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Renaissance Capital

NES New Economic School

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RenCap-NES Leading GDP Indicator*
2Q-3Q10: Recovery seems unstable

- According to our model, we project real GDP in Russia to grow 5.3% YoY in 2Q10. Our second estimate of YoY GDP growth in 3Q10 is 2.8%.
- The main driver of the upward revision to our 2Q10 GDP forecast (from 1.0% to 1.4% QoQ, in s/a terms) is an improvement in expectations (REB indices).
- We project GDP will grow 1.4% in 2Q10 and 0.7% in 3Q10 in terms of QoQ s/a figures.
- The difference between our 1Q10 GDP forecast and the actual data has been the largest since 1Q02 due to a significant change in Rosstat methodology, which came into effect 1 Jan 2010. We believe the performance of our model will improve as soon as Rosstat data comparability is restored.
- Lack of data comparability has become a major issue for all economists covering Russia, and makes any forecasting particularly difficult. However, it is clear to us that growth in 2Q should have benefited as a more conducive macroeconomic environment helped to restore confidence.

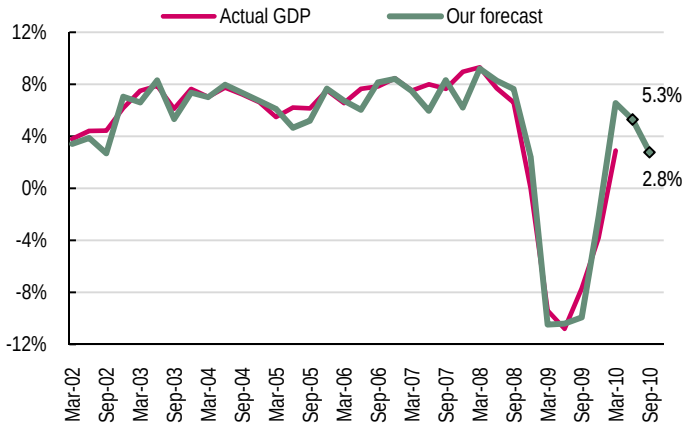
Our estimates of real GDP growth

	To previous year	QoQ	QoQ, s/a	Annualised
1Q10 (vintage 5)	7.0%	-19.2%	3.6%	15.2%
1Q10 (actual)	2.9%	-22.3%	0.1%	0.4%
2Q10 (vintage 5)	5.3%	12.9%	1.4%	5.7%
2Q10 (vintage 4)	4.9%	12.4%	1.0%	4.1%
3Q10 (vintage 2)	2.8%	11.0%	0.7%	2.8%
3Q10 (vintage 1)	3.5%	11.8%	1.4%	5.7%

Source: NES estimates, Renaissance Capital estimates

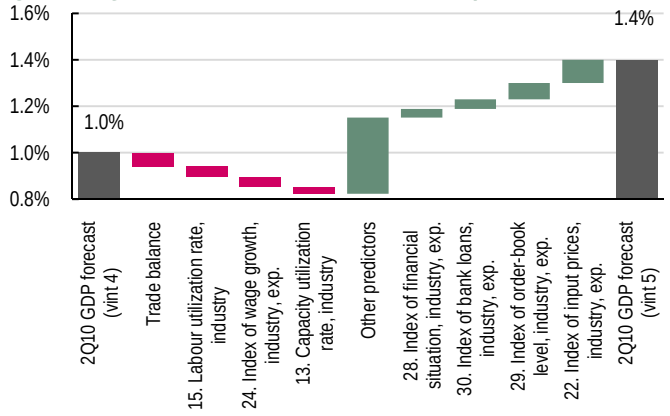
** A brief description of our model can be found in Appendix 1.See our report, RenCap-NES Leading GDP Indicator: Forecasts – better and earlier, dated 10 Dec 2009, for detailed information.*

Figure 1: Real GDP growth, YoY



Source: Rosstat, NES estimates, Renaissance Capital estimates

Figure 2: 2Q10 GDP forecast revision and its top drivers



Source: NES estimates, Renaissance Capital estimates

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Our 1Q10 forecast vs actual data

The actual GDP data for 1Q10 have been a great disappointment to us. The discrepancy between our forecast and the actual data is the largest since 1Q02 (Figure 3 shows the results of out-of-sample testing for the periods from 1Q02). For 1Q10, QoQ, s/a real GDP growth was just +0.1%, which is considerably lower than our final estimate of +3.6% for that period. Actual YoY GDP growth was +2.9% in 1Q10, while we had expected +7.0%.

The main reason for the poor performance of our model is a drastic change in the Rosstat calculation methodology, which came into effect on 1 Jan 2010. In most economists' opinion, the changes are the most significant of the past two decades.

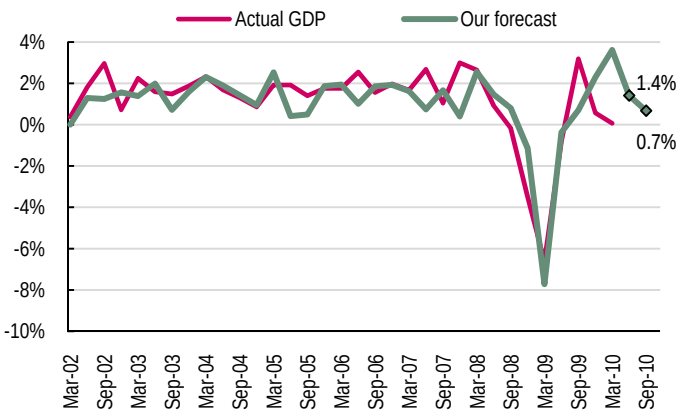
As a result, the historical comparability of economic indicators has been destroyed. Moreover, we had to exclude 18 of 37 industrial indices from the model, since the Higher School of Economics (HSE) is still processing them in order to restore the historical comparability.

Our model will probably show a weak performance until all the macroeconomic series with broken comparability are revised. The data revision process is incomplete, so there is a probability that our final forecast for 2Q10, presented in this report, will deviate significantly from the actual GDP data.

2Q10 and 3Q10 real GDP growth forecasts

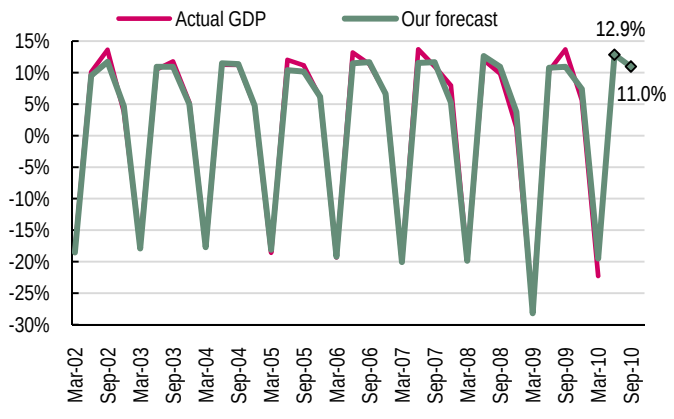
According to our model, we project QoQ s/a real GDP growth to be 1.4% in 2Q10 and 0.7% in 3Q10 (+5.7% and +2.8%, in annualised figures). In unadjusted figures, we project GDP will rise 12.9% QoQ in 2Q10 and 11.0% QoQ in 3Q10. We expect real GDP to grow 5.3% YoY in 2Q10 and 2.8% YoY in 3Q10.

Figure 3: Seasonally adjusted GDP growth, QoQ



Source: Rosstat, NES estimates, Renaissance Capital estimates

Figure 4: Unadjusted GDP growth, QoQ

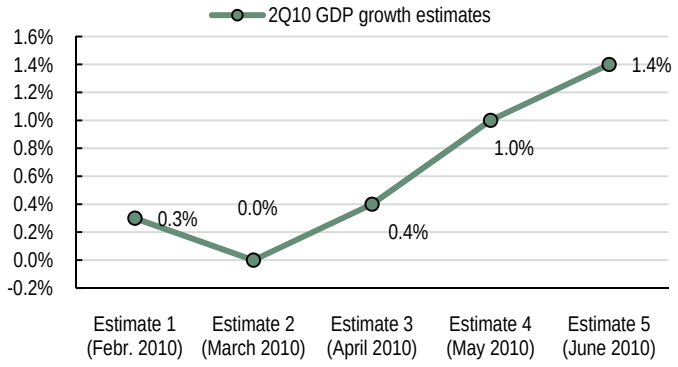


Source: Rosstat, NES estimates, Renaissance Capital estimates

Predictors with maximum influence on forecast revision

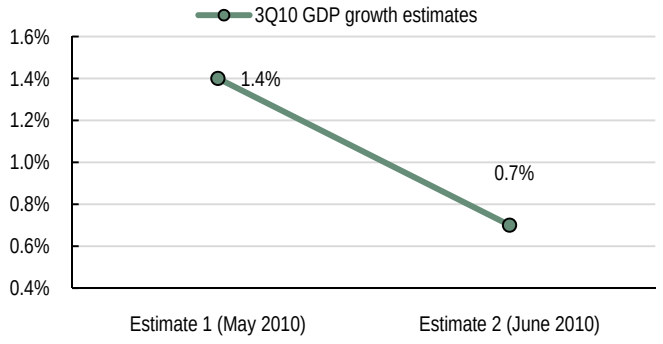
Our estimate of QoQ s/a GDP growth for 2Q10 has improved to 1.4% from 1.0% after this revision. On the contrary, our 3Q10 GDP forecast has deteriorated to 0.7% from 1.4%.

Figure 5: Vintages of 2Q10 GDP forecast (QoQ, s/a)



Source: NES estimates, Renaissance Capital estimates

Figure 6: Vintages of 3Q10 GDP forecast (QoQ, s/a)



Source: NES estimates, Renaissance Capital estimates

The only missing predictors for our 2Q10 GDP forecast have been March's REB indices and a few Rosstat indicators with a two-month publication lag. Their release allows us to produce our final 2Q10 GDP forecast and estimate the predictors' contribution to the forecast revision.

The REB indices covering expectations (indices of input and output prices, order-book level, indices of bank loans and financial situation in industry) recovered in March and have become the main upward drivers of our 2Q10 GDP forecast revision (see Figure 2 and Figure 7).

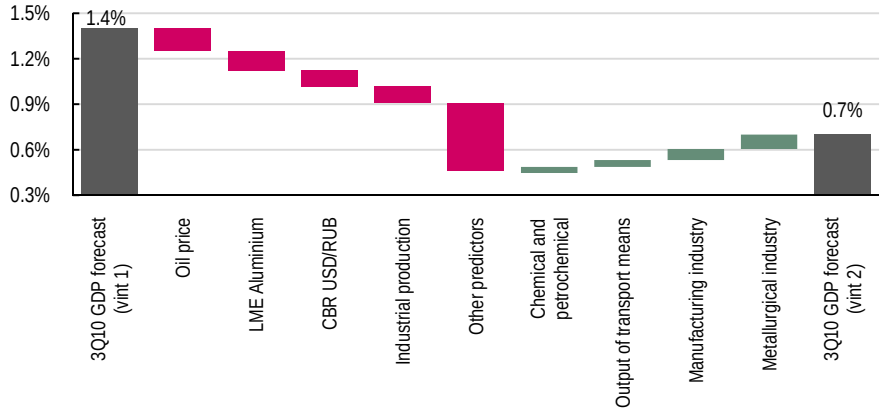
Figure 7: Top drivers of 2Q10 GDP forecast revision (estimate 5)

Predictors	N	Publication lag, months	Increase in GDP forecast caused by this predictor, ppts	Predictor's last change (s/a)	Predictor's average s/a changes in the previous months of the analysed quarter
Top drivers with negative contributions to the forecast revision					
Trade balance	32	2	-0.07	-1.0	1.1
15. Labour utilisation rate, industry (normal monthly level = 100)	63	2	-0.06	-2.2	1.1
24. Diffusion index of wages, industry, anticipated (percent rising over 3-month spans)	55	2	-0.05	-0.6	4.4
13. Capacity utilisation rate, industry (normal monthly level = 100)	62	2	-0.04	-1.8	0.4
1. Diffusion index of output prices, industry, actual (percent rising over 1-month spans)	43	2	-0.03	-0.9	1.1
17. Order-book level, industry (normal monthly level = 100)	65	2	-0.02	-1.5	-0.1
5. Diffusion index of employment, industry, actual (percent rising over 1-month spans)	46	2	-0.02	-0.3	1.7
27. Diffusion index of expenditures for equipment, industry, anticipated (percent rising over 3 months	58	2	-0.02	-2.3	-0.8
4. Diffusion index of wages, industry, actual (percent rising over 1-month spans)	45	2	-0.02	-0.3	1.3
11. Diffusion index of credit terms, industry, actual (percent improving over 1-month spans)	51	2	-0.01	-1.4	-0.4
Top drivers with positive contributions to the forecast revision					
22. Diffusion index of input prices, industry, anticipated (percent rising over 3-month spans)	54	2	0.10	4.7	-2.7
29. Diffusion index of order-book level, industry, anticipated (percent rising over 3-month spans)	60	2	0.07	10.5	-3.4
30. Diffusion index of bank loans, industry, anticipated (percent rising over 3-month spans)	61	2	0.04	-5.2	3.4
28. Diffusion index of financial situation, industry, anticipated (percent improving over 3 months)	59	2	0.04	4.6	-0.7
25. Diffusion index of employment, industry, anticipated (percent rising over 3-month spans)	56	2	0.04	5.1	1.2
21. Diffusion index of output prices, industry, anticipated (percent rising over 3-month spans)	53	2	0.04	3.5	-0.4
6. Diffusion index of output, industry, actual (percent rising over 1-month spans)	47	2	0.03	5.1	-0.1
26. Diffusion index of output, industry, anticipated (percent rising over 3-month spans)	57	2	0.03	4.3	0.7
2. Diffusion index of input prices, industry, actual (percent rising over 1-month spans)	44	2	0.02	1.5	-1.7
14. Diffusion index of expenditures for equipment, industry, actual (percent rising over 1 month)	52	2	0.02	0.5	-2.1

Source: NES estimates, Renaissance Capital estimates

As for our 3Q10 GDP forecast, the main drivers of the downward revision were a weaker USD/RUB exchange rate and a decline in commodity prices (Urals, aluminium, nickel and steel).

Figure 8: 3Q10 GDP forecast revision and its top drivers



Source: NES estimates, Renaissance Capital estimates

Figure 9: Top drivers of 3Q10 GDP forecast revision (estimate 2)

Predictors	N	Publication lag, months	Increase in GDP forecast caused by this predictor, ppts	Predictor's last change (s/a)	Predictor's average s/a changes in the previous months of the analysed quarter
Top drivers with negative contributions to the forecast revision					
Urals Mediterranean crude oil spot price, $/barrel, end of period	35	0	-0.15	-15.9%	7.0%
LME Aluminium, $/mnt, end of period	42	0	-0.15	-9.5%	-3.0%
CBR USD/RUB, end of period	7	0	-0.13	4.1%	-0.3%
Industrial production (total)	72	1	-0.11	0.3%	na
Mining	88	1	-0.11	-0.2%	na
Russia Black Sea export cold rolled steel,$/tonne, end of period	38	0	-0.10	1.9%	13.7%
Other minerals mining	93	1	-0.09	-5.5%	na
Russia Black Sea export hot rolled steel, $/tonne, end of period	37	0	-0.08	2.0%	16.5%
Coal mining	90	1	-0.07	-3.3%	na
LME Nickel, $/mnt, end of period	41	0	-0.07	-18.9%	5.1%
Top drivers with positive contributions to the forecast revision					
Metallurgical industry	102	1	0.10	2.8%	na
Manufacturing industry	94	1	0.07	1.6%	na
Output of transport means	105	1	0.05	7.1%	na
Chemical and petrochemical industry	83	1	0.04	4.5%	na
Output of chemicals	101	1	0.04	4.5%	na
Nominal wage due	23	1	0.04	-11.3%	na
New house building	24	1	0.02	17.5%	na
Fed budget exp	33	1	0.01	-8.1%	na
Labour requirements, K	16	1	0.01	3.9%	na
Cargo shipment tariffs	26	1	0.01	3.7%	na

Source: NES estimates, Renaissance Capital estimates

Commentary from Alexei Moisseev, Renaissance Capital Chief Economist

Lack of data comparability has become a major issue for all economists covering Russia. A sudden change in how the national accounts data is calculated, without a simultaneous revision of the past data which would allow a fair comparison, resulted in major question marks regarding what is really going on in the Russian economy. We are left with various measures of confidence and anecdotal evidence, but no hard data on which to base our views. De-facto, even with the official release of 1Q10 data, we do not really understand what has happened, and we expect a massive revision to these figures. Unfortunately, we have no choice but to build our forecasts on the official data for past periods, which, as we mentioned above, have become quite unreliable. Hence, we can only be reasonably certain about the direction, but not the exact figure of future growth.

We see a pick-up in economic growth in 2Q relative to our previous forecasts as economic agents have responded with greater confidence to an improved macroeconomic environment, but some cooling down in 3Q, mostly related to the European fiscal crisis, resulting in lower commodity prices and a general return of risk aversion, including in the real economy sector.

Appendix 1: Model methodology

RenCap-NES Leading GDP Indicator methodology

Our core forecasting procedure can be summarised as follows: we use 108 monthly time series (among which are surveys, commodity prices, exchange rates, real activity, labour market and money market data) as input variables. The data cover a time interval from Jan 1996 until the present.

First, we transform all input time series to obtain stationarity by removing seasonality and trends. Data outliers are smoothed. Then, we split the sample into balanced and unbalanced parts, where the former contains observations with all monthly predictors available for the whole quarter. The balanced part is standardised.

Second, we exploit the static factor approach. On the balanced part, we estimate factors as regular principal components of input time series. Thereby the forecasting content of multiple input variables is summarised in just a few factors.

Third, applying the Kalman filter, we solve the so-called jagged edge problem, whereby some variables are unavailable due to their publication lags, and we estimate the factor values for the rest of the sample.

Finally, given these factors and GDP lags (if necessary), we predict real GDP growth for the next quarter. We have constructed our forecasting model as a projection of real GDP growth on the space of own lags and factors.

We forecast a quarter of GDP growth at the end of each month as soon as monthly releases of the Federal State Statistics Service and REB survey data (a project run by the Institute of World Economy and International Relations since the early 1990s) are published. Commodity and financial market data become available immediately. Forecasts for the later months of a quarter can be viewed as an updated forecast for earlier months of the same quarter since the arrival of a new piece of monthly data provides a natural occasion to revise the GDP growth forecast.

Thus, we have five consecutive estimates of a quarter of GDP growth. The first estimate is released in the first month of the previous quarter (six months before the actual figure is published by Rosstat) and is based on just a few market series (RTS, overnight interest rate MOSIBOR, and others) available for that quarter as well as historical observations for preceding months. We make a final revision in the second month of the quarter of interest (or almost a quarter before the official GDP data for that quarter are released).

Predictors' contribution in GDP forecast revision

In this procedure, we analyse the influence of the latest value of a predictor on forecast revision and ignore the impact of historical data revision by Rosstat. We apply the following algorithm to analyse the contribution of each predictor in the GDP forecast revision:

First, for each predictor, we calculate a supplementary GDP forecast assuming that the latest value of this predictor has not influenced an estimate of its quarter change. To do that, we exclude the predictors' last value from the average of the predictor changes in the analysed quarter when running the Kalman filter procedure. As a

result, we obtain a vector composed of 108 versions of the GDP forecast, where each of these supplementary GDP forecasts can be used to estimate the influence of the corresponding predictor on the forecast revision.

Second, subtracting these supplementary GDP forecasts from our base GDP forecast (computed on the base of changes in all available predictors) we get a vector of the predictors' contribution in the forecast revision.

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Additional information (including information about the RenCap-NES Leading GDP Indicator) and supporting documentation is available upon request.

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