2. Economic Activity

Real GDP growth in 2011 will stand at around 2%, but trends are deteriorating. After 2011 started off with accelerating recovery in production and a continuation of the desirable process of restructuring oriented towards increasing exports and production of tradable goods, a reversal occurred in the second quarter (Q2). Export growth stopped, industrial production started to decline, while the real fall in retail trade additionally deepened and reached double digits in comparison with the previous year. Similar trends continued in Q3 and we have no signs that significant changes will take place by the end of the year. Investment drove production growth in 2011, achieving real growth of over 10% in comparison with the previous year. Net exports remained approximately unchanged in comparison with 2010, while public and private consumption recorded falls in real terms. Unit labor costs measured in Euros indicate a sharp drop in the price competitiveness of the Serbian economy due to the real appreciation of the dinar. Construction saw high y-o-y growth, which is partly a consequence of an extremely low base for comparison recorded in the previous year, when the crisis in the construction sector was at its peak. *Quarterly Monitor* **analysis indicates that high growth of the construction sector is probably somewhat overestimated (because of biased statistical monitoring of state-owned and other large construction companies). Preliminary estimates put GDP growth in 2012 at 1.5%, a very modest figure, but even this can prove to be elusive unless the negative trends observed in the Serbian economy, and in the region as a whole, change soon.**

Gross Domestic Product

Y-o-y GDP growth fell from 3.7% in Q1…
…to 0.7% in Q3

According to preliminary SORS estimates based on economic activity performance data, real y-o-y GDP growth in Q2 stood at about 2.4%, and in Q3 at about 0.7%. These data indicate a gradual slowdown in economic activity, as y-o-y GDP growth in Q1 had stood at about 3.7%.

Trends in economic activity can best be shown using seasonally-adjusted data. Graph T2-1 shows seasonally-adjusted GDP growth indices in comparison with the 2008 average. We have noticed that the recovery in production from crises in 2008 and 2009 ceased after Q1 2011. A slight drop in production, starting in Q2, continued in Q3.

Seasonally-adjusted indices show production has been stagnating

Graph T2-1. Serbia: Seasonally-adjusted GDP Growth (2008=100)
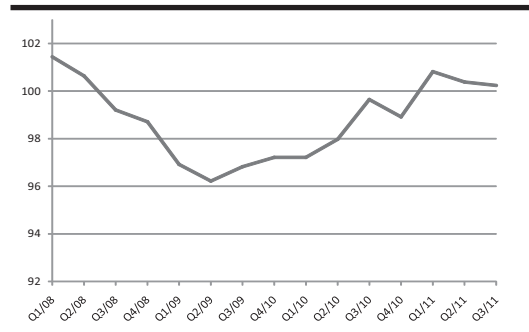
Source: *QM* estimates based on SORS data.

Even though a GDP slowdown in the middle of 2011 is evident, the rate of this deceleration is thus far not as pronounced as it was in 2008 and 2009 (Graph T2-1). Therefore, we still cannot interpret these data as signs of the beginning of a new recession, although we cannot completely rule out this possibility. A significant influence on future movements in economic activity in Serbia will probably formally be exerted by events taking place in Q4 at the national level, but, essentially, the key part will be played by the resolution of the crisis in the Eurozone, with which the Serbian economy is tightly linked. Barring any additional shocks by the end of the year, we expect Q4 to see a continuation of trends similar to those recorded in Q2 and Q3, which will result in total GDP growth in 2011 of about 2%. Such growth is, from this perspective, optimistic and is the result of high production growth in Q1 followed by stagnation in the other quarters.

GDP growth will probably stand at 1.5% in 2012

If the Serbian economy gets back on the path of recovery early in the next year, this will lead to GDP growth of about 1.5% in 2012.[1] According to current *QM* estimates, this is the most

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1 For more details see Highlights 1 in this issue of *QM*.

probable scenario of movements in economic activity over the course of the next year. However, we believe that the likelihood of next year's economic growth being lower than 1.5% is much greater that the possibility of it being higher.

An interesting piece of data can be noticed in Graph T2-1 – the recovery in production stopped before GDP had reached its pre-crisis level. The level of production last seen in early 2008 will, according to optimistic forecasts, be reached only in the second half of 2012, i.e., four years after the crisis broke out.

Construction and telecommunications lead

Growth in GDP considered by *production* is shown in Graph T2-2. This Graph shows growth by individual sectors of the economy up to and including the latest official data regarding Q2 2011.[2] The sectors of construction and information and communication saw relatively high real growth in 2011, while trade recorded the greatest drop in comparison with the previous year. Construction growth over the first half of 2011, having additionally accelerated in Q3, represents a positive indication of a powerful recovery in investment activity. Information and communication saw relatively stable real growth of about 8% in 2011. This sector, which mainly consists of telecommunications, is one of the parts of the Serbian economy that have proved highly resilient to the crisis. A good indication of its robustness is that even in 2009, when most other sectors of the economy sectors were recording major drops, information and communication saw high, double-digit growth (Table T2-2).

After a rise in Q1, manufacturing growth sharply slowed down in Q2, while we expect that the sector will experience a y-o-y production drop in Q3. Significant stagnation in growth can be seen in financial activities, while the largest fall in 2011 in comparison with 2010 was recorded by trade; we expect this decline to further deepen in Q3.

Graph T2-2. Serbia: Gross Domestic Product by Activity, 2008–2011[1]

	Y-o-y indices									GDP share
	2008	2009	2010	2010				2011		2010
				Q1	Q2	Q3	Q4	Q1	Q2	
Total	103.8	96.5	101.0	99.8	101.0	101.7	101.2	103.7	102.4	100.0
Taxes minus subsidies	101.4	98.3	100.2	100.1	100.1	100.6	100.0	104.6	103.6	17.5
Value Added at basic prices	104.5	96.4	101.3	99.9	101.4	102.1	101.6	103.6	102.1	85.2
Non agricultural Value Added	104.1	95.8	101.7	99.6	101.7	103.3	101.9	103.7	102.3	89,6[2]
Agriculture	108.7	100.8	99.6	103.5	99.0	97.1	100.2	100.5	100.0	10,4[2]
Manufacturing	100.8	84.2	100.9	98.8	102.4	103.4	98.8	107.8	102.4	14,2[2]
Construction	104.7	80.3	92.9	84.8	88.3	95.7	100.2	99.1	107.0	3,9[2]
Wholesale and retail trade	106.7	92.5	101.7	96.7	102.1	105.1	102.4	100.9	95.4	14,0[2]
Transport and storage	97.4	90.0	108.2	104.4	108.2	109.5	110.7	108.9	103.1	5,3[2]
Informations and communications	110.8	110.0	105.4	105.2	102.6	107.3	106.5	105.4	109.9	7,9[2]
Financial sector and insurance	113.4	105.5	106.7	105.1	106.1	108.1	107.5	106.3	101.1	3,9[2]
Other	103.7	101.6	100.8	99.9	101.3	101.6	100.6	102.5	102.7	40,4[2]

Source: SORS.
1) At last year's prices.
2) Share in GVA.

For a more detailed analysis of the Serbian economy, it is necessary to analyze GDP *by use*. Because SORS does not publish GDP data *by use* at the quarterly level, *QM* analysis is based on circumstantial indicators. It is our belief that, if quality analysis of economic activity and quality economic policy is desired, it would be exceptionally useful for state institutions to monitor GDP *by use* at the quarterly level. Let us reiterate that such practice is common in almost all statistical offices in Europe. We pointed out the necessity of regular monitoring of quarterly GDP data *by use* in several papers published in previous issues of QM.[3]

Investment growth was high…

When GDP is observed *by use*, high, double-digit investment growth can primarily be seen. Indicators of high investment growth are: 1) construction activity growth of some 10% for the

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2 For some industry sectors: construction, manufacturing, mining, electricity, and, to some extent, agriculture, trade and financial services, there are movement indicators for Q3 2011. That is why our analysis of these sectors partly includes Q3 as well.
3 See the Highlights: "How Much Has Economic Activity Really Declined in 2009?" *QM* 17, and Highlights: "The Reliability of Official Gross Domestic Product Data in Serbia", *QM* 24.

first nine months of 2011 in comparison with the same period last year, (2) growth in imports of capital goods of 23.2% over the same period, and (3) growth in the industrial production of capital goods of 6.2%.

Net exports, representing the difference between exports and imports, can be estimated relatively reliably based on foreign trade data. Available data indicate that net exports remained unchanged in 2011 relative to 2010. These data are less favourable in comparison with the previous year, when net export were the key driver of economic recovery.

Public consumption relative to the previous year recorded a real drop of about 2%. This downward trend of the share of public consumption in GDP is desirable; ultimately, if accompanied by positive movements in public revenues, it should lead to a reduction in the fiscal deficit.[4]

…while private consumption fell

Even though the precise movement of private consumption cannot be estimated with complete reliability, all available indicators show it fell significantly in 2011 in real terms; we estimate the extent of this fall to be about 3%. We estimated movements in private consumption on the basis of circumstantial data – movements in wages, pensions, remittances, cash and consumer borrowing – which are used to finance over 85% of private consumption. Private consumption also represents the tax base for VAT, which is why data on VAT collection also give us useful information regarding its possible trend. At the same time, we also noticed a sharp drop in the volume of retail sales, a reduction in the industrial production of consumer goods, and relatively low growth of their imports, which additionally confirms that private consumption saw the greatest fall in 2011 of all components of GDP.

Exports did not replace the fall in domestic demand in 2011…

…like they did in 2010

Graph T2-3 Serbia: Serbia: Aggregate and Domestic Demand to GDP Ratio, 2001–2011
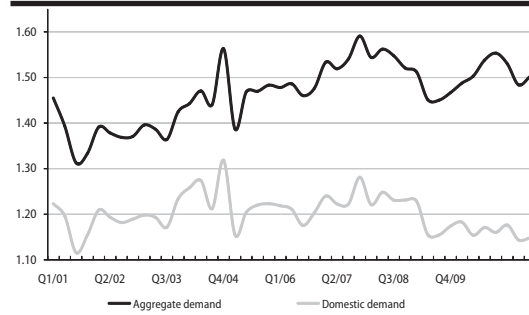
Source: *QM* based on SORS data.
1) Aggregate demand = domestic demand + exports.

Graph T2-3 shows the ratio of aggregate and domestic demand to GDP. High domestic demand, exceeding production by as much as 25% before the crisis, was the main cause of economic imbalance that led to inflationary and current deficit pressure. During the crisis, the economy rebalanced to a significant degree, whereby the share of domestic demand in GDP dropped significantly (Graph T2-3).

The ratio of domestic demand to GDP continued to decline in Q2 and Q3. We believe that the primary reason for this reduction lies in the previously described real fall in private consumption. On the other hand, it is interesting to note that aggregate demand again recorded a relative fall in 2011, which had not been the case since the end of the first wave of the global economic downturn. A strong export recovery in evidence from mid-2009 and during 2010 served as the main driver of production recovery. That is why aggregate demand, which we consider to be the sum of domestic demand and exports, grew even though domestic demand was declining. A reversal of these desirable trends occurred in 2011; we thus believe that a possible reason for the stagnation of production in Q2 and Q3 is the fact that export growth slowed down and now lacks sufficient strength to completely offset the influence of the slowdown in domestic demand on production, as it did in 2010.

Unit labor costs continued to decline

Unit labour costs[5] (ULC) expressed in dinars continued declining in Q2 and Q3, which means that the share of labor costs in added value is dropping (Graph T2-4). Even though a reduction in ULC is generally desirable, the most important reason for the drop in ULC relative to their pre-crisis levels is, unfortunately, the significant fall in employment, which was greater than the drop in production in Serbia.[6] As ULC have a strong seasonal component, we can obtain additional information on the drop in dinar-ULC from their y-o-y growth indices. These indicates a fall of

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4 For further details see Section 6, Fiscal Flows and Policy, in this issue of *QM*.
5 Unit Labor Costs in dinars are calculated for the economy (excluding the Agriculture and Public Administration sectors) and industry.
6 For further details see Section 3, Employment and Wages, in this issue of *QM*.

between 5% and 8% in comparison with the same period of the previous year, which confirms our findings presented above.

Graph T2-4. Serbia: Real Unit Labor Costs in Economy and Industry, 2005–2011
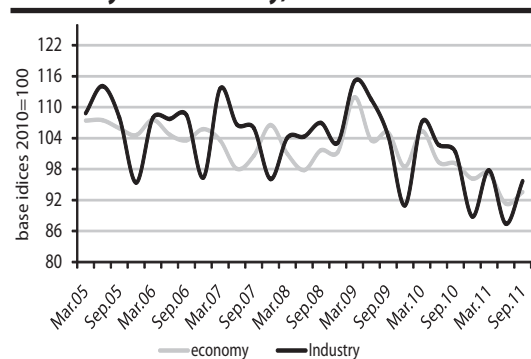
Source: *QM* based on SORS and NBS data.

Graph T2-5. Serbia: Real Euro Unit Labor Costs in the Economy and Manufacturing Industry, 2005–2011

Source: *QM* based on SORS and NBS data.

Price competitiveness of the Serbian economy began to deteriorate rapidly

Unit labor costs measured in euros (euro-ULC) are an indicator of the price competitiveness of the Serbian economy because they define the greatest national cost component (labor costs) in relation to added value. We calculate euro-ULC for manufacturing (which produces by far the greatest portion of tradable goods), and for the economy as a whole,[7] as shown in Graph T2-5. We use 2005 as the benchmark year for observing changes in euro-ULC, because that is the year when significant decline in the price competitiveness of the Serbian economy began due to the strong appreciation of the national currency, which only ended when the economic crisis escalated in Serbia.

Real appreciation reduced price competitiveness by about 10% in 2011

While in the second half of 2010 it seemed that all competitiveness lost during the period of real appreciation, had been restored after the economic crisis – as a consequence of the real depreciation of the dinar and changes in the labor market – 2011 saw a reversal of this trend. Euro-ULC grew in 2011, to stand in Q3 at about 10% more in the economy as a whole, and at as much as 20% more in manufacturing, relative to the 2005 benchmark (Graph T2-5). Even though we view the sudden growth of euro-ULC in manufacturing with a degree of caution,[8] it is indisputable that the strong real appreciation seen in 2011 led to a drop in the price competitiveness of the Serbian

Box 1. Price competitiveness – indicator of an economy's ability to overcome crises

In a November column published in the *Financial Times*, analyst Martin Wolf presented an interesting view of the Eurozone crisis, which we consider relevant for Serbia. He starts his analysis by pointing out that, because of the public debt crisis, some Eurozone countries have put severe austerity measures into place. Wolf then goes on to analyze the possible impact of these measures on the economies of countries observed, and attempts to answer the question: What are the possibilities of countries at the periphery of Eurozone to service existing debts in an orderly manner in the long run?

Budget savings by itself are not enough, says Wolf. A severe reduction in public consumption will entail a significant fall in domestic demand and have a negative effect on economic growth and employment, and, consequently, on public revenues. He concludes that the ability of certain economies to overcome the crisis will, in short, for the most part depend on their ability to realign themselves towards exports as the key driver of economic growth.

The key parameter defining the possibility of realigning an economy from domestic demand towards greater exports is price competitiveness, which is measured (as in *QM*) using euro-ULC in

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7 Excluding the Public Administration and Agriculture sectors.
8 Manufacturing saw the biggest fall in Q3, which was not followed in the short term by a proportional reduction in employment. We believe that the substantial increase in euro-ULC is temporary.

manufacturing. The price competitiveness of economies at the periphery of the Eurozone, how-ever, fell significantly over the past ten years (Graph T2-6, final figure). Greece has thus over the past ten years lost about 70% of its price competitiveness in comparison with Germany; Italy lost about 50%, while Ireland is the only one of the countries observed that saw labor costs fall and its price competitiveness improve.

Graph T2-6. Eurozone: Government Bond Yields and Relative Labor Costs
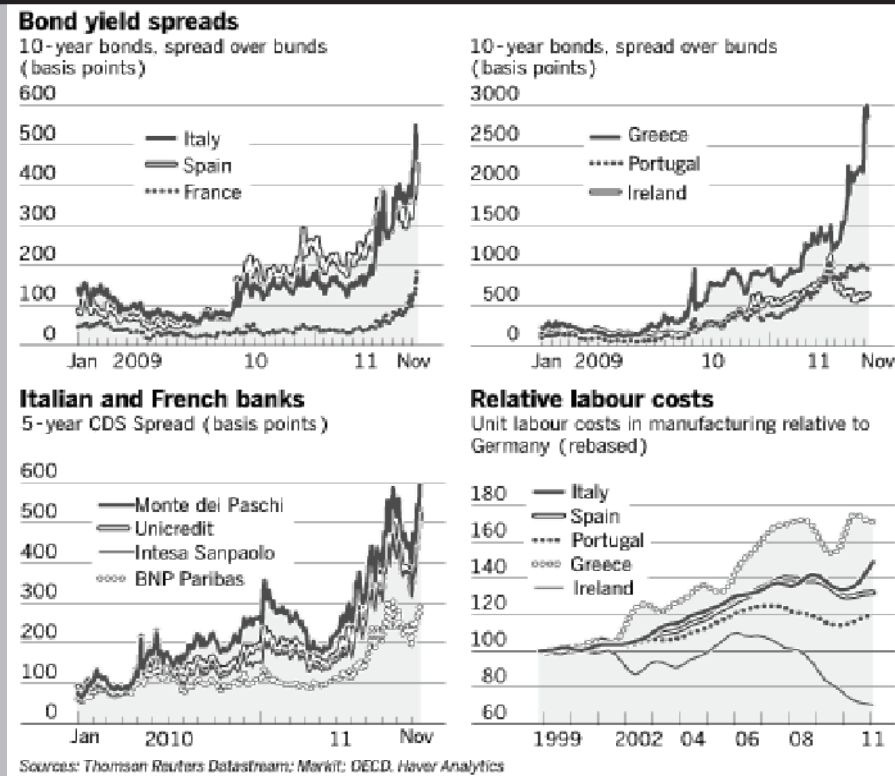
Source: *Financial Times*.

Serbia is facing somewhat similar problems, even though the high public debt is not the main cause of the drop in domestic demand. However, it is undisputable that domestic demand in Ser-bia is declining, due to other fundamental economic reasons (Graph T2-3).[11] Serbia, too, needs to reorient towards exports if sustained medium-term economic development is to be achieved.

We analyzed the price competitiveness of Serbia's economy based on movements in euro-ULC (Graph T2-5). We noticed that the trend of high euro-ULC growth in Serbia in the period from 2005 to 2008 was very similar to that observed in countries at the periphery of the Eurozone. A very important advantage that Serbia has in relation to other Eurozone countries is the pos-sibility of depreciating the exchange rate. Thanks to exchange rate depreciation, Serbian price competitiveness improved significantly between 2009 and late 2010. We also observed that net exports were the main driver of production recovery in this period.

Serbia has, therefore, in the past seven years recorded a certain deterioration in its price com-petitiveness; that deterioration was not as dramatic in comparison to countries at the periphery of the Eurozone, partly because of the depreciation of the dinar.[22] If we added the latest informa-tion on the reversal of the price competitiveness trend to Graph T2-6, Serbia would be placed slightly below Spain. Continuing strong real appreciation of the dinar, such as that seen in most of 2011, can very easily reduce Serbia's scope for sustained economic growth in the medium term.

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1 The main reasons for the reduction in domestic demand in Serbia are the real drop in private consumption, followed by the decline in public consumption. Serbia's public debt stands at about 45% of GDP, and has yet to reach proportions as alarming as that of some Eurozone countries.

2 Manufacturing euro-ULC for Serbia can be estimated only for the period starting with 2004, as information for earlier years is lacking. We belileve that the pre-2004 period is not important for analyzing euro-ULC in Serbia.

economy of about 10%.[9] The reduced price competitiveness of the country's economy may prove to be a significant obstacle to further export growth, which should in the medium term be the key component of economic growth. Therefore, real appreciation of the dinar is considered to be undesirable from the standpoint of recovery and future growth in economic activity.

Industrial production

Industrial production slowed down significantly in Q2 and Q3

Manufacturing recorded the greatest fall

Industrial production recorded y-o-y growth of 3.6% in Q2 and saw a y-o-y drop of 1.8% in Q3 (Table T2-7). As industrial production had achieved high y-o-y growth of 6.4%, in Q1, it is clear that the industrial production trend was very negative over the last two quarters.

When individual sectors of industry are viewed separately, somewhat less favorable movements can be observed in manufacturing in comparison to other sectors (Table T2-7). Manufacturing saw y-o-y growth of just 0.6% in Q2, and recorded a y-o-y fall of 2.1% in Q3. Mining and electricity supply saw positive growth throughout 2011.

Graph T2-7. Serbia: Industrial Production Indices, 2007–2011

| | Y-o-y indices | | | | | | | | | | | Share |
| | 2007 | 2008 | 2009 | 2010 | 2010 | | | | 2011 | | | 2010 |
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Total	104.1	101.4	87.4	102.5	101.1	107.3	104.3	98.2	106.4	103.6	98.2	100.0
Mining and quarrying	100.2	105.3	96.2	105.8	103.4	110.7	108.1	102.0	107.5	118.8	103.6	8.8
Manufacturing	104.6	101.1	83.9	103.9	102.5	108.1	105.8	99.6	105.8	100.6	97.9	77.6
Electricity, gas, and water supply	103.2	102	100.8	95.6	95.8	101.7	95.6	90.9	107.5	113.2	101.7	13.6

Source: SORS

Seasonally-adjusted indices indicate significant fall of industrial production since May

Graph T2-8 shows seasonally-adjusted production indices of industry as a whole and manufacturing in particular. Seasonally-adjusted data indicate that mid-Q2 recorded a fall in industrial production, which, with smaller fluctuations, extended until September. An analysis of movements in industrial production by sector shows that the fall in industrial production is in evidence in most sectors of manufacturing.

Industrial production remains some 10% below pre-crisis levels

Graph T2-8. Serbia: Seasonally-Adjusted Industrial production Indices, 2008–2011
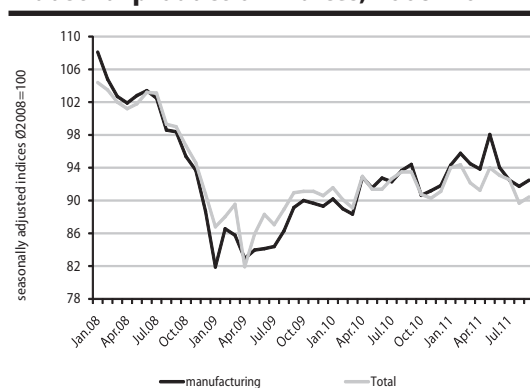
Source: SORS.

From Graph T2-8 it is apparent that industrial production is still about 10% below its pre-crisis level even two years after recovery began. The latest trends indicate that pre-crisis industrial production levels will not be reached soon.

Production of investment goods saw somewhat better results…

When goods are observed by use (Graph T2-9), it can be seen that almost all groups of goods entered negative territory in Q3 with respect to y-o-y production growth. The production of investment goods is one possible exception: it remained virtually unchanged in Q3 in comparison with the previous year. The widespread deceleration in industrial production of all product groups shows that the fall in industrial production was mostly the consequence of broader economic trends, notwithstanding any negative impacts of actions by individual companies, such as the slowdown in production at US Steel Serbia.

…while the production of intermediate goods declined

Such impacts are, however, easily seen in the above-average fall in the production of intermediate goods, which saw a y-o-y fall of 6.4%. The production of consumer goods has been declining in real terms throughout the whole of 2011 in comparison with the previous year, which is in accordance with the estimated trend of personal consumption, while energy production, under the influence of business policies of large companies such as NIS, the national oil company, and EPS, the state-owned power company, grew in 2011, albeit with a great deal of volatility by quarter (Table T2-9).

9 For further details see Section 5, Prices and the Exchange Rate, in this issue of *QM*.

Table T2-9. Serbia: Components of Industrial Production, 2005–2011

| | Y-o-y indices | | | | | | | | | |
| | 2008 | 2009 | 2010 | 2010 | | | | 2011 | | |
				Q1	Q2	Q3	Q4	Q1	Q2	Q3
Total	101.4	87.4	102.5	101.1	107.3	104.3	98.2	106.4	103.6	98.2
Energy	101.7	98.8	97.7	95.7	103.9	101.3	92.0	103.7	111.3	96.5
Investment goods	105.9	79.3	93.6	94.6	93.0	89.8	97.1	132.2	103.7	100.3
Intermediate goods	100.3	78.4	109.2	123.4	132.5	123.0	109.8	113.8	98.4	93.6
Consumer goods	101.6	86.8	102.1	101.1	104.3	100.0	103.0	96.5	98.1	95.8

Source: SORS.

Construction

How much did construction grow in 2011?

Latest construction statistics made available by SORS indicate extremely high y-o-y growth of this sector of the economy. The value of construction work performed rose by 13.3% in real terms in Q2 at the y-o-y level, only to increase further in Q3 by as much as 28.6%. Such high growth of construction is not impossible, as the volume of construction activity was very low in the previous year. Nonetheless, we view these data with a degree of caution, since construction statistics are, according to some indicators, biased toward state-owned and other large companies.

Taking into consideration the fact that the construction sector comprises a large number of small and medium-sized enterprises, whose statistical monitoring is very unreliable, we use the cement production index as an additional indicator for monitoring this sector of the economy[10] (Table T2-11). Although not sufficiently precise, we believe that data obtained in this way are a good additional indication of possible trends in construction.

The cement production index does not indicate high construction growth

Table T2-10 shows that cement production over the first nine months of 2011 declined by about 1% in comparison with the same period one year previously. Between two pieces of data completely at odds with one another – (1) the value of construction work performed, which indicates extremely high growth, and (2) cement production, which indicates construction stagnation – we choose the "golden mean": it is our estimate that construction activity in Serbia will grow by 10% in 2011.

QM estimates put construction growth at 10%

The reason for this forecast lies in our belief that official construction statistics probably overestimate the growth of this sector, but that cement production is also not a reliable enough indicator to consider its value as absolutely representative. The second and third quarters saw large investment projects initiated by the state (the construction of Corridor 10, the Stepa Stepanovic residential project, the renovation of the Gazela Bridge, the construction of the new Ada Bridge, etc.). These projects were easily visible to official statistics, unlike private investment by small and medium-sized enterprises; hence, this led to growth in the entire sector being overestimated. On the other hand, we cannot consider the cement production index as a fully reliable indicator of construction trends, considering that any change in construction activity (greater residential development vs. road construction, for example), changes cement consumption to a certain extent regardless of overall movements in construction activity.

Table T2-10 Serbia: Cement Production, 2001-2011

| | Y-o-y indices | | | | |
	Q1	Q2	Q3	Q4	total
2001	89.5	103.5	126.9	148.1	114.2
2002	83.6	107.9	115.6	81.6	99.1
2003	51.1	94.4	92.7	94.4	86.6
2004	118.8	107.4	98.5	120.1	108.0
2005	66.1	105.0	105.8	107.4	101.6
2006	136.0	102.7	112.2	120.2	112.7
2007	193.8	108.9	93.1	85.0	104.4
2008	100.1	103.7	108.1	110.1	105.9
2009	34.1	81.4	86.0	75.3	74.4
2010	160.7	96.9	96.0	97.4	101.1
2011	97.7	101.3	96.2	-	-

Source: SORS.

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[10] Cement consumption would be the most appropriate indicator, but data on cement consumption are not available at the quarterly level. Studies have shown that cement production approximates consumption with relative reliability.