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MICROECONOMIC FUNDAMENTALS (OF THE STRUCTURAL CHANGES) OF THE SERBIAN ECONOMY IN THE PERIOD 2007 – 2011 AND FORTHCOMING CHALLENGES*

Mikroekonomske osnove (strukturnih promena) poslovanja privrede Srbije u periodu od 2007-2011. godine i izazovi za naredni period

Abstract

This paper aims to detect and analyze the structural changes in the Serbian economy in the period spanning from 2007 to 2011. This period was characterized by the eruption of the global financial and economic crisis, which spilled over in Serbia from late 2008. By pinpointing the crisis' effects on Serbian economy, we improve the approach by complementing the macroeconomic trends analysis (as a way to describe the general environment) with the firm-level data analysis, i.e. microeconomic fundamentals of the representative sample of the largest Serbian companies. Relying on the financial database of the 5,000 largest for the period from 2007 to 2011 used for statistical analysis of financial performances, and 500 largest for 2011 and 2010 used for complementing previous overall view with the case by case approach, we are trying to draw conclusions on the key structural changes within the companies and sectors of activities as well as the main characteristics of the financial position of the real sector. Finally, we make a list of imminent challenges and goals confronting the Serbian economy as a whole, and economic decision makers in particular.

Key words: *business operations, microeconomic approach, financial position of firms, structural changes, business environment, Serbia*

Sažetak

Ovaj članak ima za cilj da odredi i analizira strukturne promene u srpskoj ekonomiji u periodu koji se proteže između 2007. i 2011. godine. Ovaj period je bio oličen izbijanjem svetske ekonomske i finansijske krize, čiji su se efekti prelili u Srbiju krajem 2008. Određujući efekte krize na srpsku ekonomiju, unapređujemo pristup u tom pogledu što analizi makroekonomskih trendova (kao načinu da se opiše široka slika poslovnog okruženja) dodajemo i, komplementarnu, analizu podataka sa nivoa preduzeća, tj. mikroekonomske fundamente firmi obuhvaćenih reprezentativnim skupom najvećih srpskih kompanija. Oslanjajući se na bazu finansijskih podataka za 5,000 najvećih kompanija u periodu između 2007. i 2011. (korišćenu za statističku analizu finansijskih performansi), kao i za 500 najvećih za 2011. i 2010. (korišćenu za dopunu prethodnog prikaza pristupom „od slučaja do slučaja"), pokušavamo da donesemo zaključke o osnovnim strukturnim promenama unutar kompanija i unutar sektora, kao i izdvojimo glavne odlike finansijske pozicije celog realnog sektora. Konačno, utvrđujemo spisak predstojećih izazova i ciljeva koji se postavljaju pred srpsku ekonomiju u celini, kao i pred donosioce ekonomskih odluka.

Ključne reči: *poslovanje privrede, mikroekonomski pristup, finansijski položaj preduzeća, kriza, strukturne promene, privredni ambijent, Srbija*

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Introduction

Global economic and financial crisis, manifesting in Serbia from 2008 onwards, brought about an additional dimension in the discussion on the economic growth model, as well as on the application of specific economic policies aiming at stimulating the economic development. After two decades from the start of transition in Eastern Europe (one decade in Serbia), which mainly resided on a neoliberal model with key elements of macroeconomic stabilization, privatization and market liberalization, the crisis reopened new (old) dilemmas within the professional and academic circles throughout the globe. In this context, the polemics over key measures and mechanisms for inciting the economic growth and government's role in these processes were intensified, such as – the state interventionism vs. the laissez faire, justifiability of protecting the domestic industries via industrial policies vs. liberalization, promoting consumption as a way of inciting the economic growth vs. increase of savings, fixed vs. flexible exchange rate, etc.

However, in these discussions and related analyses, the departure point is usually macroeconomic (aggregate) trends, based on whom the problems, conclusions and possible measures to be taken are defined. By doing this, the real sector, i.e. the economy, is treated as a homogeneous structure, or at best, a sample of homogeneous segments (manufacturing or service-providing enterprise, specific industrial branches, segments of small, medium and large enterprises, state and private enterprises, etc). Generalized qualifications on the real sector or its specific segments (such as that it is illiquid, inefficient, monopolized, etc) are often made. This approach, although not necessarily limited and erroneous, does, up to some extent, ignore the systematic overview of microeconomic base of Serbian economy's functioning, its specificities (especially those immanent to the process of transition implying fundamental changes in principles of management, market and institutional framework, in a short period of time), often neglecting the needs of the economy itself. On the other hand, microeconomic analysis of a certain economy's functioning is complementing the overview of economic trends based on macroeconomic approach, thus suggesting additional arguments for certain economic policies, as well as more detailed information for analysis of alternative policies[1]. One of the frequent limitations for using the micro-level approach for the macroeconomic questions resides in a lower availability and lesser quality of the data on specific economic subjects, while it requires a greater effort for its processing and analysis.

In this paper, we analyse microeconomic bases for business operations, i.e. structural changes of the Serbian economy in the period spanning from 2007 to 2011, on a representative database on financial state of specific enterprises. By using a new methodological framework, goal of this analysis is, apart from documenting the financial state of specific enterprises, to shed light on a new dimension of real sector overview. This may provide invaluable insights on discussion and decisions on further structural reforms, as well as elements for making decisions on potential policies aiming at stimulating the economy and improving the business climate.

As basis for the analysis we used the database obtained from the financial reports of companies in Serbia[2] registered with the Serbian Business Registers Agency[3]. At the upper segment of companies, out of 5,000 largest by annual operating revenues, which is also a representative sample of the Serbian economy, observed are the base trends of the financial state in a five year period spanning from 2007 to 2011. Additionally, we made an analysis on a sample of the 500 largest enterprises in Serbia according to the criteria of the size of operating revenues in 2011. The aim of the analysis of the 500 largest in 2010 and 2011 was to check whether the trends observed in the sample of the 5,000 still hold, by using a more detailed overview of the specific cases on a smaller sample.

This paper is organized in five parts, as follows. In the first part we give a macroeconomic overview in Serbia in the period from 2007 to 2011. The second part aims at presenting the used database and applied methodology.

1 Its significance in applied economic literature grew in importance ever since the period of the 1997 Asian crisis, whose roots were explored at the micro level, after it was concluded that it was impossible to capture the causes of the crisis on aggregate level data. See [10], where the author analyses the enterprise finances in the overview of the crisis.

2 Although the term "company" is accepted in the domestic legislature, we will also use synonymous terms "enterprise" and "firm" in this article.

3 Financial reports are not audited.

In the third part, we analyse the financial performance of the Serbian economy in the observed period with a special overview on base financial components – growth, earning, indebtedness, debt structure, liquidity and efficiency. In this part we also point to the crisis effects on companies' performance. In the fourth part we make an in- depth analysis of the structural changes in the observed five-year period, also by pointing to possible relations with the crisis. The fifth part concludes the analysis by sublimating the key challenges of the Serbian economy stemming from the micro level overview, while it also points to the possible directions of the future economic policies in improving the conditions for sustainable economic growth and healthy functioning of the economy.

Macroeconomic framework in the period between 2007 and 2012

The period from 2007 onwards has been marked by a large global economic crisis, which started to manifest by the end of 2008 in Serbia, via two major channels – (1) trade, through falling demand for Serbian exports, and (2) financial, through cease of foreign capital inflows. Although the macroeconomic situation stabilized to some extent in the first half of 2009 by concluding the Vienna initiative and arrangement with the IMF, Serbian GDP contracted significantly in 2009, only to temporarily leave recession in the second half of 2010 (due to a recovery in exports) and in course of 2011 (due to a higher investment-related consumption), whereas it finally started to fall once again in 2012, which was also an election year. Dinar significantly weakened, by a total of 50% from 18th September 2008 to 2012 end. Imports recovered in 2011 due to capital equipment purchases following larger investments, while import growth in 2012 may be attributed to a consumption-related fiscal expansion. Due to a necessary fiscal consolidation pointed to deficit reduction, this trend ended, and effects of a large investment in the car factory started to reflect on the export growth in the last quarter of 2012. Inflation in this five-year period oscillated from 3-4% to 15%, while a heated demand, present in 2007 and 2008, has been eliminated as an inflationary factor since 2009. Than the primary inflationary role was overtaken by the FX depreciation, as well as some cost and supply-side factors, such as the food prices in a period of the fall of domestic agricultural production (2010) and surge in global food prices (2011), gasoline prices in combination with USD/EUR strengthening, all together mixed with ubiquitous structural causes. Gasoline prices in Serbia surged by 102% from January 2009 to 2012 end (while the global oil prices surged by app. 99%, calculated in dinars), and in the same period domestic food prices rose by 35% (while global FAO food price index grew by equally 35%). In the period spanning from the beginning of 2007 to 2012, Serbian GDP grew by an average of 1.1% a year. Consumer prices grew by app. 70% between the beginning of 2007 to the end 2012 (while the Eurozone inflation sped up by 14%). Nominal wages in the same period grew by 72% in RSD terms, and 21% in EUR terms. Real wages grew by 11% in the period from the beginning of 2007 to September 2008, only to drop by 9% from September 2008 to December 2012. Hence, after a relative loss of external competitiveness until 2008, in the period between 2009 and 2012 it was partially restored. Also, under the pressure of crisis, productivity increased as well, through an increase of GDP per employee by 16%. Unfortunately, the unemployment rose from a low of 13.3% in April 2008 (434 thousands of unemployed persons), to 14% in October 2008, when the rising trend started, and finally to 22.4% in October 2012, to 665 thousand unemployed persons.

After relatively solid macroeconomic results in 2011, situation deteriorated in 2012 – GDP contraction was estimated at 1.7% in that year. These developments were also contributed to by low domestic and external demand, unusually adverse weather (especially in February and during the summer), as well as uncertainties related to the May 2012 elections, which typically deteriorate the economic activity while the state initiatives are usually postponed. These events were coupled by closing down of the Pancevo refinery due to its reconstruction during the Q3 2012. Also, at the beginning of 2012, US Steel, the largest exporter in the previous period, quit its Smederevo steelworks operations, while this steel mill's production fully halted in July 2012. Last year was also marked by a drastic contraction in foreign direct investments inflows in comparison with 2011. Nevertheless, some positive signals could have been seen in the last quarter of 2012, primarily the beginning of serial production of cars and start of work of the modernized Pančevo refinery, reflecting on the overall industrial production and exports. Due to a loose fiscal policy, consolidated state deficit deepened to almost 7% of GDP, while public debt breached the level of 60% of GDP. During 2012 a fierce RSD depreciation took place. Dinar first reached a historical minimum of 119.1 at the beginning of August 2012 (12% value loss since the year beginning), followed by a trend change and strengthening to 113.7 level at the end of 2012 (8.7% value loss for the entire 2012). These exchange rate dynamics, bearing in mind a high share of FX-indexed loans, will undoubtedly influence on reporting of higher expenditures on FX losses in the balance sheets, i.e. lower profitability of companies in 2012.

Data and methodology

As the base for further analysis we used a database of financial reports of companies in Serbia for the period spanning from 2007 to 2011. Source of data used in the analysis is the Serbian Agency for Business Registers, which includes the database of financial reports for all companies in Serbia pursuant to the Law on Accounting and Audit. Bearing in mind that at the moment of conducting the analysis the Agency did not dispose of audited financial reports, the analysis was made on the basis of unaudited reports.

This way, we have made a database of the 5,000 largest single companies, by the criterion of operating revenues in each of the five years of the observed period. The 5,000 largest, which is app. 5% of all registered companies, account for 82% of operating revenues and 64% of total employment of all registered companies in 2011. A similar coverage was reported in the previous four years. This database was used to overview the financial situation of the economy by using the statistical analysis. The second "layer" of the analysis represents an analysis of the 500 largest companies (by the criterion of operating revenues in 2011). These companies were ranked according to the criterion of their realistic power, by introducing groups to list of the largest 500, while companies otherwise consolidated in the included groups were deducted from the list. The advantage of this approach is in comprehensibility of specific cases which contributes to a better analysis of the financial data, and which is practically impossible at the sample of the 5,000. Also, due to the economic concentration, the coverage of the overall business operations of the Serbian economy via the largest 500 is equally significant. Namely, these 0.5% of total registered companies in Serbia, account for 53% of total operating revenues and 38% of all employees in all registered companies. Their operations were analysed in 2011 and 2010 as a part of this paper.

In order to overview performances per sectors/industries, a classification of the largest 500 (single) companies was conducted. In the classification of the enterprises by industries the predominant business activity registered at the Agency for Business Registers was taken into consideration, but some posterior corrections were made in accordance with the international practice and the analyst expertise, wherever it was estimated that the official classification doesn't fully reflect the predominant activity of the company in question. Bearing in mind their large importance for the Serbian companies and Serbian specificities, in this paper we made special attention, on one hand, to the "conglomerates" – domestically owned companies, which generate a significant level of operating incomes in three or more sectors (industries), and, on the other hand, to foreign direct investments. Apart from this, as a separate sample, we observed the "state companies", i.e. companies in majority (over 50%) ownership of the central or local government, or those where the state, although a minority shareholder, has a crucial, i.e. controlling role in their management. The Top 500 list including main financial indicators and industry level sub-lists are published in NIN [3].

Financial position of companies and key challenges in operations

By observing the financial results of the Serbian economy in the analysed period, it is observable that the total operating revenues and profitability suffered the most in 2009, while 2010 was a year of stabilization after a crisis-induced shock, while a recovery is visible in 2011.

However, it seems that 2012 will be very bad with a return of recession to the so-called "double-dip". Apart from this, one of the main challenges Serbian economy is confronted with is bad liquidity.

Operating revenues – visible crisis effect in 2009 and recovery in 2010 and 2011

The medial growth of operating revenues in RSD in 2008 amounted to significant 22%, whereas 10% of 5,000 observed companies reported a fall of operating revenues of 10% or more. In 2009, the medial growth amounted to 3.4%, and as much as 31% of the observed companies had a fall larger than 10% in that year. In 2010 and 2011, the medial growth of operating revenues of the largest 5,000 companies amounted to 18.3% and 16.6% respectively, whereas, similar to 2008, i.e. before the crisis, operating revenues' fall of 10% or more was reported in 13% of companies in both of these years.

At the sample of the 500 largest companies in Serbia, when single companies are observed, it is visible that effects of the foreign direct investments from the previous period are starting to materialize. Namely, apart from the companies growing and advancing year after year, such as Tarkett, Telenor, Mercator, Idea, VIP Mobile, Metro, Coca Cola, SBB, Ball Packaging, etc, in 2011 a solid advance of previous investments in the sector of tradables and services was evident, such as Valy, Gorenje, which keeps opening new factories across Serbia, Yura, which opened several factories in a short term, Grundfos and others. In the Q4 2012 first positive effects of the FIAT car factory on the industrial production and exports started to show. Nevertheless, in this segment there are some negative examples of withdrawal of some companies, as in the case of US Steel. Some other investors also consider strategic options that include an exit from the Serbian market, bearing in mind the current market conditions in Serbia, such as Hemofarm Stada, which generated large losses because of write-off of claims from wholesale pharmacies. However, those examples of withdrawal of foreign investors from Serbia are relatively scarce, leading to a conclusion that there are still large untapped investing possibilities and direct benefits for foreign investors, although in parallel there is still room for an improvement of the business climate itself.

In the segment of large companies with a majority domestic ownership, defined as conglomerates, results are very heterogeneous, in the sense of business development, growth of revenues, profitability, indebtedness and systemic importance for the economy. There are examples where growth and development from the previous period rapidly continued in 2011, such in the example of Radun Inženjering, after takeover of Slovenia's Fruktal (operating revenues growth in RSD in 2011 attaining 117,1%), Interkomerc (growth of 50% or more in the last three years), concern Farmakom, significantly supported by the international financial institutions (growth of operating revenues in 2011 of 45%) or the Elixir Group (almost 130%). Out of large companies in majority domestic ownership there is a need to mention Beohemija, IM Matijević, Univerexport, DIS, Lilly Drogerie, Almex, Vino Župa and others, reporting constant growth and development, sometimes with support of international financing institutions. On the other hand, a part of large companies in majority domestic ownership protected and consolidated their position without a significant growth rate, and some of them slowly disappeared (see Table 1).

When it comes to mid-sized companies, trends are not quite favourable. Although from the aspect of economic growth these companies are expected to grow and develop constantly, and to attain a place at the list of the largest with time, events of this kind are rare, especially in the tradable sector. More accurately, not a single company of this kind made it to the list of the Top 20 fastest growing companies in 2011. Causes of this could be found, from one side, in high concentration of the economy and significant influence of the large companies on small ones' operations, inadequate and expensive financing sources and – notwithstanding improvements at that field – insufficient incentives in business environment turned to small and medium enterprises.

When single sectors are observed, there is heterogeneity in operations of companies within sectors, but also between sectors as a whole. However, what is almost a universal phenomenon is that the sectors and the economy as a whole are consolidating. In 2011, due to an economic recovery, the fastest growth was made by the companies that operate in sectors of agriculture (24.6%), construction (22.1%), metal industry (19.1%) and energy (15.9%).

Seen as a whole, a significant growth of 26.2% was attained by companies whose main activity is retail trade. However, this growth is in a large extent a result of growth of operating revenues of Delhaize Serbia (of 37.3%), but it is not entirely realistic, bearing in mind that Delhaize, i.e. Delta Maxi did not consolidate all the companies in its system in 2010. Without Delhaize Serbia, companies that operate in the retail sector attained a 16.9% growth. Out of all observed sectors, aggregate fall in operating revenues of the listed companies was achieved by the sectors of pharmaceuticals (-9.2%) and tobacco (-6.6%), and it can be concluded that these sectors are significantly crisis-ridden.

The heterogeneous sector development in the observed period was contributed to, apart from a different effect of the crisis, by measures of the government policies.

Sector of food and beverage production is one of the most important in the Serbian economy. In 2012 this sector had a share in total exports of Serbian goods of 15.2%, and this share, despite the crisis, was increased in comparison with 2007, when it was at 14.9%, and in the crisis period (between 2008 and 2011) when an average annual growth rate of exports of 6.3% and trade surplus was 11%. Consequently one can conclude that the crisis was beneficial to this sector, foreign exchange rate adjustment as its part, of course along with the investments effecting in that and the previous period. Within this sector, trends are divergent. Hence, brewery and juice/soft-drink beverages sectors were highly consolidated, dominated by large international investors, such as Molson Coors as the owner of the Apatinska brewery (earlier owned by InBev), Carlsberg, Heineken, Coca Cola (Fresh&Co), PepsiCo, Rauch and other or significant domestic enterprises such as Nectar (part of Radun Inženjering) from Bačka Palanka. These enterprises invested significant sums in the previous period, and almost all of them had positive financial results in terms of operating revenues growth and profitability, and also had low or sustainably low level of indebtedness, with visible results in exports, above all to the regional markets (most of these companies use Serbia as the regional and production centre wherefrom they export mainly to Bosnia and Herzegovina, Macedonia and Montenegro). On the other side, subsectors of confectionery industry and meat processing are predominantly owned by the domestic capital. In these subsectors consolidation is in process, and in the forthcoming period one can expect foreign investors to come with a continued advance of the most successful domestically owned companies. This conclusion is pointed to by financial results, which are, as opposed to breweries and juice/soft-drink beverages, worse, and there are companies, mainly domestically owned, which confront the challenge of high level of indebtedness.

Effects of measures of state politics are well observable in the construction sector. This sector was hit particularly hard by the crisis, which was especially felt in 2009 and 2010, when this sector attained a fall of performed works of 19.9% and 6.4% respectively. After that, the state decided to help the domestic construction industry amidst the economic crisis by realization of large infrastructure projects (Corridor X, building new bridges, etc) and other projects (housing zones "Stepa Stepanović" and "Dr Ivan Ribar"), along with the special Law on stimulating of the construction industry. However, these measures had limited results. On one side, liquidity in the sector was improved up to some point, but systemic problems were not resolved, so even today a part of the domestic construction companies is at the brink of disappearance. On the other side, the present situation at the domestic market were fully used by the international companies operating in Serbia, such as Porr, Alpine and others, which are not the sector leaders, especially in the part related to the road infrastructure. These trends were contributed to by the way of financing large projects, relying on credits from international financial institutions, where tender conditions were out of domestic companies' reach, so they were usually involved as subcontractors of large international companies, often with a significantly lower profit margin.

A good example of the state's influence on the development of some sectors is the pharmaceutical sectors, before the crisis one of the most profitable ones, where the largest domestic suppliers (Hemofarm, Galenika, Zdravlje) are confronted with illiquidity and operating losses, whereas the chain effect of illiquidity spilled over on the pharmaceutical industry (more on this subject in the third part of the paper). Sectors that saw their results worsen under the effects of the crisis and/or state decisions are motor vehicles sales and auto parts sector and the tobacco industry. At the other hand, the sector of construction materials, especially the cement production sector, apart from all the challenges and contraction of the construction industry, remained relatively resistant to the crisis.

Profitability – large influence of financing modes

In the observed five-year period spanning from 2007 to 2011, the margin of operating profitability – EBITDA did not change sizeably, bearing in mind that the operating expenses followed the dynamics of the operating revenues. Medial EBITDA margin in operating revenues across the whole observed period stayed at app. 6%, whereas in 2007 it amounted to as much as 6.8%, only to fall to 5.9% in 2011. In other words, operating expenses (without amortization) followed proportionally the rise (fall) of operating revenues along the entire five-year period. Profitability, however, fell significantly in 2009 and recovered in 2010 and 2011, but it is still under the 2008 level. Medial ROA fell from 6.8% and 4.5% in 2007 and 2008, to 3.4% in 2009, only to recover to a 4.9% level in 2011. In absence of a more robust growth of operating revenues (i.e. in case of revenues contraction in a part of the economy), it is clear that the fall of profitability is the result of the fact that cost of financing and negative exchange rate differentials, "ate" a part of the margin and hence reduced the profitability. The influence of high costs of financing and negative exchange rate differentials is best seen at the 500 largest companies in Serbia. Unlike 2010, when a loss of RSD 1.2 billion was recorded, TOP 500 recorded a profit of RSD 114 billion in 2011. This result is a direct consequence of a significant change of a decrease of negative financial results, resulting from FX rate stabilization, and not from an increase of the profits, having in mind that the EBITDA median was reduced from 6.5% to 5.9%, and that average EBITDA margin practically remained unchanged at the same level as the year before, i.e. at 7.5% (Table 3).

When the results of specific companies are in question, it is noteworthy that in 2011 there has been a change at the list of the most profitable companies measured by the ratio net profits – after Telekom Srbija's domination in several last years, in 2011 the most profitable company in

Table 1. Overview of sectors on the base of Top 500

Sector	Growth of operating revenues, total, in %	Growth of operating revenues, median, in %	EBITDA margin, total, in %	EBITDA margin, median, in %	ROA, aggregated, in %	ROA, median, in %	Total operating income, in 000 EUR	Total number of employees	EBITDA, in 000 EUR	Net income, in 000 EUR	Total value, in 000 EUR	Net debt, in 000 EUR	Estimated investments, in 000 EUR
Agriculture	25.8	29.1	7.5	5.8	3.6	2.6	969,458	8,552	72,433	33,110	946,804	241,386	129,518
Food and Beverages	12.9	12.7	15.0	11.5	6.3	4.3	3,788,750	33,920	566,492	252,083	4,041,113	910,689	539,069
Tobacco Production	-5.6	-12.0	6.0	7.1	-1.3	-3.0	254,582	1,027	15,205	-6,675	489,581	64,544	7,237
Wood and Paper Industry	11.6	13.3	8.6	9.2	1.0	2.5	564,627	12,723	48,557	13,440	1,283,866	206,101	59,971
Chemical Industry	19.1	18.0	7.0	10.2	-3.9	5.9	2,076,457	15,929	145,734	-80,726	2,108,311	410,557	184,012
Pharmaceutical	-8.3	-7.1	14.4	9.7	-23.5	-11.3	353,683	5,772	51,051	-170,518	619,761	151,949	25,532
Construction Materials	8.2	7.7	23.2	14.9	12.6	8.7	412,227	4,255	95,450	62,147	490,917	82,816	69,413
Metal Industry	20.3	28.8	0.7	4.7	-5.4	2.8	2,390,920	26,057	17,584	-130,945	2,529,054	697,380	425,599
Other Machines and Apparatus	8.1	17.6	-0.9	7.2	-5.5	2.8	876,674	20,656	-8,314	-109,267	2,155,466	583,799	393,504
Motor Vehicle Sales	4.4	4.3	3.4	2.3	0.2	0.9	500,701	1,331	16,925	630	369,754	161,898	16,837
Energy	17.1	18.8	12.9	2.5	4.6	3.8	8,645,647	58,772	1,118,751	680,559	17,867,709	1,793,008	1,102,319
Wholesale Trade and Mediation	9.4	15.4	3.9	3.9	1.0	5.3	6,237,431	21,760	244,967	37,060	4,000,863	873,475	211,656
Retail	23.3	21.3	14.5	2.1	0.9	2.2	3,597,873	23,110	81,992	-36,955	2,544,123	1,006,048	902,495
Construction	27.5	42.9	2.3	8.8	-1.5	3.9	2,129,205	40,389	309,483	44,288	6,021,653	354,619	780,678
Transport	9.6	17.8	6.4	5.2	4.8	1.9	1,165,890	53,623	74,743	189,128	4,160,365	893,446	284,889
Telecommunications	7.4	13.5	41.0	40.1	6.2	1.5	1,801,296	16,934	738,260	251,856	3,988,208	439,130	471,144
IT	8.7	8.5	4.5	3.8	5.5	6.2	545,346	2,655	24,595	13,109	237,401	55,869	17,035
Media	5.8	2.3	14.4	7.2	2.8	8.8	296,269	2,866	42,671	10,140	359,058	79,490	21,080
Total sectors	13.3	12.9	10.0	6.4	2.1	0.9	36,607,036	350,331	3,656,580	1,052,464	54,214,007	9,006,205	5,641,988

Source: Agency for business registers (APR), authors' calculations

Serbia was NIS, with net profits reaching RSD 40.6 billion, and followed by EPS (RSD 26.8 billion) and Telekom Srbija (RSD 23.2 billion). Telekom Srbija was a leader in profitability in the last five years, but in 2011 it lost its primacy, which is to a large extent a result of an increase in NIS' performance after its takeover by Gazprom in 2008 and investments effected after that.

Observed sector-wise, in 2011 at the basis of EBT margin, the most profitable sectors were: construction materials (average EBT margin amounts to 9.9%, median EBT margin at 6.1%), telecommunications (4.8% and 3.4%) and the media (4.2% and 6.7%) and especially the companies operating in the media and sale of advertising space in developing markets. At the basis of 2011 data, the most unprofitable sector was pharmaceuticals (average EBT margin of -70.7%, median EBT margin -17%) and tobacco-processing (-9.3% and -4.4%).

Employment – adverse trends with uncertain perspective

In the observed period, after an almost stopped period of revenue growth, a (nominal) recovery of revenue growth in 2010 and 2011 was not followed by a growth in number of employees, but the median of number of employees stayed stable along these two years at the level of 2009, i.e. the median of growth of number of employees in particular companies amounted to 0 during 2009, 2010 and 2011, after 7.4% in 2008.

According to the official data, the total number of the employed in Serbia in 2009, 2010 and 2011 had a fall of 7.1%, 4.4% and 2.1% respectively, and in all companies in this period, the number of employees fell by 5.8%, 2.3% and 2.2% respectively, which may point to a conclusion that all large companies, aggregately observed, boasted a smaller reduction in the number of employees than the economy as a whole – i.e. that the small and middle companies had a shock "amortizing" role and suffered from a larger headcount reduction than the large companies. These data may point to a conclusion that the small and medium-sized enterprises are a more flexible segment of the economy, which reacts quicker to external changes, so in this segment there has been a larger employment decline in the crisis period. Also, it is possible that, in difficult external circumstances the small and medium enterprises (SME) resort to a larger tax evasion, so because of this the number of the officially employed workers diminished.

The largest employers in Serbia are the state-owned companies, concretely EPS (with 32,178 employees in 2011), Železnice Srbije (Serbian Railroads) (20,413), JP PTT Srbija (15,060) and Telekom Srbija (13,598).

Indebtedness and borrowing

During these five years, foreign borrowing, i.e. its part in total sources, increased in 2008 (median grew from 11.8% in 2007 to 14.7% at end 2008), but in 2009 and 2010 it remained at the same level, and it even mildly fell in 2011 (13.2%). In the whole observed period, indebtedness level stayed relatively low, but its concentration grew larger as time went by. Indeed, there are a small number of significantly indebted companies and a far larger number of those with little or no debt. As much as 75% of the observed companies have a share of borrowed sources of less than 30%, which is a generally accepted critical limit of indebtedness, while 10% of the observed companies have a debt larger than a half of total sources. Also, looking at debt, there is a concentration in the segment of large companies. Indeed, median of share of credits in total sources for large companies (operating revenues exceeding RSD 1 billion) amounted to 18.8%, while it stood at 12.1% in small companies at the end of 2011 (Table 4).

Short term debt (of up to one year maturity) dominates the total debt. Indeed, the median of share of short term debt in total debt of the loan-indebted companies amounts to 82%. Share of the short term debt has increased from 2009 onwards, which, apart from other things, point to a conclusion that new borrowing is probably largely motivated by needs to increase liquidity, but also that the availability of new sources of crediting was decreased in the same period.

Generally adverse pre crisis borrowing structure (domination of the short term debt and FX-indexed debt) took a toll during the macroeconomic shock of the crisis, which eventually had a negative effect on liquidity of large debtors. Negative influence of the financial position of companies, above all liquidity, was additionally indirectly contributed to the effect of the exchange rate differentials, bearing in mind that the largest share of debt has been euro-indexed, while the Serbian currency significantly weakened since the outbreak of the crisis, i.e. since 2008, with the exception of 2011. The existing researches of the crisis effects show that in 2009, after the crisis outbreak, liquidity of large debtors worsened, and that new borrowing along 2009 was used to reduce pressures on liquidity [2].

Liquidity

Despite the fact that in a large part of the observed companies short-term assets seem to be complying with the short-term liabilities (its median amounts to a solid 1.2 throughout the observed period), liquidity was threatened and drastically worsened in 2009, 2010 and 2011, as well as in 2012, although exact indices are lacking, illiquidity is probably at its highest since the start of the observed period. Namely, the net working capital, counted as a sum of values of all net working capital, became negative since 2009, deepening until 2011. This is a result of the fact that the unadjusted liquidity position is especially pronounced in large and public companies, hence a larger part of the negative net working fund originated from these companies, thus rendering this sum negative at the level of all 5,000 companies. Apart from these indices, there is a large share of unpaid claims and unpaid debt in companies' balance sheets, which in pair contribute to compliance of the short-term assets and short-term liabilities, and hence give an illusion of liquidity, but in reality it means that the companies finance their unpaid claims by not paying their current liabilities to their suppliers (median of share of these claims/obligations in total assets/liabilities is 22%), which is only a signal of illiquidity.

Hence, the key negative characteristic of operations of companies in Serbia, especially in the last two years, is the widespread illiquidity in terms of prolonged delays in payments and accumulation of total obligations in this respect. Trend of growth of negative net working capital was continued in 2011 – in comparison with 2010, negative aggregated net working capital of all companies in Serbia increased by almost 50% to RSD 322 billion, which is 3% of total assets of all companies put together. Unfavourable financial situation, that is, the imbalance of the structure of assets and liabilities of companies in Serbia has many causes, of which some date from before the crisis, such as financing of the fixed assets from short term sources. Additionally, illiquidity at the market lately was contributed by a significant lack of financial discipline in the system, increase of payment delays of the state, and debts of the state companies, an increase of the number of companies "under restructuring", which are legally protected from forced collection by creditors until the end of the restructuring process, weakening of creditworthiness (which reflects in impossibility of refinancing of the short term loans with longer term loans), absence of long term loans, etc.

All these problems may be well seen at the example of the subsector of the wholesale pharmaceutical suppliers. Before the crisis, this subsector had an incontestable leader, Velefarm, and other three important followers, Jugohemija-Farmacija, Vetfarm and Unihemkom. However, these four companies entered the crisis with relatively high indebtedness, partially because a fierce investing cycle,

Table 2. Overview of operating revenue of largest companies in Wholesale Trade in Pharmaceutical Products, in 000 EUR

	2007		2011		Average growth rate 2007/11
	Rank	Operating revenues	Rank	Operating revenues	
Velefarm	1	217,261	3	82,586	-21.5%
Jugohemija-Farmacija	2	76,358	7	33,568	-18.6%
Vetfarm	3	74,136	9	4,017	-51.8%
Unihemkom	4	65,014	6	38,675	-12.2%
Farmalogist Holding	5	57,029	2	119,261	20.3%
Pharmanova / Phoenix Pharma	6	52,428	1	213,198	42.0%
Pharmaswiss	7	48,882	4	79,583	13.0%
Erma	8	45,093	5	71,132	12.1%
Vetprom Hemikalije	9	35,155	10	25	-83.7%
Roche	10	33,126	8	22,510	-9.2%

Source: Agency for business registers (APR), authors' calculations

and with an inadequately strong liquidity position which could not withhold a long period of repayments and non-payments by the Republic Fond for Health Insurance and some other health care institutions. Other companies that had a good position of working capital took full advantage of this market position, above all, Phoenix Pharma, Farmalogist and Pharmaswiss, which thus became new market leaders (see Table 2).

Out of the former "big four", Velefarm is in bankruptcy, Vetfarm practically stopped operating, Unihemkom was in blockade for 149 days in 2012 with uncertain perspective, while Jugohemija-Farmacija owners sought an exit from the current situation in the sale of the company. Vetprom Hemikalije has also been erased from the Top 10 list, by practically ceasing to exist.

Table 3. Financial ratios of top 5000 companies in Serbia

		2007	2008	2009	2010	2011
Operating revenues, in RSD million	10th percentile	160.3	168.9	161.8	177.2	203.1
	Median	337.6	352.9	300.4	331.4	387.3
	90th percentile	1,529.1	1,613.6	1,355.8	1,579.6	1,890.7
Number of employed persons	10th percentile	8	7	5	5	5
	Median	44	42	37	37	37
	90th percentile	327	228	243	242	244
Growth of operating revenues	10th percentile		-8.9	-34.4	-15.3	-16
	Median		21.8	3.4	18.3	16.6
	90th percentile		107.7	79.4	109.4	103.86
Growth of operating revenues, tradable sectors	10th percentile		-10.7	-31.6	-16.9	-13.9
	Median		21.5	3.2	19.7	19.7
	90th percentile		100.6	67.8	90.2	90.1
Growth of operating revenues, non-tradable sectors	10th percentile		-10.8	-36.1	-14.6	-16.9
	Median		23.1	3.3	17.5	14.8
	90th percentile		148.1	88.1	123.3	113.6
Growth of the number of employees	10th percentile		-10	-18.3	-21.6	-31.1
	Median		7.4	0.0	0.0	0.0
	90th percentile		58.3	37.1	33.3	42.9
EBITDA margin, in %, in operating revenues	10th percentile	-0.3	-0.9	-2.4	-1.1	-1.1
	Median	6.8	6.5	6.4	6.4	5.9
	90th percentile	22.3	21.1	22.5	22.5	21.2
EBT margin, in %, in operating revenues	10th percentile	0.1	-3.4	-7.9	-7.1	-3.3
	Median	3.7	2.5	1.9	2.1	2.4
	90th percentile	16.9	14.9	14.8	14.7	14.9
Pre-tax profit, in RSD thousands	10th percentile	52	-15,603	-30,620	-29,869	-18,231
	Median	13,243	9,719	6,886	8,234	11,019
	90th percentile	100,367	87,119	72,538	85,060	103,109
Pre tax ROA, in %	10th percentile	0.1	-3.3	-6.7	-5.7	-3.4
	Median	6.8	4.5	3.4	3.9	4.9
	90th percentile	28.8	25.6	22.6	23.1	23.3
Loans in total liabilities	10th percentile	0	0	0	0	0
	Median	11.8	14.7	14.8	14.9	13.2
	90th percentile	43.2	18.9	49.2	48.2	46.8
Short-term loans in total loan debts	10th percentile	0.1	0.1	14.7	15.6	14.5
	Median	74.7	73.5	85.9	85.2	82.4
	90th percentile	100	100	100	100	100
Liquidity ratio (short-term assets in short-term liabilities)	10th percentile	0.7	0.7	0.6	0.6	0.6
	Median	1.2	1.2	1.2	1.2	1.2
	90th percentile	3.3	3.2	3.3	3.2	3.6
Total net working capital, in RSD billion		73.2	41.2	-3.6	-56.5	-117.0
Herfindahl concentration index, in %		28.7	31.1	34.4	38.5	35.4

Source: Agency for business registers (APR), authors' calculations

Structural shifts in the economy in the period 2007-2011

Structural shifts in Serbian economy in 2007-2011 were evident. These changes reflect in some important directions, the most important of which are the carrying out of foreign direct investments and growth in their importance in the Serbian economy, continuation of trends of concentration and consolidation (with more room for further consolidations), reconfiguration of the domestic large capital, larger focus of the Serbian economy on exports.

Concentration and consolidation through the crisis

One of the most important observable trend from the start of the crisis onwards is increase in concentration of the Serbian economy which is, by nature, highly concentrated (Figure 1) with a small number of relatively large and a large number of small companies. The fact that the large grow despite the crisis is observable at the Top 500 list, where large companies, in average, achieved solid growth rates in the crisis years as well.

At the sample of the largest 5,000, it is obvious that the concentration index (Herfindahl index which is counted as a sum of squares of shares of companies in total operating revenues of the whole sample) grows from 2007 to 2010, with a tepid fall in 2011. Additionally, larger companies in the observed 5,000 (with operating revenues exceeding RSD 1 billion), attained a larger growth of operating revenues, especially in the crisis years 2009 and 2010 (median at 5.7 in 2009 and 19.7 in 2010), than the smaller companies (median at 2.6 in 2009 and 18.2 in 2010), which was not the case before crisis, when (naturally) smaller companies attained larger relative growth of operating revenues.

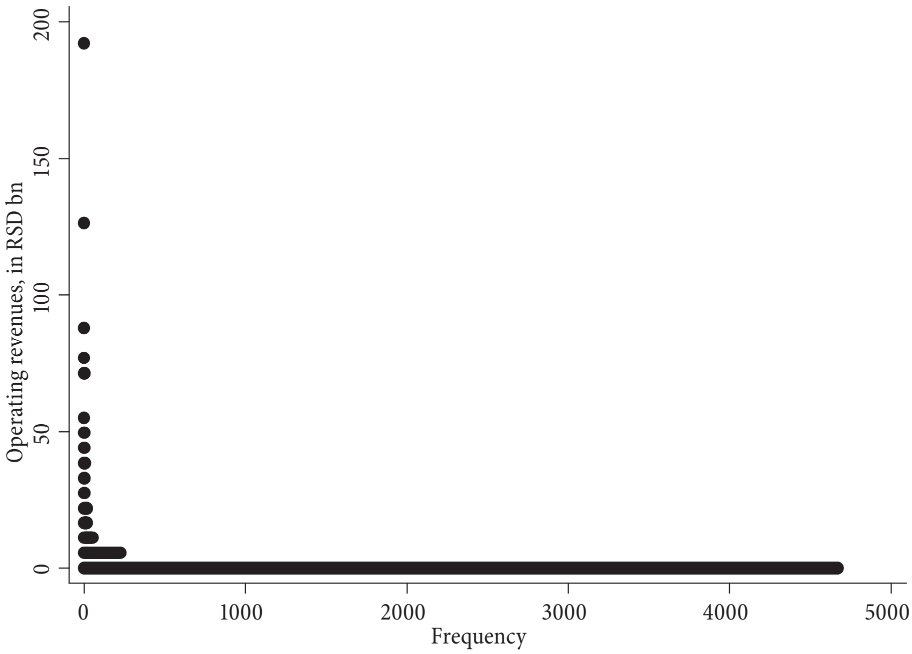
The fact that throughout the observed period there is (and remains) a constant and significant dispersion of EBITDA margins (10^{th} percentile at -1%, 90^{th} percentile at 22%), suggests that there is still a lot of room for consolidation in the market. In other words, growth of business efficiency, improving the utilization of assets which do not yield adequate returns, are all positive effects that a fiercer competition and better functioning of market

Table 4. Financial ratios of Top 5000 companies in Serbia by size of operating revenues*

		2007		2008		2009		2010		2011	
		large	small	large	small	large	small	large	small	large	small
Operating revenues, in RSD million	10^{th} percentile	1,092.6	160.3	1,088.1	164.4	1,101.6	159.2	1,105.9	173.9	1,101.7	197.6
	Median	1,855.4	284.8	1,855.8	295.8	1,860.1	262.9	1,943.9	284.9	1,893.6	319.3
	90^{th} percentile	7,846.0	670.9	7,646.9	688.9	8,850.4	656.1	9,228.7	667.6	8,839.1	702.9
Growth of operating revenues	10^{th} percentile			-6.2	-9.7	-30.6	-35.3	-8.4	-16.8	-13.1	-16.8
	Median			19.9	22.2	5.7	2.6	19.7	18.2	15.8	16.8
	90^{th} percentile			106.7	108.2	69.6	83.0	89.5	113.5	88.7	109.7
Growth of operating expenses	10^{th} percentile			-3.8	-8.3	-28.8	-34.2	-7.8	-15.9	-10.1	-15.3
	Median			20.1	22.1	3.9	2.3	18.8	17.7	16.0	17.1
	90^{th} percentile			103.7	106.9	69.7	82.9	86.8	112.5	84.8	110.9
EBITDA margin, in %, in operating revenues	10^{th} percentile	-0.4	-0.3	-1.3	-0.8	-3.4	-2.1	-1.1	-1.1	-0.9	-1.1
	Median	6.6	6.9	5.7	6.6	6.4	6.4	6.5	6.3	5.7	6.0
	90^{th} percentile	22.4	22.2	20.6	21.2	21.9	22.7	20.2	22.9	20.1	21.5
Pre tax ROA, in %	10^{th} percentile	-3.9	0.1	-8.2	-3.9	-10.4	-5.8	-9.3	-4.9	-5.3	-2.5
	Median	4.6	7.2	2.6	4.6	2.3	3.5	3.2	3.8	3.8	5.0
	90^{th} percentile	20.3	30.2	18.4	20.3	17.3	23.0	17.7	23.1	19.2	23.9
Growth of the number of employees	10^{th} percentile			-10.4	-10	-16.9	-18.3	-13.2	-15.9	-11.8	-14.6
	Median			6.1	7.7	0.9	0.0	0.9	0.0	2.8	1.3
	90^{th} percentile			54.5	59.6	33.3	37.8	29.7	37.4	41.4	46.4
Total net working capital, in RSD billion		-6.4	79.5	-26.1	67.4	-87.1	83.5	-99.6	43.1	-140.6	23.6
Loans in total liabilities	10^{th} percentile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Median	17.0	10.9	19.7	13.2	20.9	14.1	19.4	14.2	18.8	12.1
	90^{th} percentile	48.5	45.0	53.9	48.5	54.2	47.8	51.8	47.3	50.4	45.3

* a large company is defined by operating revenues exceeding RSD 1 billion
Source: Agency for business registers (APR), authors' calculations

Figure 1: Distribution of companies by size of operating revenue in 2011



Source: Agency for business registers (APR), authors' calculations

institutions may produce in order to increase employment in the future. In order to put the assets in a better function, a fresh capital is needed, i.e. investments and an increased knowledge so that the production possibilities are fully tapped. In that context, growth and better performances of Serbian companies do not only depend on the business sector itself, but also on institutions and system itself, education quality, legislative system, access to financing and financing costs.

Reconfiguration of the large domestic capital – importance of financing decisions

In the observed period, it is visible that there has been an adjustment of the large domestic capital, especially in the sub period of the full swing economic and financial crisis, from 2009 to 2011. Namely, it was an almost universal case that in the pre-crisis period, especially in 2007 and 2008, all domestically owned large companies, i.e. so called conglomerates, were carrying out strong investment cycles that were financed from loans, often short term ones. These decisions were based on the fact that before the crisis there was growth in all markets, hence a continuation of these trends was expected in the forthcoming period. However, instead of large growth rates, there came a fall in business activity, while conglomerates were burdened by a relatively large indebtedness[4] (see Table 5).

In these circumstances, owners have been using various strategies in financing their businesses. Analysis at the chosen indices for the period 2007-2011 show that the most significant rise of business activity was in those companies whose owners "opened up" to the capital, be it borrowing or direct investments in capital of international financial institutions (IFIs) or private equity funds[5]. By the entrance of these institutions to the capital of the companies, or by their support through (re)financing, a financial position of those companies is additionally ameliorated, and all conglomerates which had this kind of cooperation also had a significant growth and development even in the crisis period.

4 It is considered that the company enters a zone of high indebtedness when the value of net debt (total financial liabilities less the value of cash and cash equivalents on a certain day) exceeds the 5x value the EBTIDA, and in the crisis period this limit is reduced to 4x the EBITDA. Of course, in order to determine the situation more accurately, one has to take into consideration multiple factors, such as the maturity of indebtedness, ability of the company to create a positive net cash flow and other, but the ratio between net debt and EBITDA is a relatively sound index, based on which some preliminary estimates may be concluded.

5 Access to IFI financing is, even when it comes to credit financing, closer to approach of private equity funds, than to the commercial banks, seeing that a more thorough analysis / client check up is conducted, and contracts often contain such provisions that allow to IFI a better control of operations of companies in which they invest.

Table 5: Analysis of operations of conglomerates in the period 2007-2011, in EUR thousands

	Operating revenes			Net debt / EBITDA			Support of IFI of foreign funds
	2007	2011	Cagr	2007	2008	Average	
INTERKOMERC	48,351	234,710	48.4%	26.0	9.4	17.7	Without support
KONCERN FARMAKOM M.B.	129,336	421,864	34.4%	6.1	3.7	4.9	Support through refinancing
VICTORIA GROUP	260,728	567,119	21.4%	5.0	3.3	4.2	Support through financing and share in capital
RADUN INŽENJERING	69,774	144,438	19.9%	1.1	1.8	1.5	Support through financing
ITM GROUP	43,201	83,781	18.0%	8.3	10.0	9.2	Without support
MPC HOLDING	140,846	258,538	16.4%	2.3	3.9	3.1	Support through share in capital PE fund
MK GROUP	132,884	234,034	15.2%	3.2	6.6	4.9	Support through financing
RUDNAP GROUP	100,176	174,097	14.8%	7.1	6.8	7.0	Without support
INVEJ	206,568	193,502	-1.6%	3.0	6.0	4.5	Without support
DELTA HOLDING	1,503,379	1,098,468	-7.5%	7.0	9.1	8.1	Without support
DUNAV GRUPA	42,275	28,528	-9.4%	2.4	3.1	2.7	Without support
ZEKSTRA GRUPA - ZEKSTRA	52,233	21,826	-19.6%	7.8	77.2	42.5	Without support
VERANO MOTORS	114,027	43,777	-21.3%	12.3	16.3	14.3	Without support
IRVA INVESTICIJE	40,421	5,853	-38.3%	50.0	30.9	40.4	Without support
RODIĆ M&B HOLDING	77,038	0	-100.0%	50.0	50.0	50.0	Without support

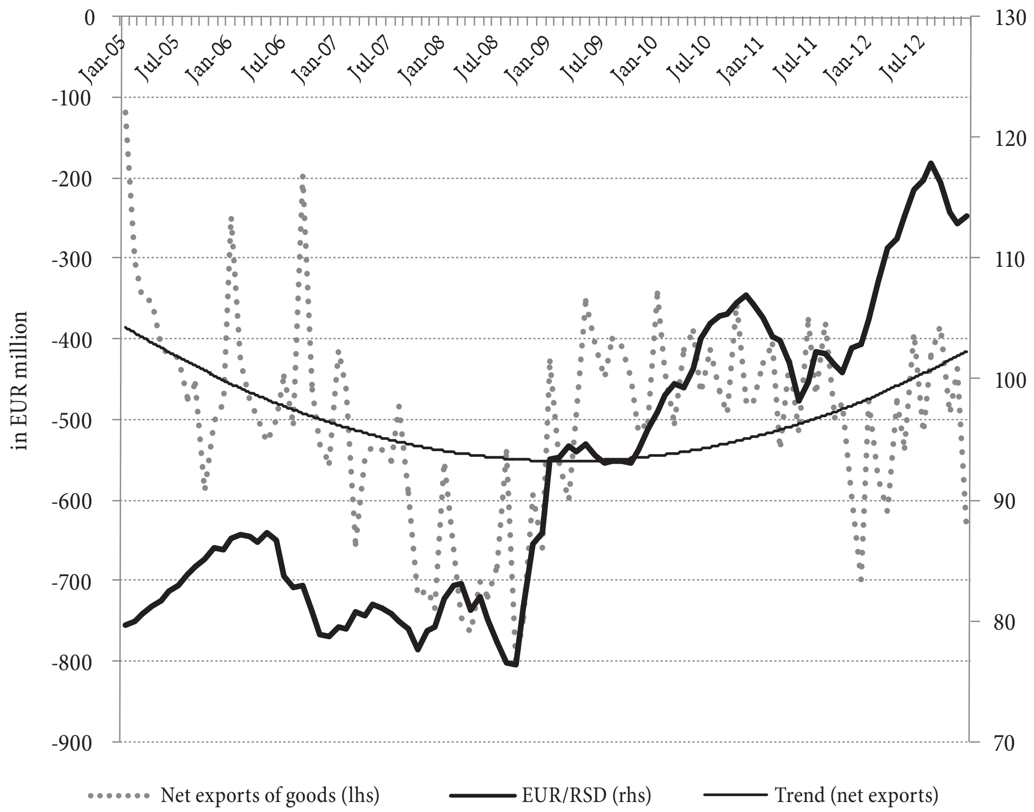
Source: Agency for business registers (APR), authors' calculations

On the other hand, companies, i.e. its owners who were less open, i.e. suitable for a partnership with professional financial institutions, had an aggregate fall of activity, many are still confronted to significant challenges, and some even went bankrupt. Of course, in this segment there are some exceptions, such as Interkomerc or ITM Group.

Higher focus on exports

In the observed period, from the outbreak of the crisis onwards, a significant structural shift took place in the Serbian economy, consisting on a more concentrated focus on exports (Figure 2). Although still sizeable, the current account deficit was narrowed. The narrowing is

Figure 2: Monthly net exports (trade deficit) and FX rate EUR/RSD



Source: Serbian Office of Statistics, National Bank of Serbia, Author's calculations a result of a smaller consumption (which is structurally oriented towards imports to a large extent), and also due to a success of some sectors to compete and sell their products abroad.

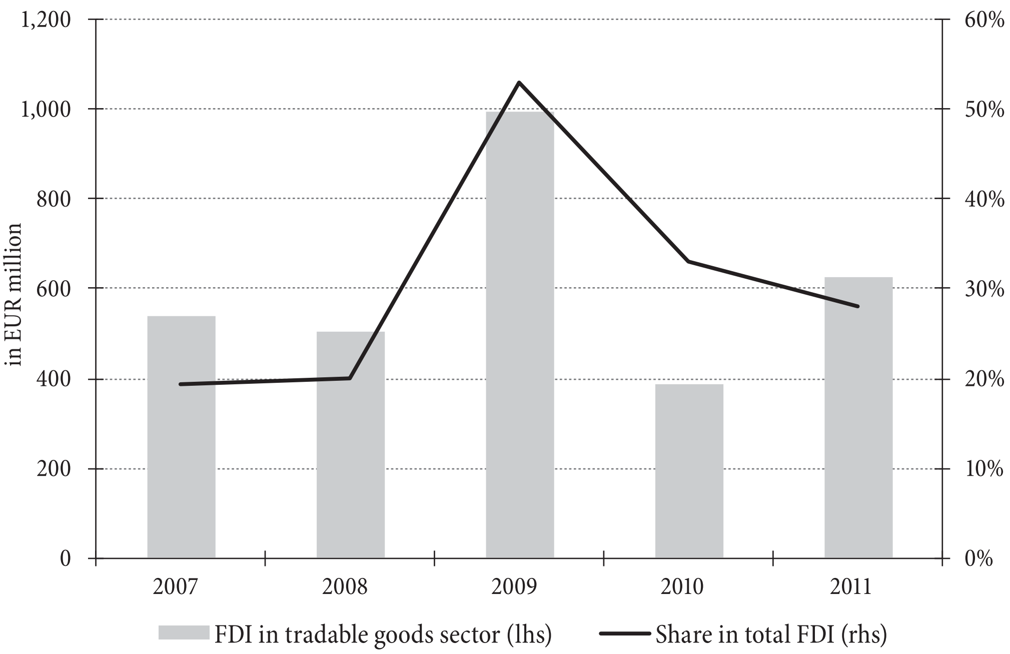
Favourable for these developments was RSD weakening, nominally by 50% and in real terms by 12%, in the period from the crisis outbreak (September 2008) until the end of 2012[6]. Non-tradable sectors have been growing at a faster pace by their operating revenues than the tradable sectors (agriculture and industry) in 2008, as well as in 2009, but in the latter at a much lower level (median at 23% and 3.3% for the non-tradable sector and 21% and 3.2% for the tradable sector in 2008 and 2009 respectively). However, the tradable sectors growth starts to outpace that of the non-tradable, in the period from the crisis outbreak onwards. In 2010 and 2011, the tradable sectors boast larger operating revenue growth (median of 19.7% in 2010 and 2011 each, against medial growth in non-tradable sectors of 17.5% in 2010 and 14.8% in 2011). In addition to that, foreign direct investments were not stopped, like the foreign credits, but their inflow slowed down from the average of 8.7% of GDP in 2007-2008, to an average of 5.9% of GDP in 2009-2011. This was partially the result of local efforts and financial incentives, but also of the fact that in Serbia there are still many untapped potentials for investments. After the last large privatization – when NIS was sold to the Russia's Gazprom in 2008 – in the previous period foreign direct investments inflow was marked by the arrangement with FIAT and a number of smaller investments flowing in, aiming at providing supplies for the car factory, but also to some other export-oriented activities. In 2011, the single largest retail chain was sold to Belgium's Delhaize.

A similar adjusting trend is visible when it comes to the destination of foreign direct investments. Indeed, in the pre crisis period, there have been some sizeable foreign direct investments in non tradable sector, while in the crisis a trend of a growing share of foreign direct investments in the tradable sector is observable (Figure 3).

Hence, by departing from the basic macroeconomic trends, it can be stated that until 2009 there was a model of economic growth based on capital imports from abroad, while from 2009 onwards, under the pressure of the global economic and financial crisis, there is an adjusting process of the Serbian economy going on, especially through the depreciation of the domestic currency and reduction of the foreign trade deficit. How long will this trend persist

6 Although in our professional and academic public there has been a lot of discussion on FX rate influence on foreign exchange sector, there is a growing body of evidence suggesting that FX rate adjustment does have a positive effect on foreign exchange deficit. See for instance [9].

Figure 3: Foreign direct investments in the tradable sector, in EUR million



Source: NBS, authors' calculations

depends both on efforts in improving the business climate and stimulating domestic and foreign investments, and on the framework of the economic policies in the forthcoming period.

State as owner and manager

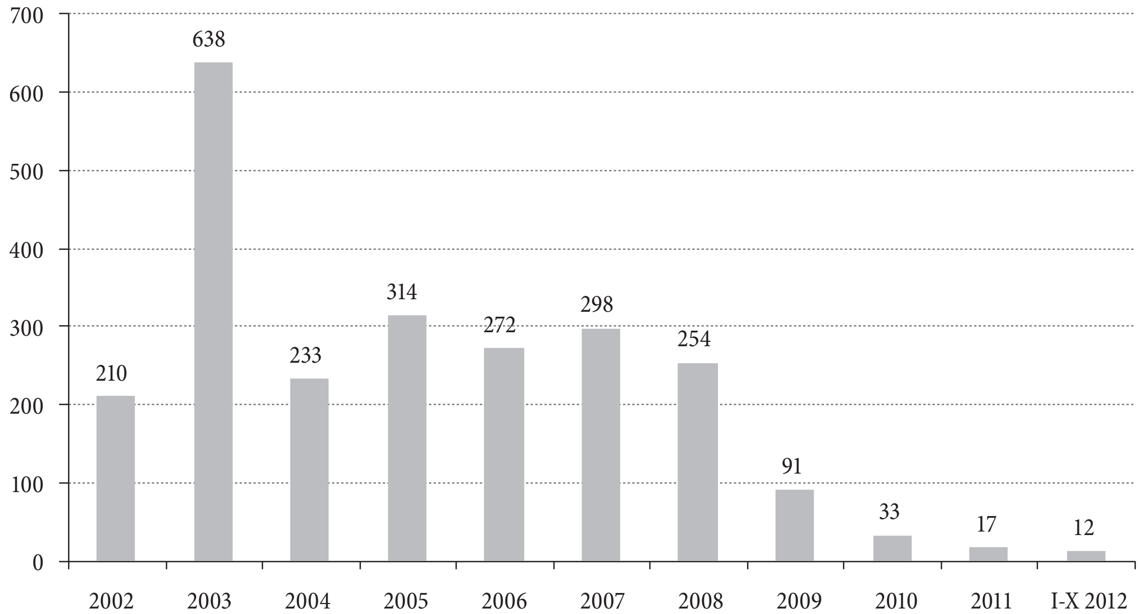
After the last large privatization of NIS by Gazprom in 2008, it can be said that since 2009, process of privatization of state and socially owned enterprises practically stopped, although it was meant to be finished in 2008 already[7]. In mid 2012, the number of non-privatized companies under the auspices of the Privatization Agency amounted to 594 with about 100 thousand employees [8]. For comparison (see Figure 4), total number of privatized companies at the end of 2011 amounted to 1,438 (source: APR).

With the economic crisis outbreak, not only was the privatization slowed down, but there was a de facto opposite process – of private ownership returning to state ownership. Namely, in order to protect the operations of companies confronted with the business challenges, and to protect the number of the employees, the state was often breaking the privatization contracts and taking the companies back from the private ownership. Many of those ended in the "restructuring", which is a concept introduced by the changes of the Law on privatization [5], which prevents creditors from conducting forced collection against companies in this status. There are currently 175 such companies, employing some 55,000 persons [8]. In order to protect business and employment, state decided to take over large companies, such as US Steel (app. 5,000 employees), and it was doing that directly or through takeover from other companies owned by the state, such as Srbijagas, which entered into ownership via debt replacement in the Serbian glass factory (the takeover took place in 2009, only to be sold to a consortium of Bulgarian companies Rubin and Glass Industry), HIP Azotara from Pančevo (2009), MSK from Kikinda (2009), and in 2010 it bought Pančevo's Agroživ (which was in bankruptcy). Apart from this, Srbijagas acquired 30% share in the company Informatika (in 2009) and together with a Russian insurance company Sogaz founded an insurance company in Serbia in 2012. If we add to the companies in state of privatization (about 600) some 50 central governments' public companies, and about another 650 local government's public companies, we come to a sum of 1,300 state-owned companies [1].

At the list of Top 500 in 2011 there were 56 companies classified as state-owned. All these companies are in majority ownership (over 50%) of the state or local government,

7 According to [5], the public tender, i.e. public auction, for the privatization of non-privatized public capital, had to be published from 31st December 2008 (Act 7).

Figure 4: Number of privatized companies



Source: [7]

with an only exception in Energoprojekt Holding, where the share of state ownership is below 50% (33.6%), but we nevertheless added it to this category, due to the state's key role in management. We also added the remaining "society-owned" companies. These account for more than 10% of total companies on the Top 500 list, and made about a fifth of all operating revenues, and employed 42% of employees of all the companies from the list. The largest among those is JP EPS with 32,000 employees, which is 8% of total Top 500's employment. These 56 companies account for 38% of the sum of net debt of all Top 500's, while Srbijagas with the record high net debt of EUR 750 million at the end of 2011 (and about EUR 1 billion at the end of 2012), accounts to 7% of total net debt of all the largest 500. These companies account for 30% of all capital investments in 2011 of all the companies from the list. And finally, these companies account for 44% of the losses of all the loss-generating companies from the Top 500 list.

It is difficult to make a general note on operations of state enterprises in 2011, but at the sample of the 56 largest state companies (which made it to the Top 500), there is a basic impression that their list is heterogeneous in multiple ways – activities they are in, motive of the state to run them, and successfulness to do it both in activities of public and strategic importance (where a state role is justifiable, often monopolist), and in those more or less market activities where the state meets the private owned competitors. At the sample of 56 large companies from the list of Top 500, the state is, we can say, present in all activities, from agriculture (PKB Beograd, PIK Bečej), manufacturing industry (production of furniture and confectionery Simpo Vranje, tires in Kruševac's Trayal, cables in Jagodina's Holding Kablovi, chemical products – HIP Petrohemija, HIP Azotara, armaments, etc), to energy sector, telecommunication, transport, infrastructure, construction, mining, utilities, natural resources management (waters, forests and other natural resources).

When it comes to performances, significant heterogeneity is observable, whereas in the public companies functioning in the domain of regulated prices, it is difficult to separate the element of realistically set price level from the efficiency level in business that is linked to organization, management, adequate number and structure of the employed, etc. However, the data show that, generally observed, this segment may be qualified as relatively inefficient and with large room for productivity and efficiency increases, through better management and by letting a part of their activities to the private sector.

As a whole, state enterprises at the Top 500 increased their operating revenues in 2011 by 7.4% (against growth of 13.8% of aggregated Top 500 companies). Aggregately counted EBT margin amounted to 3.6% (almost as much as all Top 500) which represents a significant improvement comparing to 2010, when EBT margin of all state companies was (aggregately) negative at -3.8%. Such a change for the better is above all attributable to pre-tax profits of EPS, Serbian Railroads (both reported losses in 2010), as well as by increase of profits of Telekom and PTT. Meanwhile, largest absolute fall of profits, i.e. growth of losses in 2011 was reported by Galenika. Out of all the companies from the list, 14 had negative EBITDA in 2011. Out of these 14, 9 had negative EBITDA for two years in a row. Most companies with negative result are also highly indebted, often with an explicit state guarantee. Although the efficiency is hard to define due to the absence of comparable parameters from private of international practice, in this group of companies there are some examples of relatively successful companies. They report positive results in several consecutive years, without significant oscillations in incomes and without a significant indebtedness. The previous examples are found primarily among the enterprises operating in monopolist activities, but also in some cases in activities where market is less regulated, and where a private sector (often foreign) competition is more marked, such as the construction sector. By the level of investments in fixed assets in 2011, Putevi Srbije, EPS, Beogradski vodovod i kanalizacija (water supply and sewage), RTB Bor, Telekom, Kontrola letenja (flight control), Srbijagas, HIP Azotara and EMS stand out.

The first larger group at this list is made out of eleven central-government owned public enterprises: EPS, Srbijagas, Serbian Railroads, PTT, EMS, Jugoimport SDPR, Srbijašume, PEU Resavica, Vode Vojvodine i Vojvodina šume. The other group is comprised of twelve local companies performing utility services in Belgrade, Novi Sad, and one in Vršac and Kragujevac each: JKP Beogradski vodovod i kanalizacija, Vodovod i kanalizacija Novi Sad, Gradska Čistoća Beograd (city cleaning company), DP Drugi Oktobar Vršac, Parking servis Beograd, city bus operators GSP Beograd and JGSP Novi Sad, JKP Zelenilo Beograd, JKP Beograd Put, JKP Beogradske elektrane, Novosadska toplana and Energetika Kragujevac (the last three centralized heating companies). All these companies have a status of public enterprises except for the two, which are in the same time in "society" ownership – DP Drugi oktobar Vršac and Energetika Kragujevac – in restructuring. Most of these companies are subject to a regulated price regime of its services, and their revenues are largely determined by the Government's approval for price hikes on one side, and by the efficiency of management on the other side. Among these, GSP Beograd (city transport company) stands out by a particularly negative EBITDA margin of -17% (i.e. –RSD 1.8 billion), while this company even increased its debt in 2011, by enlarging its net debt from RSD 131 million to RSD 1.305 billion, and the continuation of indebting (with an aim to renew the vehicle fleet) continues in 2012 as well. By positive financial performances, we would single out Parking servis (2011 operating revenues amount to RSD 2 billion – on a similar level as in 2010 and despite a fall in EBTIDA margin, profits and ROA in comparison with 2010, while it still boasts enviable indices – EBITDA margin at 22%, ROA at 3.4%), Gradska Čistoća (operating revenues at RSD 5 billion, i.e. 20% more than in 2010, with EBITDA margin at 21.3% and ROA at 5.5%), but Beogradski Vodovod i kanalizacija and Novosadski vodovod. Novosadske toplane significantly ameliorated their result in 2011, by passing from the zone of negative EBITDA to a solid results zone, with a growth in operating revenues.

Four companies from the arms industry made their way to the list Top 500 in 2011 – Krušik Valjevo, Milan Blagojević Lučani, Prvi partizan Užice and Kompanija Sloboda Čačak. All together, they made total operating revenues in 2011 of RSD 10 billion, i.e. 18.3% smaller than in 2010. These companies record a fall in operating revenues in 2011 as a combination of a high base effect from 2010 (a year which was particularly good for placements of Serbian weapons on the Near East markets) and, from the business point of view, adverse political turmoil (the so-called "Arab spring") of 2011. Fall of operating revenues was followed by the fall in EBITDA and EBITDA margin. Except for company Prvi Partizan Užice, almost all other three companies operated in 2011 with a negative EBITDA, but only Milan Blagojević Lučani operated with a loss, while the three others reported positive before tax results.

Other companies from this list may be observed as a group of non-privatized state companies or those the privatization contracts were broken in, and by the nature of their activities it is not necessary for those to remain in government's ownership, because they operate at relatively liberalized markets. Among those, the largest are Telekom Srbije (in which the state even increased its part at the beginning of 2012 by repurchasing stocks previously owned by Greece's OTE), HIP Petrohemija, RTB Bor, Jat, HIP Azotara, Lasta and Galenika, whereas Telekom, Jat and Galenika are mentioned most frequently in the context of the following privatizations.

Out of public enterprises, because of the nature of their activity, a pronounced profitability is not to be anticipated. However, because of their specific position, it is plausible that their management is more efficiently organized and that these companies are more sustainable, while the public interest remains protected – and public interest is that these are not dependent on (direct and indirect) subsidies, and therefore burdening the public budget. However, these companies often, like other state-owned companies (which are not public) run a social or some other function, by operating inadequately efficiently, i.e. with a negative profitability. On the other side, successfulness of some state owned companies, statistically observed, is not crucially different from an average successfulness of the whole list Top 500, and negative result of many public enterprises is the result of a low market price of their products (electricity, gas, utilities), although this cause is often hard to distinguish from low efficiency and bad management. Bright examples at this list show that state owned companies too may be run by professional management, and that these companies too may achieve results equal to their privately-owned competitors.

However, in companies whose activities have a strictly market nature, and do not have a strategic dimension for a state to keep its ownership or some kind of surveillance, it is generally considered that there is no long term interest for the state to remain a dominant owner. It is especially the case of companies operating in the negative zone of the operating result and which the state must subsidize directly or indirectly with various forms of the so called "soft budget constraint". Although the social aspect is the one that is crucial for the state's stance, bearing in mind the large size of these companies, which employ a large number of employees, at the long run the cost of maintaining the unsuccessful state-owned companies is significant, and consequences for other industries depending from these companies are unforeseeable. These consequences reflect in liquidity widening, and finally in the high cost of services paid by citizens. In the domains where, be it for the natural monopolies, or the state interest, or necessity to protect the public interest (providing services there where private owners would not see possibilities for profits, so the citizens would be deprived of these services or affordable prices of basic goods and services), the most efficient way for the society is that the state remains the owner only where it is not possible to protect the public interest by mere adequate regulation, while the business itself should be left to the private enterprises (in form of public-private partnership, or concession, to give an example). Finally, it is important that where the state remains the predominant owner of the capital, mechanisms are provided that this capital is handled by a professional management which could be motivated by various mechanisms already developed in practices of private corporations, and which permit an efficient management, rational use of resources and protection of the public interest in the widest sense.

Conclusion

The economic development from the macroeconomic perspective fit in the so-called financial integration driven growth model until the crisis outbreak. Namely, the foreign capital inflows – direct investments and, above all, debt, led to an economic growth mainly contributed to by growth of consumption. The other side of this saving-financed growth (albeit with small rates of domestic saving) deepened the foreign trade deficit, given that the consumption reflected in imports, up to a large extent. With all this, it seems that, in the same period, non-tradable sectors – trade, telecommunications, real-estate related activities – grew more intensively than the tradable sectors. Capital inflows contributed to RSD strengthening against EUR, resulting in strengthening of the effective foreign exchange rate. Wages grew more intensively than the productivity, while the competitiveness decreased. With the crisis outbreak and cease of massive inflows of private borrowing, foreign trade deficit narrowed, but the growth convergence also stopped. The Serbian economy failed to kick off a sustainable growth from 2009 onwards, given that after the weak recovery in 2010 and 2011, domestic economy fell into a recession in 2012 already, but there has been a certain adjustment. Exports and investments in tradable sectors grew in importance and were main drivers of recovery in 2010 and 2011. Even the exit of the largest exporter – US Steel – from Serbia at the beginning of 2012, and extremely adverse weather conditions (harsh winter in February and drought in the summer), did not alter the stable dynamics of growth of exports, in place since 2010 beginning, but were compensated by growth of other products of manufacturing industry, and from autumn 2012 by automotive industry exports.

The main findings resulting from the detailed micro data based analysis of the financial data for the largest 5,000 companies along the period from 2007 to 2011 consist in the following. Regarding general financial position, the main observations are: (1) high concentration of the economy in terms of size of turnover, (2) even higher concentration of debt in the upper part of the list – small number of large debtors and large number of modestly indebted or not indebted at all, (3) high reliance on short term debt, (4) poor liquidity originating from very few large "illiquidity generators" – predominantly within the public sector with severe structural problems, (5) dispersion in operating performances pointing to the suboptimal use of assets, market segmentation and business environment which is not supportive for asset transformation. On the more dynamic and structural horizon, the undertaken study has shown the following: (1) the economy has suffered the hardest shock to operation in 2009 and some recovery was felt in 2011 all improving productivity by controlling the employment level along the period from the crisis, (2) the crisis has brought some impulse to more intensive consolidation in the upper segment of the economy while larger companies has less felt the fall in income than smaller once, (3) the overall economy seems to shift toward export since the crisis with improvement in tradable industries and less resistant non-tradables, the last being a frontrunners until the crisis, (4) similar pattern has been registered in the destination of FDIs where 2011 and 2012 brought effects on production and exports of the previously undertaken FDIs, and (5) still unresolved challenges to the state controlled part of the economy with few hot points generation the majority of sources of systemic instability resulting in increase in public deficit and public debt and wrong price signals to markets and illiquidity.

Numerous challenges keep confronting the domestic economy, standing in the way of reaching the sustainable growth and decrease of unemployment at the aggregate level. By summarizing findings from this attempt of a summary financial analysis at the basis of microeconomic data, we can enumerate the following challenges: (1) increase of the financial discipline, (2) financing investments from the long-term sources with smaller reliance on debt, and larger on capital, (3) decrease of borrowing costs, (4) managing the risks stemming from foreign exchange rate changes, (5) growth of small and medium enterprises, (6) increase of knowledge and managerial capabilities.

For a stronger economy, important is the role of the creators of economic policy, i.e. the state, and especially at several key fronts. The first is to improve the institutional framework in which business takes place, in order to correct the signals for an adequate allocation of resources, and in order to provide conditions for more efficient asset utilization. The latter includes the correction of unrealistic prices of products and services of public companies, speeding up the bankruptcy proceedings, incentives, i.e. cancellation of obstacles for a better functioning of the capital market. The second important direction where a state may improve conditions in business is to resolve illiquidity, often generated by state institutions, which starts a chain of non-payment. The precondition for confronting these challenges is to finish the reforms in the state-controlled part of the economy.

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