +3500	account type "K-€" of FI (1) +50 (2) -50 account type "K-RuR" of FI (2) +3500 (3) -3500 RuR account of the RE (3) +3500	€ corresp ac. at FB (2) +50 RuR corresp ac. at CBR (2) -3500			€ account of the FI (1) -50 € corresp ac. of REB (1) +50 (2) -50 € corresp ac. of RB2 2) +50	€ account at FB (1) -50 account type "K-€" at REB (1) +50 (2) -50 account type "K-RuR" at REB (2) +50 (3) -50 Gas in € (3) +50	

Source: compiled by the author.

However we still believe that "real money" is still abroad - on the correspondent account of the second Russian bank. The effect of this transaction on the financial account of the BOP and IIP of Russia will be similar to the previous ones.

What then is the fundamental difference between the new procedure for paying for Russian gas and the option of selling export earnings by a Russian exporter on the currency exchange, which we considered in the third option for obtaining export earnings? Yes, technically, the new option does not provide tangible advantages as a protection against the freezing of Russian accounts abroad. But, firstly, the problem of controlling illegal capital outflows is eliminated in cases where exporters hide part of their proceeds abroad and do not report on it to the tax authorities. Secondly, and more importantly, we believe that the Russian authorities are gradually accustoming foreign companies to work with the ruble in this way. And not far off is the transition to the next option of paying for the export deliveries of Russian gas, in which not foreign importers, but foreign banks will have to open accounts in Russia.

Let us now consider the option of paying for Russian gas in rubles, in which not importers, but their banks will have to open their accounts in Russian banks. That is a completely mirror version of what existed for a long time when paying for Russian gas in euros. Let's see how it

will work. Under this scenario for gas payments, the foreign importer will instruct his bank to make a payment from his account in euros (or even rubles) to the Russian gas exporter's ruble account in a Russian bank. To do this, the foreign bank will debit funds from the importer's account and at the same time instruct the Russian bank to debit its ruble corresponding account at the Russian bank in favor of the Russian exporter.

Figure 5. Fifth scenario of receiving payment for Russian export of gas

Russia				**Foreign Country**			
Russian exporter (RE)		Russian Exporter's Bank (REB)		Foreign Bank (FB)		Foreign Importer (FI)	
assets	liabilities	assets	liabilities	assets	liabilities	assets	liabilities
Gas ↓ RuR account at REB ↑			RuR corresp ac. of FB ↓ RuR account of RE ↑	RuR corresp ac at REB ↓	€/RuR account of the FI ↓	€/RuR account at FB ↓ Gas ↑	

Source: compiled by the author.

As we can see, with this option of obtaining export earnings, Russia will not have any funds abroad, therefore, there is will be no threat of their freezing. Moreover, foreign banks will have to accumulate ruble balances in their correspondent accounts in order to be able to fulfill the payment orders of their clients. The effect of this operation on the financial account of the BOP and IIP of Russia will be as follows: a decrease in liabilities to foreigners on the financial account of the BOP and IIP.

3. Conclusion

The established practice of international settlements of Russian exporters is characterized by significant vulnerability to external shocks. First of all, disconnecting exporters and their banks from the SWIFT system will not allow them to manage their funds in foreign banks. A possible solution here is the active development of the Russian analogue of the SWIFT system. But in the short term, one should hardly expect the functioning of the Russian analogue of SWIFT in Western countries. A more serious threat is that the freezing of foreign accounts of Russian exporters and banks continues.

The current version of the transition to paying for Russian gas in rubles will, to a certain extent, increase the protection of Russian exporters from external shocks, but will not completely eliminate the problems noted above, since interbank payments between Russian and foreign banks will continue to go through correspondent accounts in foreign banks.

Only a complete transition to settlements in rubles, in which foreign banks will have to open ruble correspondent accounts with Russian banks, can completely eliminate the problem of freezing foreign accounts of Russian exporters.

In the long run, the transition to ruble settlements for Russian exports and imports could lead to fundamental changes for the Russian economy and the financial sector. Through the

growing use of the ruble in the foreign economic activity of Russian companies will the ruble acquire a status of an important global reserve currency.

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