

Fiscal Policy

Under

Budget Surplus and Balance of Payments Surplus in Russia

Akira UEGAKI

uegaki@seinan-gu.ac.jp

Seinan Gakuin University, Fukuoka, Japan

Introduction

The short economic history of Russia since the collapse of the former regime can be divided into three periods. The first is a period of budgetary deficit and the second and the third are periods of budgetary surplus. Difference of the second from the third period lies in the fact that the budgetary surplus reached a tremendously high level in the third period that would have caused dangerous inflation unless some policy to keep the surplus unused had been carried out. All the three budgetary structures had been managed on another characteristic macro-economic structure: balance of payments surplus. It is interesting enough for researchers to investigate these three periods in comparative perspective, because many economists had been studying how to make appropriate economic policy in case of budgetary deficit or balance of payments deficit, but not so often studied how to cope with budgetary surplus and balance of payments surplus at the same time.¹

In the first part of the paper, the author would like to present the structural difference of the three periods in the framework of open macro balance. Here the author would like to place Russia's macro economy in comparative perspective. In the second part, he will follow the production and distribution of value added of Russia in the framework of SNA. The SNA is a set of rigorous statistical information, which shows how the production is arranged, how the income is produced, how the income is distributed. Therefore, the difference shall be presented here in a scientific macro-economic setting. In the third part, he will discuss about saving-investment balance by institutional sectors and other problems, which is also shown in

¹ A valuable exception is Gurvich (2006). This paper tries to investigate the same issues as he pointed out from another point of view.

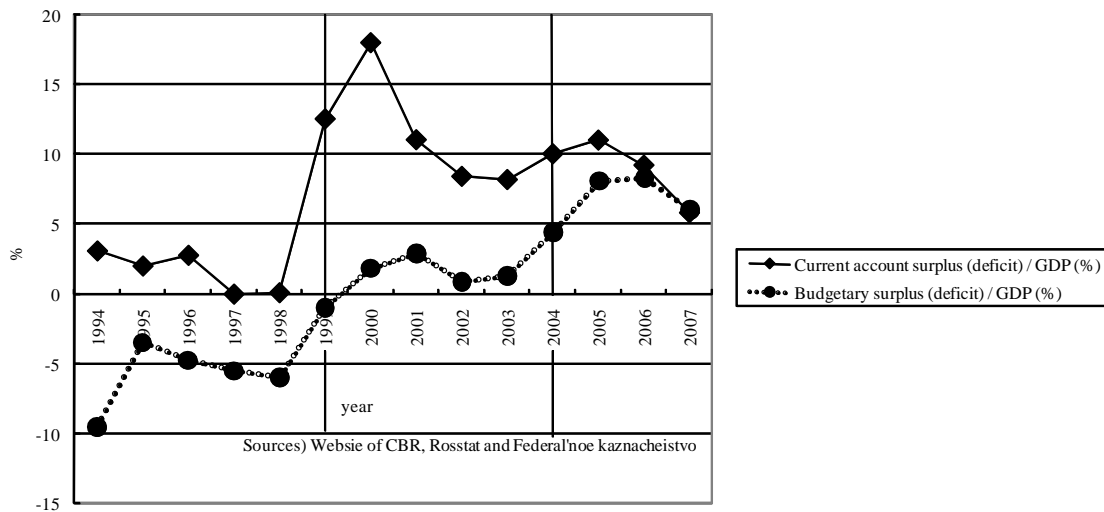
the framework of SNA.

1. Open Macro Balance

1.1 Current Account Balance, Budgetary Balance and S – I Balance

Fig. 1 shows the trend of Russia's current account in balance of payments and budgetary balance since 1994² through 2007. We see a clear dividing line around 1999. Until 1999 a considerable amount of fiscal deficit was accompanied by rather small amount of current account surplus, while there has been tremendous big current account surplus with considerable amount of budgetary surplus since 2000. The year 1999 was a transition year, when the budget was almost balanced but the current surplus suddenly jumped up (in percent of GDP³).

Fig. 1) Russia's Balance of Payments and Budget (Surplus / Deficit)
(calculated in current prices)



The second dividing line, though more ambiguous, can be drawn around 2004, when the growth of the fiscal surplus was accelerated because of the increase of tax revenues. Of course, this phenomenon was caused by historically high oil and gas price,⁴ therefore the

² In Russia the balance of payments statistics of 1994 were the first reliable statistics strictly based on the method of Balance of Payments Manual Version 5 (United Nations *et al.*) with data of transaction both with CIS countries and non-CIS countries.

³ The current account surplus also jumped up in 1999 in nominal terms (in US dollar).

⁴ The five main oil-and-gas related indirect taxes accounted for 5.5 % of budgetary revenue in 1994, while it jumped up to 31.0% in 2006 (Tabata, 2008a, p. 217).

Russian government was obliged to set up a new scheme, Stabilization fund⁵, in 2004 to keep this extra revenue unused in order to prevent inflation. Behind Fig. 1 is hidden a basic open macro formula as follows,

$$(1) \quad CA = (T - G) + (S^P - I)$$

Where CA = current account surplus = export of goods and services minus import of goods and services,⁶ T = governmental tax revenues, G = governmental expenditure, S^P = private saving,⁷ I = investment.⁸

Considering that a positive amount of CA means an increase of financial credit of residents of a country against the rest of the world in a given period, the formula shows that excess of fiscal balance and excess of saving over investment would be pushed out of the country as financial claim. On the contrary, if $(T - G) + (S^P - I) < 0$, CA is negative. It means that if fiscal deficit and excess of investment over saving occur, the shortage of the right side of the formula (1) must be covered by foreign borrowing, which will result in negative figure of CA⁹. Of course there might be a case when both CA and $(S^P - I)$ are positive but budgetary balance is negative. In this case, the saving is too big to cover budgetary deficit and therefore a considerable amount is to be pushed out of the country as financial claim (= positive current account).

1.2 Russia's Open Macro Balance in Comparative Perspective

Table 1¹⁰ shows the relation among the three items of the formula (1) for several selected countries. It does not represent the world general trend because several important countries like China, India, United Kingdom, and oil producing Middle East countries are omitted. It only picked up several typical examples. It is, however, interesting enough to examine the differences among five countries.

The first distinct example is the USA's one. Both the current account balance and the fiscal balance have been in deficit last 14 years, but the degree of the current account deficit has

⁵ In 2008, it was reorganized into "Reserve fund" and "Fund for future generation".

⁶ Accurately, the current account includes the so-called factor income and current transfer.

⁷ T - G can be read as governmental saving.

⁸ Investment of the government is included in I.

⁹ Or $(T - G) + (S^P - I) < 0$ means excess of import over export of goods and services (if disregarding factor income and transfer).

¹⁰ The figures would not necessarily correspond to accurate SNA statistics, because (1) the definitions of fiscal balance are various among the five countries, (2) the exchange rates are calculated as annual average, and (3) S - I is calculated as residual (therefore there is no room for "statistical discrepancy").

been larger than that of budgetary deficit, therefore the saving was not enough to cover the shortage, and a large amount of financial resources have been pouring into the American financial market. We need not necessarily interpret this phenomenon that too much consumption (= too small saving) of the American people, whose life-style is too “extravagant”,

Table 1) Open Macro Balance of Selected Countries
(in billions of US\$, annual average)

		CA = Current account balance	T - G = Fiscal balance ¹	IS ^p -I = CA - (T - G) ² = Saving - Investment balance
Russia	1994 - 1998	5.16	-18.52	23.68
	1999 - 2003	33.98	4.18	29.80
	2004 - 2007	79.16	63.88	15.28
USA	1994 - 1998	-142.76	-136.60	-6.16
	1999 - 2003	-416.23	-145.54	-270.69
	2004 - 2007	-736.28	-429.85	-306.43
Japan	1994 - 1998	104.53	-238.48	343.01
	1999 - 2003	114.15	-336.85	450.99
	2004 - 2007	179.73	-305.23	484.86
Germany	1994 - 1998	-17.76	-58.54	40.78
	1999 - 2003	5.81	-39.44	45.25
	2004 - 2007	136.37	-38.55	174.91
Brazil	1994 - 1998	-21.37	-26.26	4.89
	1999 - 2003	-15.26	11.17	-26.43
	2004 - 2007	10.20	22.69	-12.49

Note) ¹ = Fiscal balances in local currencies are converted into those in US\$ by *IFS*'s annual average exchange rates.

The definition of fiscal balance are the followings;

Russia: Consolidated budgetary balance including non-budgetary fund.

USA: Net lending or net borrowing including social security contribution and expenditure.

Japan: Central government fiscal balance.

Germany: General government budgetary position including social security contribution and expenditure.

Brazil: Central government balance including social security contribution and expenditure.

² = Not calculated directly from the data of S and I, but calculated as residual (CA - (T - G)).

Sources) *IFS* except the followings;

Russia: 1994-2007: CA = Balance of Payments Statistics at the website of the CBR [<http://www.cbr.ru/statistics/?Prtd=svs>].

Russia: 1994-2006: T - G = *Finansy Rossi*, various years.

Russia: 2007: T - G = Website of Federal'noe kaznacheistvo [<http://www.roskazna.ru/>]

USA: 1994 - 2007: T - G = Website of BEA [<http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N#S3>]

Japan: 1994 - 2007: T - G = Website of the Ministry of Finance of Japan [<http://www.mof.go.jp/jouhou/syukei/sy014.htm>]

Japan: 2007: CA = Website of Ministry of Finance of Japan [<http://www.mof.go.jp/bpoffice/bpdata/s1bop.htm>].

Germany: 1994 - 2007: T - G: Website of Deutsche Bundesbank [http://www.bundesbank.de/statistik/statistik_zeitreihen.en.php?lang=en&open=wirtschaftsdaten&func=list&tr=www_v27_mb01_01c]

Brazil: 1994 - 2007: T - G: Website of Banco Central do Brasil [<http://www.bcb.gov.br/?INDICATORS>]

had been compensated by foreign debt. We can also interpret it that the American industrial sectors are so strong and so attractive that foreign investors are induced to invest money there¹¹. Consequently the amount of investment is larger than the saving of the American people. In either case it is no doubt that if the American power to absorb foreign financial resources decline, the world financial structure would totally change.

¹¹ Alan Greenspan's argument is mainly based on this line (Greenspan, 2007).

On the contrary, the excess of saving over investment in *Japan* has been too large to cover the budgetary deficit and the surplus has been pushed out of the country, which is expressed in a big current account surplus. Comparing the amount of S-I balance of the USA with that of Japan, it is possible to say that the saving of the Japanese people has been supporting the consumption of the American people. There may be, however, another interpretation that the Japanese market is not so attractive even for Japanese investors and a large amount of excess money is wandering around the world.

Germany had been suffered from current account deficit and fiscal deficit after the turbulence caused by the unification. At the turn of the century, however, the current account began to be positive and more recently its surplus reached to a considerable amount though the fiscal balance has been always in deficit. Now Germany is an important player in the international financial market, whose structure is becoming to similar to that of Japan.

From a view point of absolute quantity, *Brazil* and *Russia* are not so significant players in the international market.¹² Russia and Brazil are, however, worth considering because their macro structure is interesting. Both countries have been changing the relation among the three items stage by stage.

In the first stage (1994-1998), Brazil suffered from current account deficit and fiscal deficit, but the absolute amount of the former was smaller than that of the latter. It means that there were a few amount of saving excess. In the second stage (1999 – 2003), while the current account was still in deficit, the fiscal balance turned into positive and the private saving was not enough to cover domestic investment demand. In the third stage (2004 – 2007) both the current account and the fiscal balance had surplus while the private saving was insufficient for investment demand. Brazil is now a country which has healthy external balance and budgetary balance with strong domestic investment demand.

As for *Russia*, in the first stage the fiscal deficit was covered by the excess of private saving and a part of the excess was pushed out of the country as financial resources.¹³ In the second stage, the fiscal balance turned into surplus, while the current account surplus jumped up considerably. In this stage the excess of S-I balance became larger than before because the current account surplus was much larger than the fiscal surplus. In the third stage, both the current account surplus and fiscal balance surplus grew to a tremendous amount. Especially the surplus of fiscal balance increased so quickly that the excess of private saving began to decrease. In fact, taking one year data of 2007, $(S^p - I)$ was negative.

Comparing with other transition countries, Russia is a unique country in a sense that it succeeded to convert fiscal balance from deficit to surplus in a relatively short period, and also

¹² Out of the table, of course, China is now a significant international financial player.

¹³ Here the so-called capital flight is not considered explicitly.

in a sense that it has always made current account surplus almost every year after the collapse of the former regime. Russia's uniqueness also lies in the fact that in the third stage the S – I balance began to decrease under high oil price. These examples of uniqueness have important effects on the movement of investment, saving and tax in Russia, which in turn would cause special difficulty for Russian policy makers. In the following sections the author would like to show special problems of Russia's macro economy which are concealed under the two large surpluses.

2. Russia's Macro Economy in the SNA Framework I: Consolidated Flows

2.1 Structure of SNA

Some features of the uniqueness of Russia's macro economy can be traced rigorously by applying the SNA framework. Table 2 shows basic consolidated structure of the SNA with figures of the Russian Federation in selected years. Each of the three years in the table is selected as a typical year of the above mentioned three periods. 1996 is the year of budgetary deficit and current account surplus in the system of "the corridor" and short-term treasury bonds. 2000 is the first year of budgetary surplus since the collapse of the previous regime and also the year of historically high level of current account surplus. 2006 is the year of high budgetary surplus and considerable amount of current account surplus, though the former grew faster than the latter. Therefore 2006 is the year when the S – I balance began to shrink.

Table 2 shows how the value-added is produced, how the income is generated and how the income is distributed from an accountant point of view. Account I and II show how the value-added is produced in Russia. The two accounts indicate that the GDP equals output in basic prices plus tax on products and import less intermediate consumption and subsidies on products and import.¹⁴ These two accounts tell us a concise and exact definition of GDP as value-added.

Account III shows how the GDP in market prices is transferred to income, various types of revenues and receipts of money of someone or some units in the national economy. Account IV shows that GNI is GDP plus receipt of wage earned by the residents in foreign

¹⁴ Here let's show that the basic GDP defining formula and Account I would lead to Account II. The basic GDP defining formula is (2) Use of GDP = C [final consumption] + I [gross capital formation including inventory changes] + X [export] – M [import] (here government expenditure is included in C and I). By using the code numbers of Table 2, this formula can be rewritten as (3) B. 1*g = P. 3 + P. 5 + P. 6 – P. 7. Then Account I in Table 2 means (4) P. 2 + P. 3 + P. 5 + P. 6 = P. 1 + P. 7 + D. 21 – D. 31. From (3) and (4), we will get (5) B. 1*g = P. 1 – P. 2 + D. 21 – D. 31. Therefore (6) B. 1*g + P. 2 = P. 1 + D. 21 – D. 31. This is Account II.

countries and receipt of interest and dividends from non-residents' countries less payment of wage earned by foreigners in the resident country and payment of interest and dividends to non-residents' countries.

Account V means that the gross disposable income equals GNI plus net current transfer and Account VI shows how the disposable income is divided into final consumption and gross saving.

Finally Account VII shows that the gross saving plus net capital transfer is used as either gross capital formation¹⁵ or changes in inventories, leaving the rest as net lending or borrowing of the residents against the rest of the world. The net lending or borrowing is a new term in the SNA 1993, which hitherto has been called Saving – Investment balance [S – I balance].

2.2 Taxes on Production and Imports

We can find out some interesting features of Russia's macro economy in Table 2. At first let us look at the trend of taxes on production and imports.¹⁶ Account III (generation of income account) shows high speed growth of the taxes of this kind in Russia in nominal term. The author calculated the share of net taxes on production and imports in GDP in market price in Russia, the result of which is shown in Fig. 2.

Here we must pay attention to the fact that the natural resources-related payments had been classified as non-tax revenue from wealth until 2001, but since 2002 the newly introduced Severance taxes (Mineral extraction fees) in place of those payments began to be classified as tax on production in the Russian SNA (Tabata, 2008, p. 89; Kuboniwa, 2008, p. 104). So the share must have been higher than the line in Fig. 2, if we include the natural resources-related payments in the category of tax on production also in the period before 2002.

¹⁵ Exactly, gross fixed capital formation + acquisitions less disposals of valuables.

¹⁶ Detailed study to place Russia's taxes on production and imports in its macro economy has been done by Kuboniwa (for example, Kuboniwa, 2008).

Table 2) Consolidated SNA Structure of Russia¹
(in current prices; 1996: in trillions of Ruble; 2000 and 2006: in billions of Ruble)

I. Goods and Services Account

code	Uses	1996	2000	2006	codes	Resources	1996	2000	2006
P. 2	Intermediate consumption	1970.9	6080.0	23023.5	P. 1	Output in basic price	3799.1	12552.2	45891.3
P. 3	Final consumption expenditure	1435.9	4476.9	17742.6	P. 7	Import of goods and services	438.7	1755.8	5679.1
P. 5	Gross capital formation*	475.3	1365.7	5415.8	D. 21	Taxes on products	269.1	980.9	4069.4
P. 6	Export of goods and services	523.5	3218.9	9069.1	D. 31	Subsidies on products (-)	89.5	147.4	156.1
	Statistical discrepancy	119.3	0.0	232.7					

* = including changes in inventories and acquisitions less disposals of valuables

II. Production Account

code	Uses	1996	2000	2006	code	Resources	1996	2000	2006
P. 2	Intermediate consumption	1970.9	6080.0	23023.5	P. 1	Output in basic price	3799.1	12552.2	45891.3
B. 1*g	GDP in market price	2007.8	7305.6	26781.1	D. 21	Taxes on products	269.1	980.9	4069.4
					D. 31	Subsidies on products (-)	89.5	147.4	156.1

III. Generation of Income Account

code	Uses	1996	2000	2006	code	Resources	1996	2000	2006
D. 1	Compensation of employees	1022.6	2937.2	11816.1	B. 1*g	GDP in market price	2007.8	7305.6	26781.1
D. 2	Taxes on production and imports	378.7	1404.1	5521.1					
D. 3	Subsidies (-)	92.9	155.6	163.0					
B. 2g + B. 3g	Operating surplus and Mixed income (gross value)	699.4	3119.9	9606.9					

IV. Allocation of Primary Income Account²

codes	Uses	1996	2000	2006	codes	Resources	1996	2000	2006
D. 4	Property income (payable to the rest of the world)	47.7	316.8	1326.1	B. 2g + B. 3g	Operating surplus and Mixed income (gross value)	699.4	3119.9	9606.9
B. 5*g	Gross national income	1978.9	7116.6	26009.7	D. 1	Compensation of employees	1020.6	2944.7	11697.4
					D. 2	Tax on production and imports	378.7	1404.1	5521.1
					D. 3	Subsidies (-)	92.9	155.6	163.0
					D. 4	Property income (receivable from the rest of the world)	20.9	120.2	673.4

V. Secondary Distribution of Income Account³

code	Uses	1996	2000	2006	code	Resources	1996	2000	2006
D. 62 + D. 7	Current transfer payable to the rest of the world	3.6	20.8	214.5	B. 5*g	Gross national income	1978.9	7116.6	26009.7
B. 6*g	Disposable income (gross value)	1979.4	7118.5	25974.7	D. 61 + D. 7	Current transfer receivable from the rest of the world	4.0	22.7	179.4

Table 2) Continued

VI. Use of Disposable Income Account

code	Uses	1996	2000	2006	code	Resources	1996	2000	2006
P. 3	Final consumption	1435.9	4476.9	17742.6	B. 6*g	Disposable income (gross value)	1979.4	7118.5	25974.7
B. 8*g	Gross saving	543.5	2641.6	8232.1					

VII. Capital Account

code	Change in Assets	1996	2000	2006	code	Change in Liability and Net Value of Capital	1996	2000	2006
P. 51 + P. 53	Gross fixed capital formation + Acquisitions less disposals of valuables	401.6	1232.0	4795.6	B. 8*g	Gross saving	543.5	2641.6	8232.1
P. 52	Changes in inventories	73.6	133.7	620.2	D. 9	Capital transfer receivable from the rest of the world	9.4	318.7	19.9
B. 9	Net lending (+) or borrowing (-) and statistical discrepancy	65.6	1576.0	2818.6	D. 9	Capital transfer payable to the rest of the world (-)	12.0	18.6	17.6

Notes) ¹ = All the terms and code numbers of the items are according to SNA 1993, though the code numbers of accounts (I - VII) are different from those of SNA 1993.

² = SNA 1993 reads "GNI (Gross national income) is equal to GDP less taxes (less subsidies) on production and imports, compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world ...

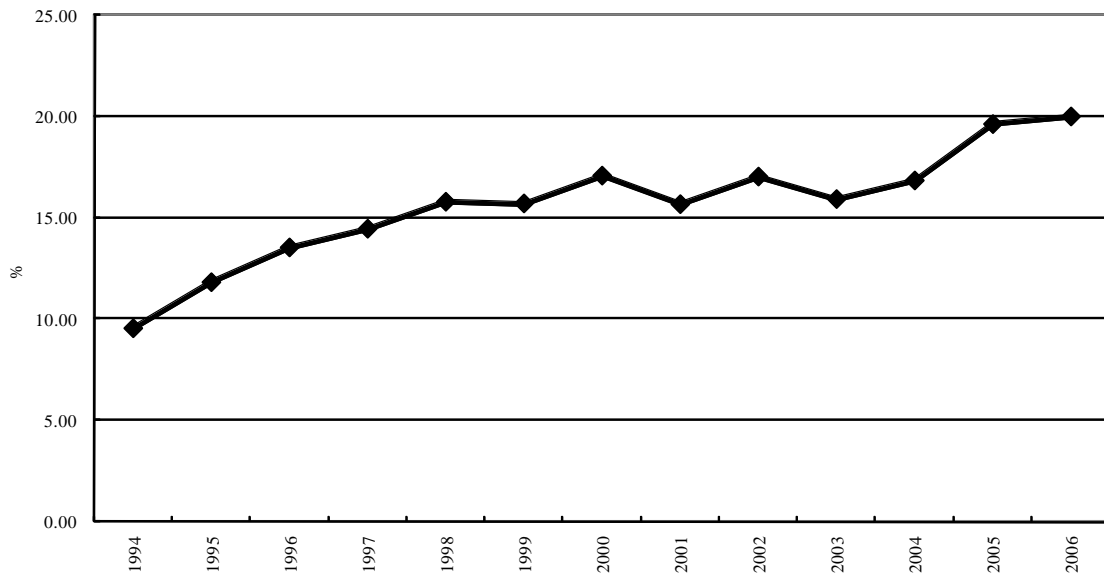
In contrast to GDP, GNI is not a concept of value added, but a concept of income (primary income)" (Para. 2.181).

Therefore the value of the items D. 1, D. 2 and D. 3 includes value payable to and receivable from the rest of the world. Especially, the value payable to and receivable from the rest of the world for D. 1 is not negligible, the figures of D. 1 in the account III are different from those in the account IV.

³ = SNA 1993 recommends to make entries of "social contribution" and (domestic) "current transfers" on the both sides, but the Russian statistics omits them.

Sources) NSR95-02, pp. 19 - 21.
NSR99-06, pp. 17 - 19.

Fig. 2) Net Taxes on Production and Imports per GDP



Sources) NSR93-00, p. 29, NSR99-06, p. 18

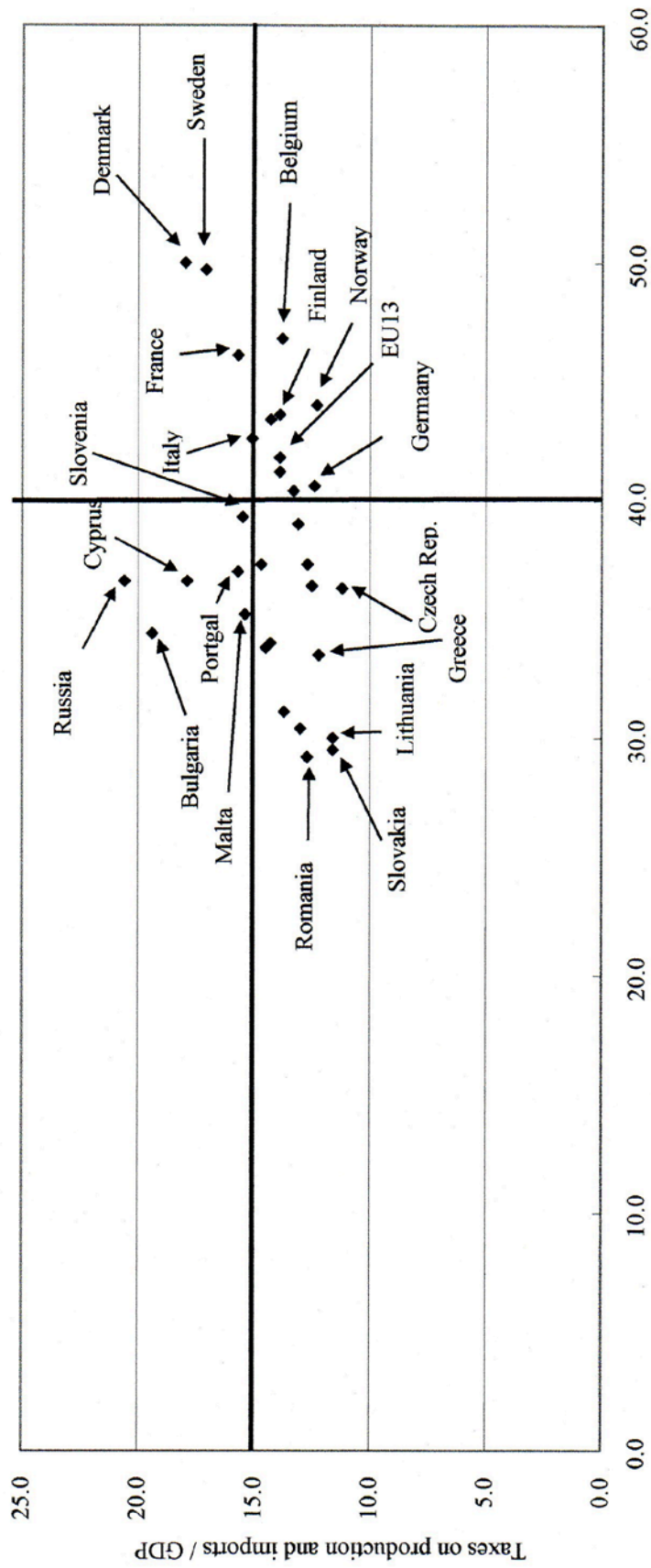
The taxes on production and imports now include VAT, excises, export taxes, import duties, and mineral extraction fees. On the contrary, tax on organizational profits, tax on income of physical persons, and others are excluded from this category. Seeing that the share in Fig. 2 has been generally increasing year by year, we can realize the importance of the oil and gas industry in the Russian fiscal system, because a good part of the taxes on production and imports has close relation with the industry. It is proved by correspondence of the share with the changes of oil and gas prices and also by correspondence of the share with transformation of the fiscal system on oil and gas revenues.

The important point here is, however, not only the growth but also a relatively high level of the share by international standard. Of course it is understandable that in direct-tax-oriented countries such as Japan and the USA the share is much lower than that of Russia,¹⁷ but it must be also noted that in comparison with EU countries, where the share of indirect taxes in GDP or the share of tax revenue in general in GDP has been traditionally high, the share of taxes on production and imports in Russia is relatively high.

Fig. 3 shows Russia's position compared to European countries concerning tax revenues. If we draw lines on 40% of total tax revenues per GDP and 15% of taxes on production and imports per GDP, Russia stands on the fourth quadrant, where the share of the

¹⁷ The Japanese share of taxes on production and imports in GDP has ranged between about seven to eight percent last ten years (Website of the Ministry of finance of Japan). America's figure is much lower: only 6.94 % and 6.95 % in 2005 and 2006 respectively (*SCB*, Dec. 2007).

Fig. 3) Total tax revenue and Taxes on production and imports per GDP in 2006 (%)



Sources) Lupi, 2008, p. 6; SNR99-06, p. 18; Website of Kaznacheistvo Rossii.

total tax revenues in GDP is lower but the share of the taxes on production and imports in GDP is higher.

European welfare states, such as Denmark or Sweden, are the countries where the main routes of governmental revenues are not only the taxes on production and imports but also taxes on income and wealth, and social contributions. Comparing with such countries, Russia is a country which has not established diversification of tax base. Norway, which is also an oil producing country, stands on a symmetrical point to the place of Russia. Norway's main sources of governmental revenue are taxes on income and wealth and social contributions, especially the former. It means that the oil related revenues in Norway are not heavily levied at the production level but at distribution level.

This phenomenon indicates that Russia has not yet established a *Steuerstaat* [tax state], which is a modern state that does not have its own wealth to get revenues as in the medieval centuries but has only a power to tax its ordinal people and economic units.

2.3 Gross Saving

Then let us examine the trend of gross saving in Russia. Fig. 4 shows a very interesting trend of the ratio of gross saving to gross¹⁸ disposable income¹⁹ in Russia. According to Account V of Table 2, the gross disposable income is GNI plus net²⁰ current transfer from the rest of the world²¹ and according to Account III and IV, the GNI equals GDP plus net property income from the rest of the world. According to Account VI, the gross disposable income is divided into final consumption and gross saving. Therefore Fig. 4 shows how the income of the Russian residents, which includes value added in domestic market and net value of interests, dividends, compensation of employees and other income and transfer, all of which are receivable from the rest of the world, is allocated between final consumption and saving.

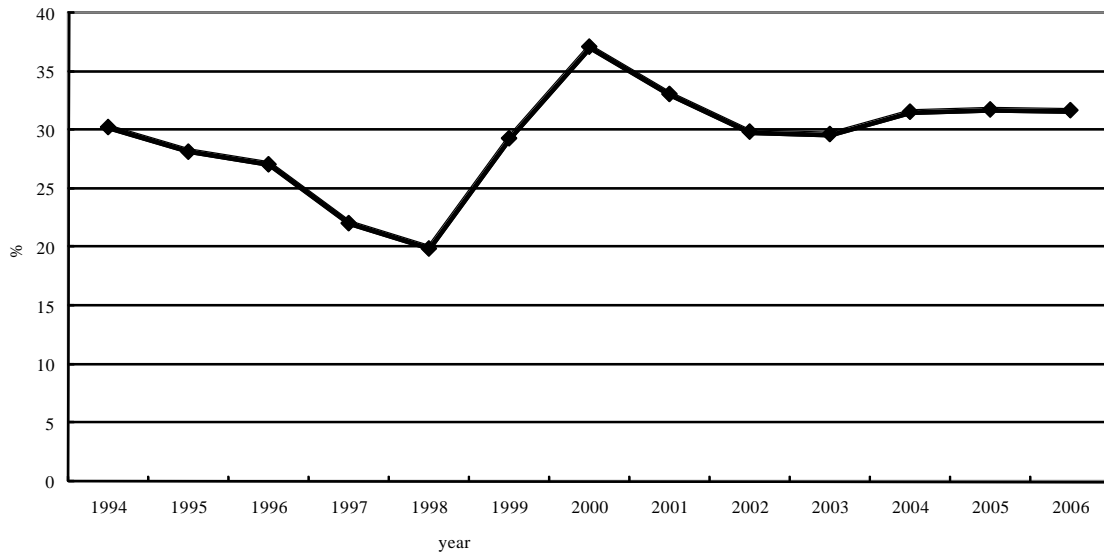
¹⁸ Here, the word “gross” means “not deducting the value of depreciation”.

¹⁹ We must not confuse the ratio of gross saving to gross disposable income with the “household’s saving rate” which is defined as household’s net saving divided by household’s net disposable income. The household’s saving is one of the constituting factors of gross saving in a national economy.

²⁰ Here, the word “net” means “value receivable from the rest of the world” minus “value payable to the rest of the world”.

²¹ In case of Russia, the net current transfer is negligible, so the GNI is almost the same as the gross disposable income.

Fig. 4) Gross Saving per Gross Disposable Income (%)



Sources) NSR93-00, p. 31, NSR99-06, p. 19.

It was around 30% in 1994, but had been dropping down drastically through 1998. After the crisis year of 1998, it jumped up to 37% in 2000. Then it began to decrease again to a level a little higher than that of 1994 in 2006. Here we must take it into consideration that the saving includes not only the saving of households but also that of business corporations.

The drastic decline of the ratio since 1995 through 1998 was caused by contraction of the saving in real terms. Especially in 1997 through 1999, the saving was decreased even in nominal terms comparing with the preceding years. It suggests that the consumption of commodities including imported goods by the Russians increased considerably in the period under the condition of high exchange rate of Ruble. On the contrary since 1999 the income, consumption, and saving of Russians grew rapidly simultaneously. It is important to note that the speed of the growth of the income was much higher than that of the consumption in 1999 and 2000. Therefore the share of the income not used grew considerably. It means that there appeared a huge pool of financial resources for investment in this period. In fact, the investment recorded a big rise in 2000. Since 2001 until recently, it has been a period when both income and final consumption has been growing rapidly but the growth of the latter has been faster than that of the former. We can call it the period of consumption burst.²²

The trend of the saving of Russia in recent years is unique in a sense that it fluctuated violently in a relatively short period. It was caused by fluctuation of both households' saving

²² Seeing from the use side of the GDP of Russia, the contribution of final consumption to its growth in real terms has been highest among other factors such as the capital formation and the net export since 2001 through 2006 (Tabata, 2008b, p. 81).

and corporations' saving, which will be examined in the following section. Anyway this unstableness of saving in Russia will cast a dark shadow on the economic development of Russia in the future, because one of the driving forces of stable development is a considerable amount of excess money of ordinal people which is to be invested into the business activities through modern financial system.

It is also unique in a sense that the ratio of the saving to disposable income or GNI in Russia is relatively high. Table 3 shows the gross saving per GNI²³ of selected countries. With the exception of the crisis years of 1997 and 1998, Russia's figures are almost same or higher than those of Japan, whose households' saving rate has been high and is supposed to have been an important factor of its high speed economic growth.²⁴

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Russia	30.2	28.2	27.1	22.0	19.9	29.4	37.1	33.0	29.8	29.6	31.5	31.7	31.7
USA		16.2	16.6	17.7	18.2	17.9	17.7	16.2	14.2	13.3	13.2	13.0	13.9
Japan			29.6	29.8	27.9	26.5	27.5	25.6	24.4	25.4	26.2	25.9	26.4
Germany	22.1	22.0	21.4	21.7	21.9	21.5	20.3	19.6	19.8	19.7	20.5		
Brazil ¹		15.8	14.3	13.8	13.3	12.5	14.4	14.0	15.2	16.5	19.0	17.6	18.0

Note) ¹ = As for Brazil, data for Gross saving cannot be attained from accessible data base including the Wevsite of Banco Central do Brazil. Therefore the author calculated Gross saving by the following method. (1) Gross saving = Gross disposable income - (Private consumption expenditure + Expenditure of Non-profit institutions serving households [NPISHs] + Government consumption expenditure). (2) Gross disposable income = GNI + Net current transfer. We can get data for Private consumption expenditure, Expenditure of NPISHs, Government consumption expenditure, and Net current transfer from *IFS*, so we can calculate Gross saving of Brazil.

Sources) *NSR93-00*, pp. 30-31, *NSR99-06*, pp. 18 - 19 [Russia].
IFS, Various issues [USA, Germany, Brazil].
 Website of the Cabinet Office, Government of Japan [Japan].

A high share of saving in GNI seems to be a positive factor for future development of the Russian economy, but in reality, it would not necessarily be the case. The problem is who is to save and who is not. According to the SNA statistics of Russia, the corporations sector²⁵ saved much more than the households sector every year since 1996 through 2005. For example, in 2000 the gross saving of the corporations sector was 7 times more than that of the households sector.²⁶ This situation is totally different from that of Germany or Japan, where the saving of households sector has been more than the half of the total amount of saving of the national economy.²⁷

²³ The author used GNI instead of gross disposable income because of data availability.

²⁴ However, the households' saving rate of Japan has been declining from 10.4 % in 1994 to 2.7 % in 2004, which can be explained by rapid aging of the Japanese society (Doihara *et al.*, 2006, p. 17). In the USA it is lower than one percent recently (*SCB*, Dec. 2007, p. D-18).

²⁵ It includes accounts of non-financial corporations sector and financial corporations sector. See the last paragraph of Section 3 of this paper.

²⁶ This problem will be discussed in the following section in detail. The references are put there.

²⁷ However, in case of Japan, the share of households sector in the total saving has been

Considering the distinct features of the Russian economy, where the economy is dominated by an oil-gas concentrated industrial structure with strong government intervention under weak financial networks, it is open to be discussed whether a large amount of saving in the corporations sector in Russia would help further development of the economy. One of the important factors to increase the saving rate of financial and non-financial corporations is low rate of distribution for employees in the total income by international standard (Kuboniwa, 2008, p. 107).²⁸ How to deal with the corporations' income, which is kept inside of them and not distributed to their employees, is a key in the investigation of Russia's macro economy.

Here we face a task to study the economy by decomposing it by institutional sectors, which can also be traced in the data of the SNA.

3. Russia's Macro Economy in the SNA Framework II: Analysis by Institutional Sectors

3.1 SNA by Institutional Sectors

The System of National Accounts 1993 [SNA 1993] recommends each account of the SNA should be decomposed by "institutional units and sectors". Here the institutional sectors consist of (1) the non-financial corporations sector, (2) the financial corporations sector, (3) the general government sector, (4) the non-profit institutions serving for households sector [NPISH], (5) households sector, each of which has some sub-sectors (United Nations *et al.*, 1993, pp. 87-110; p. 585).

Rosstat [Goskomstat Rossii] has been publishing interesting SNA data decomposed by the categories of institutional sectors in its *Natsional'nye scheta Rossii* [NSR]. Though the published tables are so complicated that we cannot follow them easily, a lot of important information is concealed in the tables. The decomposition leads us to a deeper understanding of Russia's macro economy.

3.2 Seeing from Statistical Discrepancy

Table 4 shows Russia's Saving – Investment [S – I] balance (hereafter the term "net lending" or "net borrowing" is used) by institutional sectors. As for the total it is the same thing as is shown in Table 1, but the figure in Table 4 is calculated immanently in the

decreasing since the beginning of the new century, while the share of financial and non-financial corporations sectors has been increasing (Doihara *et al.* 2006, pp. 13-14).

²⁸ The share of compensation of employees in the GNI was 41.4% in 2000 and 45.0% in 2006 in Russia (see Table 2), whereas it is around 70% today in Japan and the USA (Doihara *et al.*, 2006, p.8).

framework of the SNA.²⁹ Here we must take notice of two points. Firstly the items of “corporations” and “households” include large statistical discrepancies in 1995 through 1999, and secondly since 2000 the lines of “net lending or net borrowing” include statistical discrepancies in themselves.³⁰

It is true that these two points would make us doubtful about the reliability of the data, but the explicit discrepancy would teach us something interesting. As is shown in Table 4, the statistical discrepancies of corporations were always negative. According to the format of the capital account in the SNA 1993 (United Nations *et al.*, 1993, p. 607), the net lending (or net borrowing) is defined as,

$$(7) \text{ Net lending (or net borrowing)} = X - Y$$

Where

X = net saving + capital transfer receivable – capital transfer payable

Y = gross fixed capital formation – consumption of fixed capital + change in inventories + acquisitions less disposals of variables + acquisitions less disposals of non-produced non-financial assets.

Therefore a minus figure of discrepancy of the net lending means that a registered figure of X is smaller than the reality, or that a registered figure of Y is larger than the reality, on condition that the figure of net lending (or net borrowing) is correctly calculated from other sources. A too small figure of X means that there is hidden net saving and/or hidden net capital transfer. A too large figure of Y means that there is over-declaration of gross fixed capital formation, change in inventories, net acquisitions of variables and/or net acquisitions of non-produced non-financial assets. There is also a possibility of under estimation of

²⁹ See Note 2 of Table 1. In addition, take note that the figure in Table 1 is one converted into US dollars.

³⁰ Therefore the blank cells in the lines of “statistical discrepancy” in table 4 do not necessarily mean zero.

**Table 4) Russia's Saving-Investment Balance by Institutional Sectors: Net Lending or Borrowing
(through 1998 in billions of Ruble; since 1999 in millions of Ruble;)**

		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
FISIM ¹	Net lending (+) or Net borrowing (-)	-15446	-5163	-7399	-6321	-11467	-58239	-129720	-179288	-211584	-307147	-442865
	Statistical discrepancy											
NPISH ²	Net lending (+) or Net borrowing (-)						-43520		40244	19210	25483	14147
	Statistical discrepancy											
Corporations	Net lending (+) or Net borrowing (-)	-27968	-118002	-38797	155306	526113	879948	678474	219041	250604	300806	487720
	Statistical discrepancy ³	-53586	-65209	-108719	-17463	-162458						
Households	Net lending (+) or Net borrowing (-)	83889	216778	137709	28866	-156114	67326	110077	578386	715537	575870	528279
	Statistical discrepancy	53526	48088	57769	17463	76772						
General government	Net lending (+) or Net borrowing (-)	-4212	-33911	-73939	-105251	266785	730473	13461	-50114	246252	1059149	1416986
	Statistical discrepancy											
Total national economy	Net lending (+) or Net borrowing (-)	36263	59702	17574	72600	625317	1575988	672292	608269	1020019	1654161	2004267
	Statistical discrepancy	-60	-17121	-50950	0	-85686						

Notes)

¹ = Financial intermediation services indirectly measured

² = Non-profit institutions serving households. In 1995 through 1999 and in 2001, the data for it are included in the data of corporations.

³ = Figures of statistical discrepancy for corporations and households are explicitly entered until 1999, but since 2000 they are included in the data of net lending (or borrowing) .

Sources)

NS93-00 , pp. 84-103, *NS97-04* , pp. 26-41.

consumption of fixed capital.

Among the possibilities above, if we take the large amount of negative discrepancy into consideration, the following two cases are feasible. Firstly, the corporations might hide a part of their saving from the statistical or fiscal authorities and invest the hidden money in fixed capital, on which the corporations honestly report or somehow the authorities discover. Secondly, the corporations might over-declare the amount of gross fixed capital formation and keep the unused money concealed from the authorities. We have no positive evidences to say which is the case, but we must take note that the unused money in the second case would pour out of the country as capital flight.

On the contrary, the statistical discrepancies of households were always positive. This means, using the same reasoning as above, that there might be an over-estimation of households' net saving and/or under-declaration of households' fixed capital formation (for example, individual house buildings).

Since 2000 the discrepancies began to be merged in the data of net lending (or net borrowing). It does not necessarily mean that the above mentioned cases disappeared. Notwithstanding, in order to analyze the trend of Russia's macro economy by a consistent method, we must ignore not only for the years since 2000 but also through 1999, when the discrepancies were explicitly recorded.

3.4 Net Lending or Net Borrowing by Institutional Sectors

Fig. 5 shows the structure of net lending or borrowing (with statistical discrepancies in them) by institutional sectors. Fig. 6 shows the ratio of the overall net lending or borrowing to GDP. They tell us that the year 1999 was a turning point when the net lending of the general government recorded surplus for the first time (Fig. 5) and the overall net balance jumped up to the level of over 10% of GDP (Fig. 6). The year 2004 was also a turning point when the net lending of the general government became the largest contributing factor of the overall net lending.

Besides, we can find out interesting features of Russia's macro economy from Fig. 5 and Fig. 6. Firstly, the relation between households and corporations is worth noting. That is, it was only in the first three years that the net borrowing of corporations (too small saving for investment) was covered by the net saving of households³¹ like Japan in its rapid economic growth in 50s and 60s. Since 2000 both the net lending balance of corporations and that of households always recorded surplus.

As for the general government, its contribution to the lending/borrowing balance has been always positive since 1999 except in 2001 and 2002.³² Especially in 2004 and 2005, the general government's contribution to the balance was higher than any other sectors. Russia in 2004 and 2005, where all the three sectors of general government, corporations and households contributed positively to the lending/borrowing balance and the general government was the number one contributor, was a unique country in comparative perspective.

The falling down of the ratio of overall net lending to GDP in 2001 and 2002 can be attributed to falling down of the contribution of the general government to lending/borrowing balance. The reason for this phenomenon must be examined in detail by analyzing the capital account.

3.5 Capital Account by Institutional Sectors

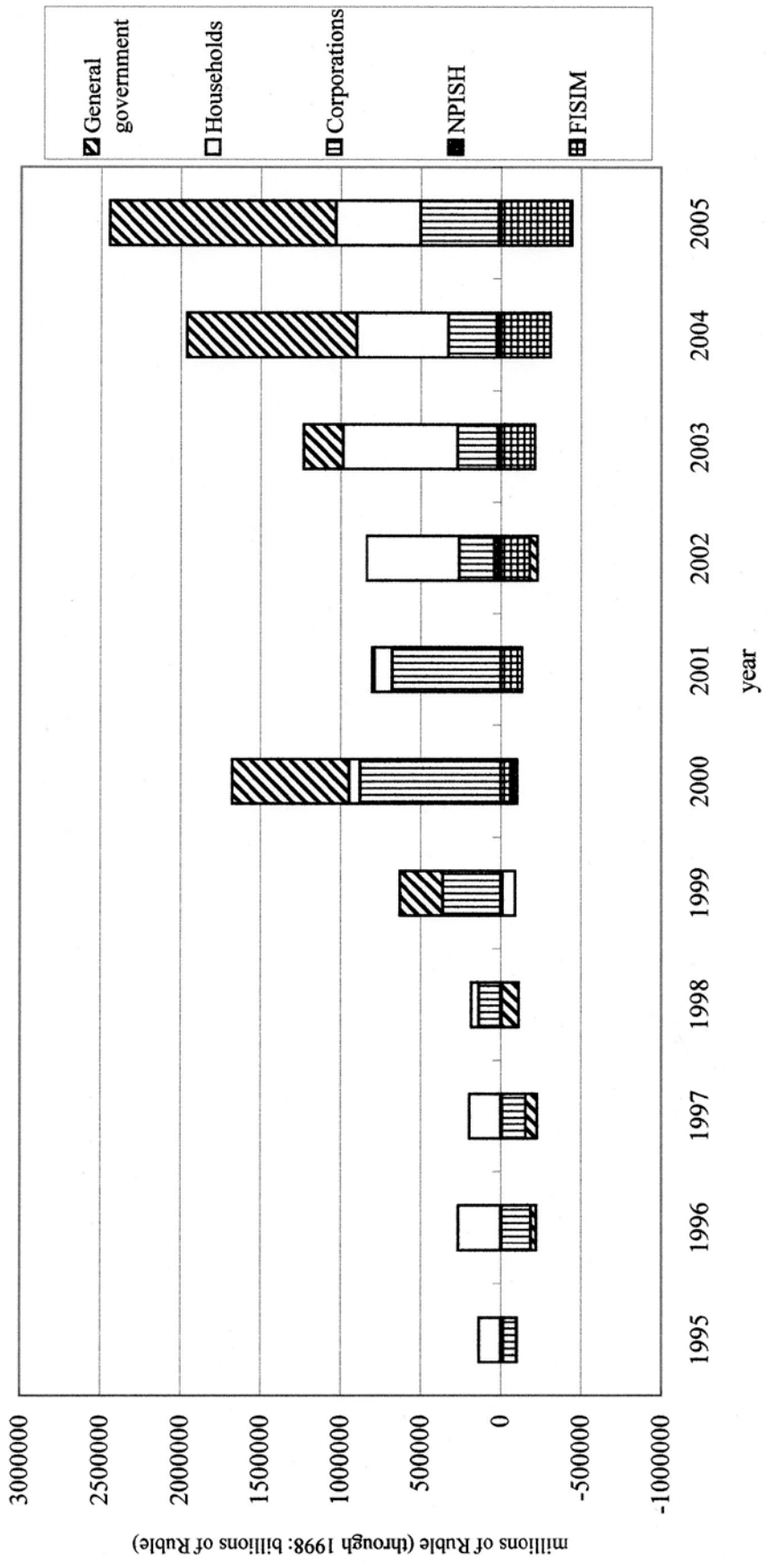
Table 5 compiled by the author using the data of *Natsional'nye scheta* shows the capital accounts of five institutional sectors of Russia.³³ As for the capital account of the *general government*, Table 5 shows that the transformation from negative to positive figures of net lending in 1999 was mainly caused by sudden increase of gross saving. According to the

³¹ As is explained above, the saving of corporations and households must be treated carefully because of data inconsistency.

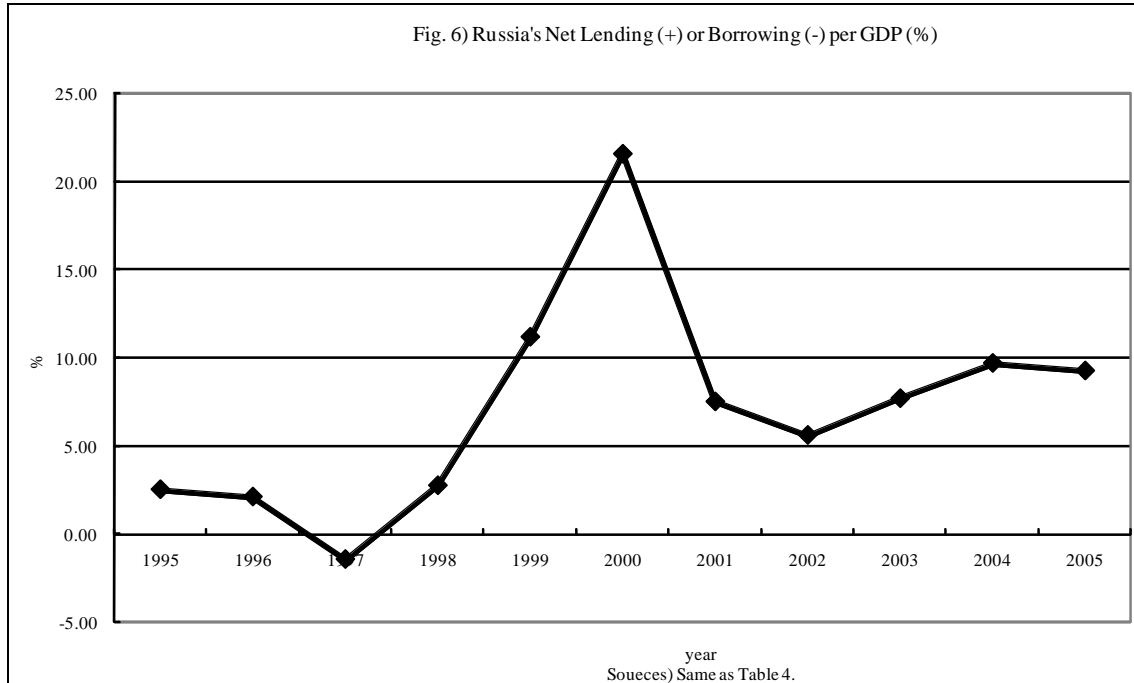
³² The net lending balance of the government must not be confused with budgetary balance.

³³ While the net lending or net borrowing of the overall capital account is that against the rest of the world, the individual accounts of sectors indicate net lending or net borrowing not only against the rest of the world but also against the other domestic institutional sectors. The same is true as for the item of capital transfer. Let us read the figures in Table 5 keeping these things in mind.

Fig. 5) Russia's Net Lending or Net Borrowing by Institutional Sectors



Sources) Same as Table 4



table, the rapid upward trend of the net lending of the general government continued in 2000, when the gross saving kept growing but the gross fixed capital formation stagnated in nominal terms.

On the contrary, as is shown in Fig. 5 and Fig. 6, in 2001 the net lending of the general government dropped down in a large scale and in 2002 the lending/borrowing balance turned into negative. Table 5 tells that this phenomenon was caused by three factors: (1) steady growth of the gross fixed capital formation, (2) stagnation of gross saving, (3) increase of supply of capital transfer (negative net capital transfer). The most important is the factor (3). Russia's balance of payments statistics would provide interesting information concerning this.

According to the balance of payments of Russia, an item called "capital transfer in connection with renunciation of credit of the governmental institutions" (net figure) was \$ - 8.9 billion in 2001 and about \$ -11.9 billion in 2002³⁴ (-260.0 billion Ruble in 2001 and -373.1 billion Ruble in 2002 using annual average exchange rate of *IFS*). Therefore more than half of the net minus figures of the capital transfer of the general government³⁵ in 2001 and 2002 can be explained by the renunciation of the former Soviet Union's credit against developing countries³⁶ by the Russian government.

³⁴ *VBR*, No. 26-27, p. 2003.

³⁵ The net capital transfer of the general government was -490 billion Ruble in 2001 and -582 billion Ruble in 2002.

³⁶ The large minus figures are entered in the line of "credit against distant foreign countries" in the balance of payments.

However, the rest of the net minus figures must be explained by other factors. Here we must note that the account of corporations shows large positive figures of the net capital transfer since 2000. There is a possibility that the excess saving of the government was transferred to corporations as capital transfer,³⁷ though it is not clear what kind of transactions were made between the government and the corporations.

Since 2004 the gross saving of the government, which is a representation of budgetary surplus, was so large that the rapidly growing “gross fixed capital formation” and large negative “net capital transfer” could not stop explosive increase of the net positive lending. Table 6 shows the same thing from another view point. Table 6 shows recalculated data of several elements of Table 5 in real terms. To calculate real terms the author used GDP deflators. According to Table 6 the big growth of gross saving in 2004 and 2005 happened only in the government sector.

In connection with the fact that the $S^p - I$ balance has been decreasing since 2004 and turned negative in 2007 (see Formula (1) and Table 1), this situation can be described as follows (in case of 2007),

$$(8) \quad S^g - I^g = T - G - I^g > 0 \quad \text{[Government sector]}$$

$$(9) \quad S^p - I^p < 0 \quad \text{[Sectors other than government]}$$

But,

$$(10) \quad S^g - I^g + S^p - I^p = CA > 0 \quad \text{[National economy].}$$

This is a result of the government policy to keep windfall revenues unused by the mechanism of Stabilization Fund. However, considering the fact that the lending/borrowing balance of the sectors other than the government is in deficit is a dangerous symptom for the future economic development, T might be too big or G too small, though we must pay attention to inflation problem.

As for *households*, it is impressive that it was only in 1999 that the lending/borrowing balance recorded negative figure. Table 5 tells that this was caused by sudden decrease of gross saving. According to other SNA statistics, in 1998 and 1999 the final consumption of households increased rapidly in nominal terms (*NSR93-00*, pp. 94-102). At the same time the households’ saving rate (gross disposable income per payments for final demand) decreased rapidly.³⁸ Therefore the gross saving in nominal terms decreased in a large scale in 1999 (also in 1998).

³⁷ Remember that the capital account records capital transfers between the domestic sectors here.

³⁸ 15.3% in 1997, 6.1% in 1998 and 0.05% in 1999 (calculated by the author using the data of *NS93-00*, pp. 94 -102.

Since 2000 both gross fixed capital formation and gross saving grew steadily, which, in turn, made large amount of net lending. In 2004, however, the situation was changed again. The net lending began to decrease because the gross fixed capital formation increased faster than the gross saving. It can be confirmed in real terms (see Table 6). This means increase of investment in house building and other durables by the households sector.

As for *corporations*, the lending/borrowing balance recorded negative figures until 1997 and then the balance turned upward to the highest mark in 2000. After that the figure once decreased and then increased again. This complicated movement is a result of independently moving figures of gross fixed capital formation and gross saving, in which we cannot find any general tendency.

Notwithstanding, one distinct feature is found in Table 5 concerning the account of the corporations: every year since 2002 the net lending of the corporations had been smaller than that of the households. As is examined above, the saving of the corporations has been larger than that of the households. Therefore the relatively small amount of the net lending of the corporations indicates that its fixed capital formation has been much larger than that of households. Here, however, we must remember that there was a possibility of over-declaration of capital formation by corporations. At the same time we must note that in 2004 and 2005 the net lending of the general government increased tremendously. Considering that overall net lending of a country means an increase of current account surplus in balance of payments, that is, an increase of claims of residents against non-residents, this phenomenon reveals that the income of Russians earned by oil and gas export is distributed among people or absorbed by the government and that the credit against the rest of the world is registered mainly by the name of individual households and the government instead of corporations.

Concerning the corporations, the data in real terms would provide us another interesting fact. According to Table 6 it is clear that the gross fixed capital formation of the corporations has been stagnated in real terms except in 2000 and 2001 comparing with the government and the households. As the absolute level of capital formation in corporations sector had been already large from the beginning in nominal terms, this stagnation might mean saturation of investment in Russia. It is, however, not consistent with what we know about Russia. All these things indicate that a stable system which transfers income earned by the oil and gas export into investment has not been established in Russia at least until the end of 2005.

Table 5) Capital Account by institutional sectors (in current millions of Ruble (through 1998 in current billions of Ruble))

General government		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Changes in assets</i>												
P. 51	Gross fixed capital formation	36519	51659	37936	77525	185421	159365	204802	265881	360407	501601	811334
K. 1	Consumption of fixed capital (-)						35452	41767	51529	59174	71349	87866
P. 52	Changes in inventories						0	0	0	0	0	0
P. 53	Acquisitions less disposals of valuables	3146	-7504	4137	577	0.2	10000	1500	-7111	-6997	-26636	-9595
K. 2	Acquisitions less disposals of non-produced non-financial assets	-67	-133	-174	-279	-590	-438	-1277	-13151	200	387	932
B. 9	Net lending (+) or Net borrowing (-)	-4212	-33911	-73939	-105251	266785	730473	13461	-50114	246252	1059149	1416986
<i>Changes in liabilities and net worth</i>												
B. 8g	Gross saving ²	88126	68225	30172	14846	523041	820500	708498	777390	858771	1783133	2949227
K. 1	Consumption of fixed capital (-)						35452	41767	51529	59174	71349	87866
B. 8n (=												
B. 8g - K. 1)	Net saving ²					785048	666731	725861	799597	1711784	2861361	
D. 9	Capital transfer, receivable	3643	2201	829	1008	1175	308003	53002	224452	10596	15517	3604
D. 9	Capital transfer, payable (-)	56383	60315	63041	43282	72600	229103	543014	806337	269505	264149	733174
Households		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Changes in assets</i>												
P. 51	Gross fixed capital formation	4793	12118	29226	52299	77710	179093	237064	322499	414201	600374	767288
K. 1	Consumption of fixed capital (-)						69028	84886	107939	121011	96974	109308
P. 52	Changes in inventories	53	-8424	-69	-8875	-11694	3446	14594	10879	21005	2689	9626
P. 53	Acquisitions less disposals of valuables	3571	3677	4678	5668	8685	12376	16775	21967	26356	29499	37215
K. 2	Acquisitions less disposals of non-produced non-financial assets											
B. 9	Net lending (+) or Net borrowing (-) ¹	137415	264866	195478	46329	-79342	67326	110077	578386	715537	575870	528281
<i>Changes in liabilities and net worth</i>												
B. 8g	Gross saving	146526	271182	228540	97656	1121	234820	348796	878502	1117013	1209361	1338915
K. 1	Consumption of fixed capital (-)						69028	84886	107939	121011	96974	109308
B. 8n (=												
B. 8g - K. 1)	Net saving					165792	263910	770563	996002	1112387	1229607	
D. 9	Capital transfer, receivable	15137	19271	12358	12038	17085	46367	51012	80279	86579	25059	27756
D. 9	Capital transfer, payable (-)	15831	18216	11585	14273	22847	18946	21298	25050	26493	25988	24261
Corporations (through 1999 with NPISH)		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Changes in assets</i>												
P. 51	Gross fixed capital formation	279912	394420	406474	349383	494856	868910	1229174	1329818	1631379	1981719	2200740
K. 1	Consumption of fixed capital (-)						492588	598216	684089	776562	928142	1089693
P. 52	Changes in inventories	63595	82749	81862	-32599	-25764	130245	259201	219120	301792	425739	491859
P. 53	Acquisitions less disposals of valuables										36204	35212
K. 2	Acquisitions less disposals of non-produced non-financial assets	67	133	174	279	590	438	1277	13151	-200	-387	-932
B. 9	Net lending (+) or Net borrowing (-) ¹	-81554	-183211	-147516	137843	363655	879948	678474	219041	250604	300806	452508
<i>Changes in liabilities and net worth</i>												
B. 8g	Gross saving	210178	239368	284134	415728	767138	1685766	1981578	1649327	2018221	2544103	2818314
K. 1	Consumption of fixed capital (-)						492588	598216	684089	776562	928142	1089693
B. 8n (=												
B. 8g - K. 1)	Net saving					1193178	1383362	965238	1241659	1615961	1728621	
D. 9	Capital transfer, receivable	56383	60315	63041	42936	72003	279813	240823	135793	170267	204948	365501
D. 9	Capital transfer, payable (-)	4541	5592	6181	3758	5804	86038	54275	3990	4913	4970	4428
NPISH							2000	2001 ³	2002	2003	2004	2005
<i>Changes in assets</i>												
P. 51	Gross fixed capital formation						2299		6261	6906	7763	6228
K. 1	Consumption of fixed capital (-)						1638		2294	2346	2675	2673
P. 52	Changes in inventories											
P. 53	Acquisitions less disposals of valuables											
K. 2	Acquisitions less disposals of non-produced non-financial assets											
B. 9	Net lending (+) or Net borrowing (-) ¹						-43520	0	40244	19210	25483	14147
<i>Changes in liabilities and net worth</i>												
B. 8g	Gross saving						-41221		43540	22631	29332	20375
K. 1	Consumption of fixed capital (-)						1638	0	2294	2346	2675	2673
B. 8n (=												
B. 8g - K. 1)	Net saving						-42859	0	41246	20285	26657	17702
D. 9	Capital transfer, receivable						0		2965	3485	3914	0
D. 9	Capital transfer, payable (-)						0		0	0	0	0

Table 5) Continued

FISIM		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<i>Changes in assets</i>												
P. 51	Gross fixed capital formation											
K. 1	Consumption of fixed capital (-)											
P. 52	Changes in inventories											
P. 53	Acquisitions less disposals of valuables											
K. 2	Acquisitions less disposals of non-produced non-financial assets											
B. 9	Net lending (+) or Net borrowing (-)	-15446	-5163	-7399	-6321	-11467	-58239	-129720	-179288	-211584	-307147	-442865
<i>Changes in liabilities and net worth</i>												
B. 8g	Gross saving	-15446	-5163	-7399	-6321	-11467	-58239	-129720	-179288	-211584	-307147	-442865
K. 1	Consumption of fixed capital (-)											
B. 8n (=												
B. 8g - K. 1)	Net saving						-58239	-129720	-179288	-211584	-307147	-442865
D. 9	Capital transfer, receivable											
D. 9	Capital transfer, payable (-)											

Note) ¹ = It is calculated as residual of the other items of this table, therefore a statistical discrepancy is included.

² = Net saving = gross saving - consumption of fixed capital. Until 1999, only the gross saving was recorded, while since 2000 both the net and gross saving were recorded. The residual figure of net lending (or net borrowing) is not affected by this problem because the consumption of fixed capital, whose data are not explicitly recorded in the capital accounts by institutional sectors until 1999, would appear on the both side of the account (In Account 7 of Table 2 the gross fixed capital formation and the gross saving are recorded).

³ = NPISH has been recorded independently since 2000, but for some unknown reason the data for 2001 was not published.

Sources) Same as Table 4.

FISIM means the financial intermediation services indirectly measured. The value of FISIM is “calculated as the value of the property income receivable by financial intermediaries less the interest payable by them” (United Nations *et al.*, 1993, p. 563). Table 5 shows that the net lending balance (= the gross saving = the net saving) of the FISIM has always been negative and the negative amount grew year by year since 1999. It *does not* mean that the amount of interest paid by Russian financial institutions has been always larger than the property income of them, and that the “losses” of the financial institutions has been growing recently. In Table 5 the item “FISIM” is a dummy sector which is considered to undertake all the cost of FISIM as its intermediate consumption and the same (positive) value is allocated to other sectors including the financial corporations sector. The figures in Table 5 indicate that financial activities in Russia have been intensified year by year.

Table 6) Capital formation and saving in government, households and corporations (in real terms, 1995 prices)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Government											
Real gross fixed capital formation	36519	35849	22608	38957	54027	33735	37216	41838	49890	57815	78450
annual growth rate	%	-1.83	-36.94	72.32	38.68	-37.56	10.32	12.42	19.25	15.88	35.69
Real gross saving	88126	47346	17981	7460	152401	173688	128748	122327	118877	205525	285170
annual growth rate	%	-46.28	-62.02	-58.51	1942.83	13.97	-25.87	-4.99	-2.82	72.89	38.75
Households											
Real gross fixed capital formation	4793	8409	17417	26281	22643	37911	43079	50747	57337	69199	74191
annual growth rate	%	75.45	107.11	50.89	-13.84	67.43	13.63	17.80	12.98	20.69	7.21
Real gross saving	146526	188190	136198	49073	327	49708	63383	138238	154625	139392	129464
annual growth rate	%	28.43	-27.63	-63.97	-99.33	15118.33	27.51	118.10	11.85	-9.85	-7.12
Corporations (until 1999 with NPISH)											
Real gross fixed capital formation	279912	273713	242237	175569	144189	183935	223364	209255	225828	228414	212796
annual growth rate	%	-2.21	-11.50	-27.52	-17.87	27.57	21.44	-6.32	7.92	1.15	-6.84
Real gross saving	210178	166112	169329	208909	223525	356851	360090	259532	279377	293235	272512
annual growth rate	%	-20.97	1.94	23.37	7.00	59.65	0.91	-27.93	7.65	4.96	-7.07

Notes)
Sources)

¹ = To calculate real figures, GDP deflators are used. Original data through 1998 are in billions of Ruble and since 1999 in millions of Ruble.
NS93-00, pp. 84-103, NS97-04, pp. 26-41, NS99-06, pp. 22-37 [Original current price data].
NS93-00, p. 47, NS97-04, p. 94, NS99-06, p. 88 [GDP deflator].

4. Concluding Remarks: Implications for Policy Making

By analyzing statistical data, especially the SNA data, of the Russian Federation, we have found the following interesting features of Russia's macro economy.

- (1) The short history of Russia's macro economy can be divided into three periods from a view point of open macro balance: 1992 – 1999; 1999 – 2004; 2004 – now.³⁹
- (2) The budgetary balance has transferred from deficit to surplus in a relatively short period, whereas the current account balance have always recorded surplus. The net lending /borrowing balance was in surplus in the first and the second period but in the third period it began to decrease.⁴⁰ Such structure is unique in comparative perspective.
- (3) The share of taxes on production and imports in the GDP is high, though the share of the overall tax revenues in the GDP is relatively low. It reflects the state structure of Russia where its fiscal revenue depends heavily on the production sphere, where the state intervention is strong, instead of circulation and income. This setting is different from that of European welfare states including Norway.
- (4) The ratio of gross saving to disposal income (or GNI) has been relatively high comparing with other countries, though it has been moving violently. Especially the corporations sector has made much larger saving comparing with other sectors, some of which can be explained by low labor distribution rate.
- (5) The net lending of the general government has played a critical role in the movement of the whole net lending/borrowing balance of the country. Since 2004 the net lending of non-government sector is decreasing whereas that of government sector is still growing.
- (6) Since 2000 a large amount of net lending has been recorded in the both sectors of households and corporations. The more important is that the amount of the former has been larger than that of the latter in 2002 - 2005. At the same time the growth rate of the gross fixed capital formation of corporations has been stagnated in real terms. It reveals that Russia lacks stable and productive financial system and effective policy that would pour excess money into investment.

What kind of policy recommendations can be drawn from these findings? First of all, the finding (3) above would lead us to a recommendation that the tax base should be diversified, because stable governmental services could not be maintained on violently changing oil price.

³⁹ Recently, especially in 2007 and 2008, we see some symptom for another change.

⁴⁰ The net lending/borrowing balance might have been negative in 2007, though the SNA statistics have not been open.

The finding (4) tells us that some appropriate measures should be taken to cope with too much saving of corporations sector. It means that a tax system to redistribute revenue between corporations and people should be set up. The finding (5) has close connection with the recent disputes on how to keep and use too much tax revenue, including the dispute on reorganization of the former Stabilization Fund. Some measures to tax cut might be necessary to bring $S^p - I$ positive. The finding (6) has a clear message that a new tax system and financial network to induce the corporations to invest in the domestic market is necessary. Last but not least, the author would like to present a problem if today's dividing line between what is to be done by the government and what is not in Russia is appropriate for the future development. At least, the financial flows between the government and corporations must be more transparent.

This study does not consider the problems of domestic and international prices and exchange rate. It must be supplemented by international financial theory and macro economics.

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