

**Does Russia need to strengthen the ruble:  
Accumulation of foreign exchange reserves and economic growth**

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Russia is being advised to run down its foreign exchange reserves and to appreciate (strengthen) the ruble. These reserves grew up quickly after the 1998 currency crisis – from \$12 billion dollars right after the crisis to over \$60 billion by the end of 2003, but IMF experts believe that the ruble is currently undervalued and that low ruble only stimulates inflation (Financial Times, 19.08.2003). Other countries are asked to allow their currencies to appreciate as well. John Snow, the US treasury secretary, was recently in China trying to persuade the leaders of the rising superpower to stop the fast accumulation of reserves and to float the yuan, so its exchange rate could rise. “We do not think we are treated fairly, when a currency is controlled by the government”, - said president Bush (Financial Times, 8.09.2003).

Fred Bergsten from the Washington Institute of International Economics complains that (East) Asian countries are not playing their role in the global adjustment process that is needed to reduce America’s external deficit. “Economist” was likening the exchange rate policy of East Asian countries to the attempt to load the hardest job on to the others (Economist, July 12, 2003). According to the recent IMF’s “World Economic Outlook”, “reserves in emerging economies in Asia are now at the point where some slowdown in the rate of accumulation is desirable from both domestic and multilateral perspective... An eventual narrowing of the US current account deficit from its present unsustainable level will likely require emerging economies in Asia to share in the adjustment, to prevent an undue burden of the adjustment on other economies... not least to keep protectionist pressures at bay”.

**Exchange rate protectionism**

The story is not without a precedent. In the 1930s, during the Great Depression, many countries resorted to protectionist measures and to competitive devaluations in an attempt to insulate their markets from foreign competition («beggar-thy-neighbor-policies»). In the 1980s it was Japan that was blamed for the US trade deficit. The Plaza Accord of 1985 involved the coordinated

efforts of major Western countries to appreciate their currencies against the dollar in order to reduce the US trade deficit; as a result, the Japanese currency appreciated most – from 239 yens to the dollar in 1985 to 128 yens in 1988. Export/GDP ratio in Japan that increased from 10 to 15% in 1960-84, fell to 10% by 1986 and stayed at this level until today. Economic growth in Japan slowed down dramatically in the 1990s, some economist see a causal link between these two events.

China did not devalue yuan versus the dollar after the 1997 Southeast Asian currency crises mostly on political reason – it took an economic hit since its exports was competing with ASEAN exports in western markets for the sake of providing assistance to its neighbors and promoting East Asian solidarity. De facto revaluation of the yuan versus East Asian currencies that plummeted after the Asian crisis caused a deflation in China (prices decreased or virtually did not grow in 1998-2002) and a slowdown of economic growth (from 10% in 1996 to 7% in 1999). But China continued to accumulate dollar reserves.

Why China accumulates foreign exchange reserves so rapidly – from less than \$5 billion in 1978, at the start of reforms, to over \$300 billion today (not counting over \$100 in Hong Kong)? Why were accumulating reserves so fast Japan (from less than \$2 billion in the early 1960s to over \$500 billion today), Taiwan (\$about 200 billion today), South Korea (over \$100 billion), South East Asian countries, so that Asia now accounts for 2/3 of the world's reserves? The stockpiling of foreign exchange reserves, like the accumulation of all stocks (inventories), is associated with costs – countries should limit their consumption to build up reserves. Moreover, reserves are invested into highly liquid and reliable securities, like the US treasury bills, with low returns, so alternative costs of keeping the reserves are high. And why the US and other Western countries are not accumulating the reserves at such a high pace as Asian countries do? Why the US are asking for the appreciation of yuan instead of building up their stocks of yuans, so that the exchange rate of the Chinese currency appreciates?

### **Theory: How reserves build up stimulates growth**

The standard theory regards the *real* exchange rate as determined by circumstances, not by policy, that is to say, if prices in Russia would increase two times, whereas in the US they will

stay stable, the nominal exchange rate would sooner or later (in the long run) will go from 30R/\$ to 60R/\$. However, this is only the case when some countries do not build up the reserves faster than the others: if they do, they artificially underprice their currencies by buying foreign currency and selling domestic one. The new theory suggests that intensive reserve accumulation can have a stimulating effect on the long term growth rates in developing, although not in developed, countries.

First, foreign exchange reserves accumulation causes real exchange rate undervaluation that is expansionary in the short run and may have long term effects, if such devaluations are carried out periodically and unexpectedly. Second, real exchange rate undervaluation allows to take full advantages of export externality and triggers export-led growth. This is sometimes called the “exchange rate protectionism” and quantitatively is considerably more important than conventional trade barriers. Third, FER build up attracts foreign direct investment because it increases the credibility of the government of a recipient country and lowers the dollar price of real assets. This third mechanism can operate even with the exchange rate overvaluation, if benefits from FDI inflows exceed costs of not utilizing fully the export externality.

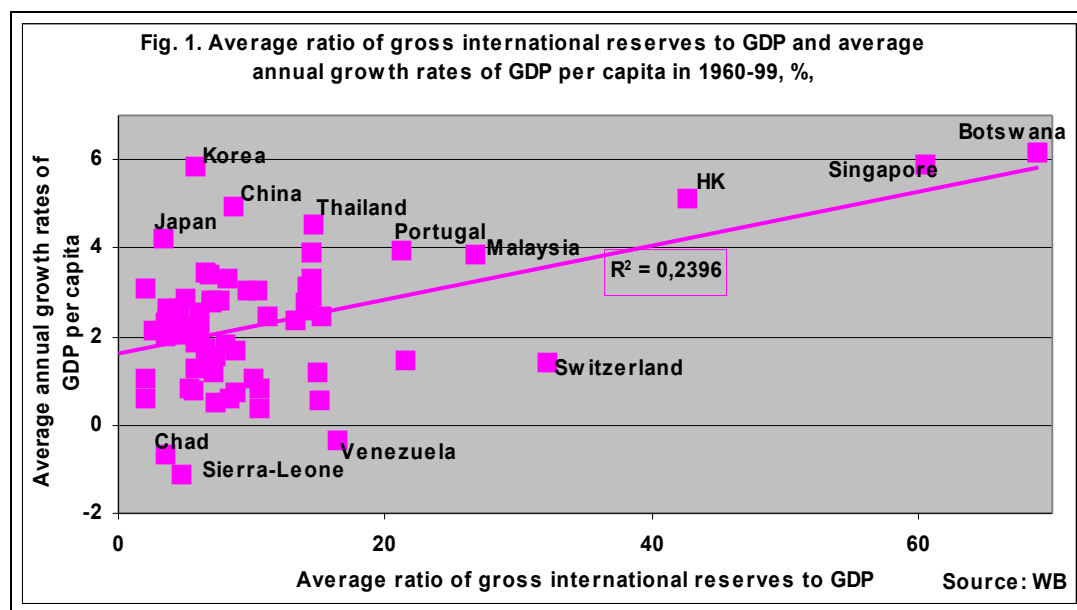
The accumulation of foreign exchange reserves is neither a necessary nor a sufficient condition of economic growth. It may well be that countries that do not accumulate reserves grow faster than others because of better investment climate, better institutions, greater involvement into international trade achieved through greater openness of their economies even though their exchange rate is at equilibrium level. It can also be the case that countries accumulating reserves are not able to increase their investment/GDP ratios due to high capital flight resulting from poor investment climate. Moreover, even if accumulation of reserves yields increases in investment/GDP ratios the growth of output may still be low due to poor marginal capital productivity. This happened, for instance in former centrally planned economies, or, more generally, in countries that promoted import substitution, although the example is of limited value, since in most of these countries the accumulation of reserves did not occur on any significant scale, whereas high investment/GDP ratios resulted from more direct government measures, not from the intensive accumulation of reserves and underpricing of the exchange rate.

However, the accumulation of foreign exchange reserves is a powerful macroeconomic mechanism of raising long term growth rates. It is simple, if not to say primitive, but this is exactly where it's major strength lies. It is available to all countries in all periods, even when other measures to boost economic growth are not feasible due to political economy reasons or require long time for the first dividends to be reaped. If there is nothing else to do in a country with numerous government failures, poverty trap and institutional traps, there is at least a chance to provide an efficient "big push" to economic development via accumulation of reserves by a central bank. Even the most inefficient and corrupt governments can use the reserve accumulation as the last resort device to promote growth.

The accumulation of reserves brings about the undervalued exchange rate, the increase in revenues and profits of the export sector at the expense of consumption, and boosts investment and export-led growth. The resulting greater involvement into the international trade ensures that new investment would not be used to create industrial dinosaurs enterprises of the sort of "white elephants" or "Egyptian pyramids" that were often created under the import substitution policy. On the contrary, total factor productivity increases due to externalities associated with greater participation in the international trade. Besides, reserve accumulation that continues for a decade or so appears to attract foreign direct investment because low exchange rate makes domestic assets look cheap and because foreign investors are impressed by the consistency of the government policy.

#### **Empirical evidence: How reserves build up stimulates growth**

Empirical evidence seems to suggest that the accumulation of foreign exchange reserves contributes to economic growth of a developing economy by increasing both the investment/GDP ratio and capital productivity (fig. 1). It appears that this policy works primarily for developing countries and that trade protectionism and "exchange rate protectionism" are basically substitutes, i.e. both policies at a certain stage of development can achieve growth promoting results. Growth regressions imply that for countries with PPP GDP per capita higher than \$5000 in 1975 (the level of Israel) the accumulation of reserves negatively affected growth, whereas for poorer countries the impact was positive.



Fast growing countries usually have undervalued exchange rate (*ceteris paribus* lower ratio of domestic to US prices), which is achieved due to rapid accumulation of foreign exchange reserves. As a result, there is a positive correlation between the accumulation of reserves, the share of investment in GDP and economic growth. It was shown for developing countries that overvaluation of the exchange rate is detrimental for economic growth by including the variable that characterizes the undervaluation of the exchange rate into standard growth regressions.

Developing countries that accumulated more reserves were also growing at a higher rate. What is the fastest growing economy in the world in 1960-2000? If you do not know, you probably won't guess – Botswana that managed to increase its per capita GDP in constant 1995 dollars by over 10 times – from \$340 to nearly \$4000 (6% annual average increase in GDP per capita over the period of 40 years). And what is the country with the highest ratio of foreign exchange reserves to GDP (import)? Again Botswana – over 100% of GDP and for 2 years of import. And what are other countries with high reserves/GDP and reserves/import ratios? China, Korea, Hong Kong, Taiwan, South East Asia, Mauritius, Chile, Ireland – all familiar growth champions.

Growth regressions also imply that “exchange rate protectionism” is a more efficient policy to stimulate growth in middle income countries than import duties (conventional protectionism) that are also good for growth at a certain stage of development. One explanation is that import

duties do not necessarily promote export oriented growth (they do only when the proceeds from these duties are spent for export subsidies), whereas undervaluation of the exchange rate via reserve accumulation is an automatic subsidy to all producers of tradables, especially to exporters. The other explanation is probably the indiscriminate, non-selective nature of low exchange rate policy: while tariff protection is selective and is thus prone to lobbying pressure, exchange rate undervaluation via reserve accumulation provides protection and stimuli to all industries producing tradables, especially to export oriented. This latter policy cannot be captured and “privatized” by particular interest groups, which makes it especially efficient growth promoting instrument in poor and middle income countries that generally suffer from corruption.

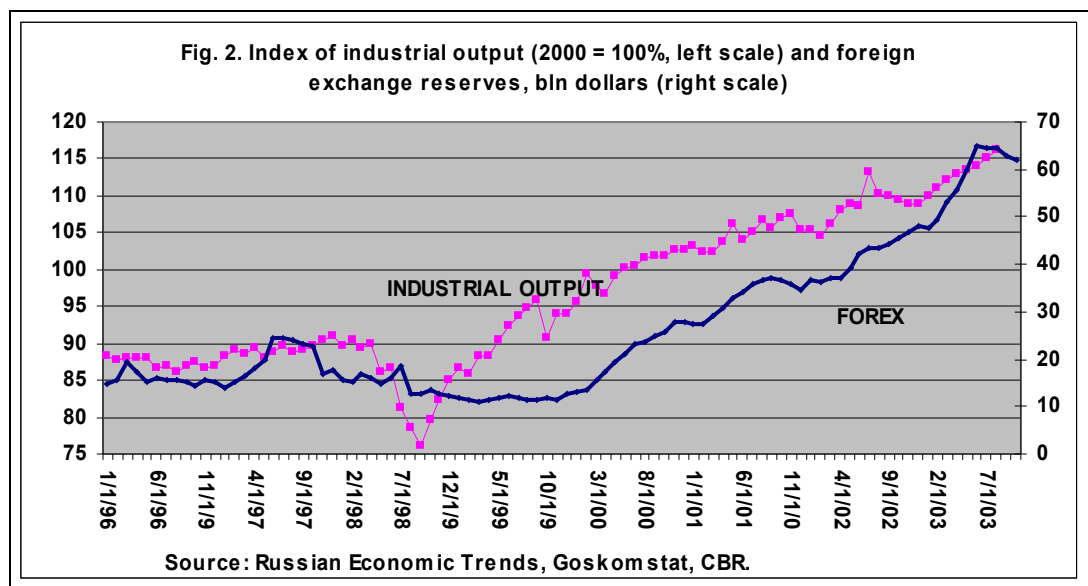
### **How much reserves Russia needs**

Undervaluation of the Chinese yuan making Chinese goods supercompetitive is a big problem for the US – the American trade deficit with China in 2003 will probably amount to \$150 billion, more than total Russian export. The Chinese trade surplus returns to the US in the form of purchases of US treasury bills by the Chinese monetary authorities. Foreigners now account for 1/3 of the US government debt and the share of Asian investors in annual foreign purchases of the US government securities is 40% - just a bit less than the share of Europe (43%). If Asian investors, or even just China, refuse to buy the US treasury securities (say because of the new terrorist attack in the US or simply due to the deterioration of political/trade relations), then interest rates in the US would rise and/or the dollar would depreciate – this would be the only way to reduce the current account deficit or to continue to finance it with the capital inflows. In both cases restructuring would follow and American output and real incomes would be suffer. The idea of the current US administration is probably not to wait for the avalanche, but to ensure the soft landing, while it is still possible, via gradual appreciation of yuan that could cause a gradual reduction of the US imports from China and stimulate US exports to China.

The US could lower the exchange rate of the dollar itself through the accumulation of own foreign exchange reserves, including reserves in Asian currencies, but does not want to. The build up of reserves is associated with costs, which are especially high for the US that keeps an exceptionally large part of all the reserves in gold (the burden of the superpower) – storage of

gold does not yield any returns. Moreover, for developed countries reserve accumulation does not bring benefits of faster growth, like it does for poorer countries, because their engagement into international trade is already at an optimal level. So US are pressing China to slow down reserves build up and to appreciate the yuan, which ultimately is going to hurt Chinese growth. So far, the Chinese politely refused.

Unlike the Chinese yuan, the Russian ruble and its exchange rate is a small problem for the US, but Russia is also advised to allow the appreciation of its exchange rate by stopping the accumulation of reserves. Economic growth started in Russia only recently, after the devaluation of 1998, and is based on two pillars – high fuel prices and still low ruble exchange rate (fig. 2). It is being said that the reserve accumulation leads to inflation, but is it necessary to fight inflation at a price of lowering growth? Besides, in theory there is no direct link between reserve build up and inflation (if increases in money supply due to reserve accumulation are sterilized through open market operations – sales of treasury bills), and in practice inflation rates in recent years in Russia were dropping even though reserves were growing. On the contrary, *real* (adjusted for inflation) ruble exchange rate increased a lot since 1998 against the dollar and especially against the euro. If fuel prices would drop tomorrow Russian economic growth would be jeopardized. Does Russia have to sacrifice its still fragile economic growth for the sake of «global structural adjustment»?



## Conclusion

In practical terms, there are no formal limits for the accumulation of reserves by developing countries, but “exchange rate protectionism” can result in “beggar-thy-neighbor policies” – obviously, if all countries will exercise these policies at the same time, everyone would loose. However, the US-IMF policy to press countries to appreciate their exchange rates (via selling their reserves) is in fact depriving these countries of a powerful tool of growth promoting policy. If there are countries that have more moral reasons than others to use “exchange rate protectionism” for promoting growth, naturally these are less developed countries, including Russia.

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The academic paper with the model and regressions:

V. Polterovich, V. Popov. Accumulation of Foreign Exchange Reserves and Long Term Economic Growth) - <http://www.nes.ru/english/about/10th-Anniversary/papers-pdf/Popov-Polterovich.pdf> and <http://www.nes.ru/english/about/10th-Anniversary/papers-pdf/Popov-charts.pdf>. For the short version in Russian see: V. Polterovich, V. Popov. Last Hope, Expert, Dec. 22, 2002.