

**OECD ECONOMIC SURVEY OF THE RUSSIAN FEDERATION, 2004:**

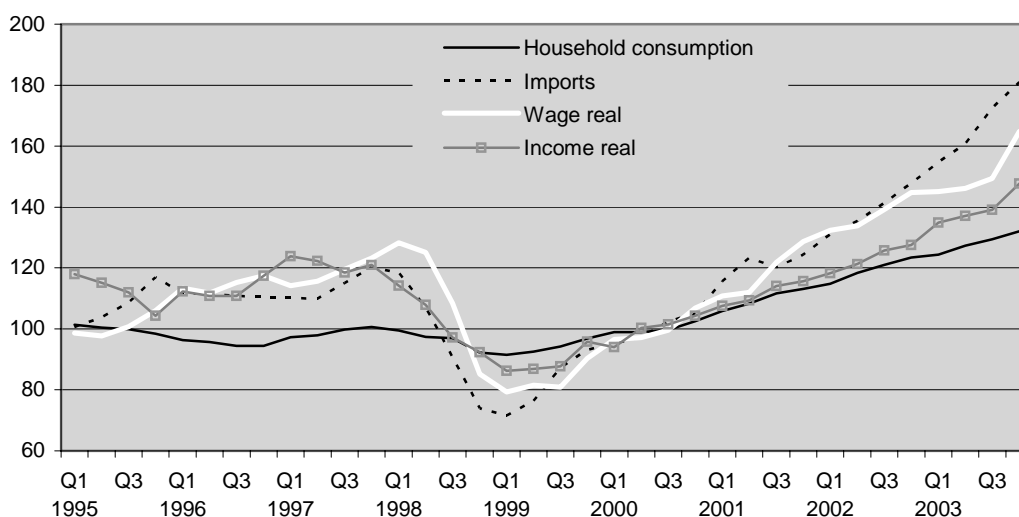
**THE CHALLENGE OF SUSTAINING GROWTH**

*This is an excerpt of the OECD Economic Survey of the Russian Federation, 2004, from the section on sustaining growth in chapter 1.*

***Sustaining high growth rates will require continued strong growth in exports***

Imports in recent years have tended to increase at least in line with disposable incomes (see Figure 1.7). Since one of the main aims and consequences of economic growth is to raise living standards, high growth rates will almost certainly imply a continuation of strongly increasing import demand. Russian industry is still unable to compete with imports of many sought-after consumer goods. Moreover, the continued real appreciation of the rouble will further increase demand for imported goods, for both consumption and investment.<sup>1</sup> This rise in imports may be somewhat dampened by further import substitution.<sup>2</sup> Nonetheless, it would be very surprising if imports did not continue to grow strongly.

**Figure 1.7. Income, consumption and imports**  
Index 2000=100, Seasonally adjusted



Source: Goskomstat, OECD.

To sustain such a situation, Russia must continue to increase exports. While the present large current account surplus could be taken to mean that Russia has ample space for increasing imports without a corresponding increase in exports, this is not the case. The current terms of trade are extremely favourable but will in all likelihood deteriorate at some point in the future.<sup>3</sup> If oil prices had been at their long-term average of USD 19/bbl (Urals) in 2003, and everything else equal, the current account surplus would have been of the order of USD 20bn, which would have only been somewhat above estimated capital flight. Alternatively, assuming that import volumes increase at roughly their current rate in dollar terms, with growth in export volumes slowing to a still reasonable 5 per cent by mid-2004 (which is above the 1996-99 average, as well as the rate recorded in 2001), the current account surplus would disappear by end-2005 even with Urals crude at around USD 25/bbl. Given continued capital flight, Russia would be structurally dependent on importing foreign capital even when oil prices were relatively high. Given Russia's vulnerability to terms-of-trade shocks, this would be a highly dangerous situation, especially in the absence of strong, stable FDI inflows. In short, if Russia wants to sustain high growth, it will have to be able to sustain rapid export growth.

### ***Growing oil and gas exports are hence of prime importance***

While the Russian authorities would understandably -- and rightly -- prefer a more diversified export structure, Russia's revealed comparative advantage (RCA) in recent years has been in natural resources, especially hydrocarbons, and energy-intensive basic manufactures (steel, aluminium, nickel, fertiliser), plus some other commodities.<sup>4</sup> Moreover, the RCA in oil has been growing strongly in recent years (see Chapter 2), as the oil sector has increased exports much faster than any other important sector. In any case, more than 50 per cent of Russian exports consist of oil, oil products and gas. Even if Russia managed sharply to increase exports of more sophisticated manufactures,<sup>5</sup> their contribution to total export growth would remain modest for some years to come, given their small share in current exports. Basic manufacturing in energy-intensive sectors may also be able to make some contribution to future export growth, although part of their competitive advantage will be eroded by necessary increases in domestic energy prices and by exchange-rate appreciation. In any case, recent experience suggests that potential export growth in these sectors may be constrained by the threat of protectionist measures on the part of Russia's trade partners.<sup>6</sup>

### ***Sustained growth in hydrocarbon exports will probably require new pipeline capacity...***

Robust export growth in the short-to-medium term will probably not be possible without further increases in mineral, and especially hydrocarbon, exports. Strong growth in oil production and exports should be possible through 2008. Beyond that, some significant new pipeline capacity would probably be needed. It is often claimed that slow progress in realising large-scale export infrastructure projects would sharply constrain the growth of oil exports in the coming years. There are, however, a number of smaller (and thus less visible) infrastructure improvement projects that should allow oil exports to increase at an estimated average annual rate of around 10 per cent, at least between 2004 and 2006.<sup>7</sup> It appears that production increases would be consistent with such export increases for the next few years, although production growth is currently expected to slow towards the end of the decade. One should, of course, keep in mind that increases in oil output have been consistently above forecasts in recent years. Nevertheless, if Russia is to maintain reasonable oil-sector growth beyond the end of the decade, it will be vital to ensure that fiscal and regulatory policies encourage the development of new oil fields to replace production from those currently in decline. While Russian oil companies appear to consider current fiscal terms attractive enough to invest in short-term projects, enhancing production from existing fields, it is not clear that this regime will be equally attractive when it comes to making large, up-front investments in the development of new fields. Any changes in oil-sector taxation should be sensitive to this problem, and there is an urgent need to streamline government decision-making with respect to new field development and to reduce the existing, very considerable

bureaucratic barriers that currently impede such activity. In this connection, it will also be important to ensure that property rights are clearly assigned and secure, lest asset-control contests damage the sector's ability to finance new investment.

### *...as well as gas sector reform*

In the longer term, oil exports probably cannot remain the chief driver of export growth. Russian oil reserves are comparatively limited,<sup>8</sup> and, perhaps more importantly, continued rapid export growth would at some point risk a price war with OPEC.<sup>9</sup> The obvious candidate to take the lead as oil export growth slows would be gas. Russia has the world's largest proven gas reserves. While many of them are in areas that are difficult to develop, Russia's gas monopolist OAO Gazprom, as well as its smaller gas producers, have exhibited real technical excellence in extracting them. Gas has the added advantages that world demand for it will probably continue to increase and Russia's gas reserves mean that it probably faces no threat of a price war if it increases exports. Unfortunately the gas sector in its current highly monopolised and heavily regulated configuration is unlikely to deliver sustained output and export growth. This underlines the importance of gas-sector reform from a macroeconomic point of view (see Chapter 3). The oil sector has shown that with the correct incentive structures -- including multiple privately owned production companies and fair access to export infrastructure -- production increases on a totally unexpected scale have been possible. In all likelihood the same would hold for a reformed gas sector.

The service sector could be another driver of long-term growth. With Russia becoming a richer country, demand for services will increase. As the service sector is still largely underdeveloped (once the statistical effect of transfer pricing in export sectors is stripped out), there is ample scope for catch-up growth in services.<sup>10</sup> The service sector, however, will not develop very strongly in the absence of a general increase in living standards: in other words, services growth may well outpace overall GDP growth but it must be accompanied by increases in goods production and exports.

A strategy of further developing resource-sector exports is not without risks, but these should remain manageable. Moreover, this is the course Russia has been following for several years now and it is difficult to see how it could change in the short to medium term without causing major disruptions. Even if policies favouring economic diversification are highly successful, Russia's performance will continue to depend on its resource sectors for quite some time to come. In a resource-exporting economy there are, however, three important types of potential risk that policy-makers need to address: external vulnerability, Dutch disease, and institutional pathologies that appear to be associated with resource-driven development.

### *Russia will have to cope with external vulnerability*

Given its industrial and export structure, the crucial importance of good fiscal and monetary policy for the Russian economy can hardly be overstated. It will also be important to continue developing institutions that enhance the sustainability and political feasibility of responsible macroeconomic policies. On the fiscal side, given that revenues are extremely sensitive to oil prices, this translates into a need for prudent fiscal policy based on conservative oil price assumptions and a large stabilisation fund. If Russia continues to adhere to the fiscal conservatism of recent years, the negative impact of a sharp fall in oil prices would be substantially mitigated. If not, effects would be magnified, as the government would have to run extremely restrictive (pro-cyclical) fiscal policies during periods of low oil prices, because external borrowing in such circumstances would probably be prohibitively expensive, if available at all on the necessary scale.

The recently established stabilisation fund (see Box 1.5) could play a crucial role in using fiscal policy as a stabilisation tool over the oil price cycle. If the fund is indeed to serve its purpose, it must be large enough to insure the budget against several years of below-average oil prices. This implies that the amount to be accumulated in the fund should be raised. It is currently planned to accumulate Rb500bn in the fund, roughly 3.8 per cent of 2003 GDP. This is a much smaller figure than was first proposed: the finance ministry's initial aim was to accumulate the equivalent of around 8.7 per cent of GDP in the fund. A larger fund, moreover, would strengthen Russia's bargaining position *vis-à-vis* OPEC. Whatever its planned size, the stabilisation fund may at some point reach a level sufficient to ensure that the budget is adequately insured against oil-price drops. At that point, it would be advisable to use additional surplus revenues in the first instance for early debt repayment. This would allow for sustainable higher government spending or lower taxation levels in subsequent years. The authorities might also wish to consider accumulating additional oil windfalls in the fully funded pillar of the state pension system. This would be a macroeconomically responsible way of distributing the windfall to the population and would help in particular to enhance the pensions of those citizens who, owing to age or income, will otherwise have little or no direct involvement in the fully funded scheme (see below). The authorities should resist the temptation to use windfall revenues accruing after the fund has grown to the required level to finance tax cuts or higher current spending that in all likelihood would turn out to be unsustainable and strongly pro-cyclical (and would thus counteract the purpose of stabilisation), since oil prices are likely to be relatively high when the fund achieves whatever planned level is set for it.

Keeping external debt low can also help to reduce external vulnerability, both by decreasing the risk of currency crises and by limiting the economic fallout from such crises if they occur. This applies to both sovereign and private external debt, so it will be important to prevent the private sector's external borrowing from reaching dangerous proportions. Recent empirical work undertaken at the IMF suggests that external debt above a certain level has a negative impact on growth. This research suggests that the optimal external debt level for Russia is probably somewhere below 40 per cent of GDP.<sup>11</sup> The reduction in external sovereign debt in recent years is thus a welcome development, as is the shift from external to internal sovereign debt issues, although this has so far been on a small scale. Ideally, sovereign debt should be predominantly in domestic currency, or at least oil-price indexed, so that debt service would fall when oil prices were low. Hitherto, commodity-price-indexed bonds have principally been employed by companies or in the context of sovereign debt restructurings, but there is no obvious reason why they could not be used more widely for sovereign issues.<sup>12</sup> Such paper could be attractive to individuals, companies or countries needing a hedge against oil price rises.

On the monetary side, given the large share of exports that are subject to large price fluctuations (a share that may further increase in the short-to-medium term), exchange-rate flexibility is needed to accommodate terms-of-trade shocks, especially negative ones. Exchange-rate corrections following terms-of-trade shocks are especially painful if the exchange rate has become fundamentally overvalued beforehand. In this respect, there may be some scope for efforts to avoid excessive exchange-rate appreciation, especially when oil prices are high and there are major short-term capital inflows. However, the pursuit of such exchange-rate goals with the monetary policy tools currently available (mainly unsterilised exchange-rate intervention) incurs significant costs in terms of inflation. While it may be both desirable and necessary to accept relatively gradual disinflation in order to support growth and manage the exchange rate, it is important to ensure that inflation does remain on a downward path, to avoid a shift of expectations from declining to increasing inflation. Such a shift would make fighting inflation much harder and costlier in the future. Continued disinflation should thus be a priority even if it meant a somewhat stronger nominal appreciation of the rouble.

It should be possible to make the inflation/rouble appreciation trade-off somewhat less acute by giving the CBR a wide range of sterilisation instruments. In general, the fact that Russia can expect to

experience exceptionally large swings in capital flows implies that the CBR should have an especially large capacity for monetary sterilisation.<sup>13</sup> First and foremost this means that Russia should have a large market in rouble-denominated government debt. This market is still too small (see Chapter 5, Box 5.1). Secondly, the CBR should be able to issue securities. The primary legislation needed to do this has been in force for some time, but the secondary legislation has not been forthcoming. The new Federal Financial Markets Service, which has been created to replace the Federal Securities Market Commission, should make it a priority to resolve this issue. More generally, dollarisation (or euro-isation) of the economy as such should be avoided or reduced, with prices and contracts being in local currency as far as possible. Such a structural shift would further reduce the economy's vulnerability to exchange-rate fluctuations. This shift will not happen overnight. It will require further bolstering the confidence of business and the public in the rouble, above all by maintaining sound fiscal policies and achieving stable low inflation.

#### **Box 1.5. The fiscal stabilisation fund**

The Stabilisation Fund of the Russian Federation was established in 2004 following the adoption of amendments of the Budget Code of the Russian Federation in December 2003.<sup>1</sup> The purpose of the fund is to insure the federal budget against oil-price volatility. Under the Budget Code amendments, 'surplus' revenues resulting from relatively high oil prices are accumulated in the fund automatically: all income from the natural resource extraction tax and the crude oil export duty above that which would accrue at an oil price of USD20/bbl (Urals) is automatically transferred to the fund. The government may also be required to transfer to the fund budget surpluses accumulated in the previous fiscal year, although this is less automatic: some surplus funds may be carried over to finance budgetary expenditures in the early months of the new year, when tax revenues are traditionally low.

The legislation stipulates that, until the fund accumulates a total of Rb500bn, the revenues accumulated in the stabilisation fund may be spent only to finance the federal deficit arising as a result of oil prices below the baseline USD20 level for Urals crude. The Russian authorities estimate that a fund of Rb500bn would insure the budget against the revenue losses arising from two consecutive years with oil prices averaging USD15/bbl for Urals crude. Once the fund exceeds Rb500bn, the government will be able to spend the additional revenues for unspecified 'other purposes', albeit only with the agreement of the Federal Assembly (such spending must be specified in the law on the federal budget for the year in question). The government intends that such surplus revenues would be used, in the first instance, to repay foreign debt early and to finance spending on structural reforms, but there is no requirement to this effect in the Budget Code.

The fund is managed by the Ministry of Finance, although the government may delegate some management functions to the CBR. The only instruments in which stabilisation fund revenues may be invested are foreign government securities; the government is to define the list of states in whose securities may be used for this purpose. One welcome side effect of this arrangement is that stabilisation fund investments will help to stabilise the exchange rate. The investment and spending pattern of the stabilisation fund will contribute to capital outflows when oil prices are high and capital inflows when they are low. These flows will be an important mechanism to counteract current account pressure on the exchange rate, thus helping to shield the economy somewhat from potentially damaging sharp exchange-rate fluctuations.

It is important to recognise that the fund's purpose is fiscal stabilisation across the oil price cycle. In this, the fund differs from some other oil funds, most notably that of Norway.<sup>2</sup> Norway's much larger Petroleum Fund aims not only to smooth short-term fluctuations in oil revenues but also to act as a mechanism for transferring the wealth derived from the current exploitation of a non-renewable resource to future generations. The Norwegian fund actually accumulates all of the state's net cash flow from petroleum activities, a portion of which is then transferred back to the budget to finance the non-oil budget deficit.

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1. 'O vnesenii dopolnenii' (2003).

2. On the Norwegian fund, see Finansdepartementet (2003).

### *Continued vigilance will be needed to avoid ‘Dutch disease’*

Further increasing the importance of the mineral sector in the economy also increases the risk of ‘Dutch disease’. This term usually refers to a situation in which a country suddenly discovers large natural resources, the extraction of which increases the equilibrium exchange rate and thereby puts pressure on the competitiveness of the other tradable sectors in the economy.<sup>14</sup> In the Russian context, the discovery of natural resources as such is not the source of the problem. Rather, it is the fact that their full weight in the economy made itself felt only at the start of the transition, when the relative prices of primary raw materials, which had been held at artificially low levels under central planning, soared, as did resource exports. This exposed large differences in productivity between sectors in Russia. Whereas the export-oriented energy sector is highly competitive and profitable, and would be so even at a stronger exchange rate, many enterprises, especially in the manufacturing sector, are already barely competitive at current wage and exchange-rate levels. The fact that many manufacturing enterprises are located in places with unfavourable climatic conditions (which increases operating costs) does not help.<sup>15</sup>

The strength of the resource sector allows -- indeed, compels -- Russia to have a relatively strong exchange rate, while high wages in the resource sector put upward pressure on wages in the rest of the economy. This is not all bad news. It increases living standards and boosts production in the non-tradable sector. However, it makes life much harder for other tradable sectors. Given the structure of the Russian economy, this is unavoidable. The non-resource tradable sector must therefore increase productivity and restrain unit labour costs sufficiently to stay competitive in order either to export or at least to withstand import competition. In this context, positive developments with respect to productivity in most sectors, and to some degree also unit labour costs, are encouraging (see Chapter 2). This improvement must be sustained if Russia wants to maintain high growth rates and achieve a more diversified industrial structure in the longer term. Ironically, Russia’s otherwise problematic industrial inheritance has so far made it easier for processing industries to cope with the effects of rising wage levels and an appreciating real exchange rate: the inefficiency of former Soviet industrial enterprises meant that there was often a great deal of scope for relatively easy productivity gains -- not least by means of ‘passive’ restructuring (*i.e.* labour-shedding). However, there are limits to how far such passive restructuring can go. Further *active* industrial restructuring, including private investment to modernise production capacities, is thus the *sine qua non* for continuing strong growth.

Dutch disease may also, however, affect equilibrium employment levels. To the extent that the strength of the resource sector (which provides relatively little employment) necessitates relatively high levels of labour productivity in other industrial sectors, it also risks contributing to reductions in industrial employment. Decreasing industrial employment would not necessarily be a problem in itself if employment in the service sector could compensate for lost industrial jobs. The problem, however, is that a lot of the potential employment opportunities in the service sector are of rather low productivity, which would imply comparatively low wages. To the degree that large wage inequality may be socially and politically unacceptable, these potential employment opportunities in services may not arise.

There are, however, policy measures that can help limit the potential negative impact of the natural resource sector on the economy and ease the adjustment process for the tradable non-resource sector, while trying to avoid a low employment trap. While real exchange-rate appreciation in itself is not only desirable, but also unavoidable over the long term, attempts should be made to avoid sharp movements in relatively short time-spans. This is yet another reason for a fiscal policy that is to some degree countercyclical to the oil price, a substantial stabilisation fund and a wider range of monetary sterilisation mechanisms.

The tax structure of the economy can also be used to assist the development of the non-resource sector. The abolition of turnover taxes since 2000 represents an important step in this direction, since such taxes weigh particularly heavily on processing industries (see Box 1.4). Increasing direct taxation of the natural resource sector (not only the oil sector) via excise, extraction or export taxes should be used to lower overall tax levels in the economy and in particular to cut the unified social tax (UST), thereby reducing non-wage labour costs.<sup>16</sup> Such a cut might in some sectors be partially or even wholly offset by wage increases, but it should certainly lead to lower total labour costs in sectors with low productivity. Since a cut in the UST would cause shortfalls for the Pension Fund, it might be desirable to earmark a certain portion of price-independent resource taxes to make up these losses. However, any increase in taxation of resource-extraction industries must ensure that these sectors, which are critical to growth, remain sufficiently profitable to allow for their further development. Current steps to increase of the tax burden on the oil sector, especially under favourable oil prices, while closing tax loopholes at the same time, are hence a step in the right direction. However, it would be unwise to focus solely on the taxation of the oil industry. There should also be attempts to increase taxation of other resource or related sectors. Taxing a larger part of the resource rent away should also lead to relatively lower wages in the resource sector and hence diminish the pressure on wages in other sectors. To the degree that this would allow the paying of lower wages for activities with lower productivity, it would help to preserve employment that would otherwise be lost (or facilitate the creation of jobs that might not otherwise exist).

While the foregoing measures could help to keep employment at acceptable levels, facilitate the diversification of the economy and favour the production of more sophisticated products, the transformation into a less resource-based economy will be a slow process. Diversification is an important long-term goal, but, even if diversification policies are relatively successful, the main structural changes in the economy in the coming years will probably be an increase in the service sector, as well as some increase in import substitution industries. Any major diversification in the export structure is unlikely except in the long term. For the foreseeable future Russia is almost certain to remain highly dependent on natural resource exports. It should therefore make the best of its resource endowments. While natural resources are sometimes seen as a ‘curse’ for longer-term economic development,<sup>17</sup> developing a successful modern economy based on natural resource exports is feasible, given the right institutions and policies, as the examples of OECD countries such as Canada, Australia or the Scandinavian countries demonstrate.

### ***Resource wealth can make it harder to create sound institutions***

Many of the potential macroeconomic problems arising from resource dependence can be resolved or at least substantially mitigated by the right macroeconomic policies and related structural reforms. The potential political economy implications may therefore be the toughest challenge. The literature suggests a number of reasons why resource orientation may complicate economic development. First, it has been shown that a larger share of natural resources in exports is related to more corruption,<sup>18</sup> which is associated with slower long-term growth.<sup>19</sup> Secondly, a higher natural resource share in the economy is often accompanied by greater inequality of incomes, which has also been shown to undermine long-term growth performance. Thirdly, it has been argued that the allocation of talent in natural resource economies is biased in favour of the resource sector. Highly capable individuals may focus on securing resource rents rather than building successful businesses in sectors with more potential for innovation.<sup>20</sup> Fourthly, resource wealth may favour the development of political and economic institutions which likewise favour rent-seeking over entrepreneurship, thereby reinforcing the structure of incentives faced by individuals.<sup>21</sup>

To the extent that inequality in Russian society is mainly driven by the fact that those active in natural resource sectors (owners, managers and workers alike) get their share of the resource rent, and

hence are usually doing far better than those in similar positions in other sectors, the solution is to tax away a larger part of the resource rents in a relatively corruption-proof way and to reduce general tax levels for the economy as a whole. This is essentially what the Russian authorities are committed to doing. Some increase in targeted social transfers would also play a role. A large reduction in resource rents going to individuals instead of the state would also help solve the problem of potential misallocation of talent to resource sectors. The main obstacle to achieving this is that it requires a fairly efficient and non-corrupt administration. Hence the second and third concerns, regarding income inequality and the allocation of talent, basically reinforce the importance of the first, namely low levels of corruption.

There are various measures that can be taken to limit corruption. The first step is to create more corruption-resistant structures. Rules, if necessary at all, should be simple, transparent and standardised, with few exceptions and as little reliance as possible on bureaucratic discretion. Many recent legislative changes seem to be at least partly motivated by this kind of reasoning, including changes to fiscal federal relations (see Annex 1.3) and measures to curb bureaucratic interference in commercial activity by, for example, curtailing officials' inspection powers, simplifying business registration and reducing the range of activities subject to licensing requirements. In this context, recent proposals to vary effective tax rates in the oil sector on the basis of the quality of deposits exploited should be viewed with caution. Such an approach would in theory be more efficient, as it would not only favour the exploration of less profitable fields but would also prolong the life of declining fields beyond what would be commercially viable under the current tax system. However, it will be critical to ensure that any such system of taxation relies on a small number of variables that are easily collected and monitored and that it be implemented in a manner which does not give much discretion to bureaucrats. In Alberta, for example, the royalty system takes into account three basic variables -- the age of the field, the depth of the oil and the flow rate -- all of which are easy to monitor. Though the adoption of such a relatively simple system may be advisable in the medium term, given widespread corruption and transfer pricing in the sector, it probably makes more sense at present to tax natural resources mainly through excise and similar taxes, as well as export taxes.

While drafting corruption resilient legislation is important, it will not be sufficient on its own to reduce corruption levels as long as corruption goes largely unpunished because of a lack of monitoring. Cross-country research shows that both the efficiency of the rule of law and the development of civil society are strongly and negatively correlated with corruption levels.<sup>22</sup> The evidence also suggests that a lack of press freedom causes corruption.<sup>23</sup> It would thus be in Russia's economic interest not only to strengthen the judicial system, but also to foster the development of civil society and press freedom. Strengthening the rule of law and increasing the accountability of officialdom are particularly important in creating an institutional environment more conducive to entrepreneurship and wealth creation rather than rent-seeking.<sup>24</sup>

1. Short-term real appreciation will be driven by the current account surplus, medium-to-long term appreciation by the Balassa-Samuelson effect.
2. Production increases in import-competing sectors would also contribute to a welcome diversification of the economy.
3. This would reduce the pressure for real appreciation and might therefore slow import growth, at least temporarily. The general process of strong import growth with improving living standards is, however, set to continue.

4. Russia may have a comparative advantage in arms production; the data to assess this hypothesis are not available.
5. There is little scope to compete in labour-intensive basic manufactures with countries like China, which have much lower wage levels than Russia and almost unlimited surplus labour.
6. According to the Ministry of Economic Development and Trade, Russian exporters in early 2004 faced 93 different restrictions on access to foreign markets, including 57 anti-dumping measures of various kinds. Roughly 60 per cent of these applied to steel exports, with a further 25 per cent affecting the chemicals sector.
7. See Collison *et al.* (2004).
8. At least those for which development is commercially viable at current technology levels.
9. There is increasing agreement that the oil price collapse of 1986 was one of the key factors in triggering the terminal crisis of the Soviet system; see Tompson (1999) and Kotkin (2001).
10. Part of the increasing weight of services in GDP will also come from a shift in relative prices. Domestic prices for non-tradables will be increasing faster than for tradable with the Russian currency appreciating.
11. Empirical work by Patillo *et al.* (2002) argues that, for developing and emerging countries, the average impact of external debt on growth becomes negative at about 35-40 per cent of GDP or about 160-170 per cent of exports. The marginal impact of debt would start being negative at about half of these values. This would suggest that, for Russia, optimal external debt levels would be somewhere in the range of 15-40 per cent of GDP.
12. See UNCTAD (1998:41-5).
13. In recent years sterilisation may have been difficult because of limited demand for rouble debt instruments. This is no longer the case, as witnessed by the fact that interest rates on rouble instruments are very low and often negative in real terms.
14. The name 'Dutch disease' is in fact rather unfortunate, as the Netherlands actually handled such a situation comparatively well.
15. Mikhailova (2003).
16. OECD (2003a).
17. See, *e.g.* Sachs and Warner (2001).
18. See, *e.g.* da Cunha Leite and Weidmann (1999).
19. Mauro (1995).
20. See Acemoglu and Verdier (1998) for a related point.
21. Countries that are highly dependent on natural resource exports are also more likely to experience large-scale rebellions and civil wars. This point, however, is not particularly relevant for Russia.
22. Brunetti and Weder (1999).

23. Ahrend (2002).

24. Interestingly, all resource-based economies that have developed successfully had strong civil societies, relatively well functioning and independent judicial systems, high levels of press freedom and relatively low levels of corruption, whereas resource economies that failed to achieve adequate economic progress usually lacked most of these features.

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