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THE RELEVANCE OF POSITIONAL RISKS IN CREATING DEVELOPMENT STRATEGY: THE CASE OF PUBLIC ENTERPRISES

Relevantnost pozicionih rizika u kreiranju strategije razvoja – slučaj javnih preduzeća

Abstract

Public enterprises have considerable economic and political importance in many countries around the world. The state is largely involved in infrastructure sectors of strategic importance for the development of the national economy. State-owned enterprises often significantly contribute to GDP and total employment. Also, we should not overlook their effect on the operating and financial performance of companies that do not belong to the public sector. However, a number of research studies have shown that the state does not perform its ownership function in an effective manner and that state-owned enterprises are usually less successful than private companies. The same holds true for Serbian public enterprises. Inadequate management, lack of transparency in their operations and absence of an efficient monitoring system lead to irrational use of resources and huge losses. Serbian public enterprises have become one of the generators of public debt, mainly due to the policy of government guaranties for their loans. Substantial subsidies coming directly from the budget or indirectly through unpaid obligations to other public enterprises, coverage of their losses and write-offs of their debt place a heavy burden on the state budget. Therefore, reform of public enterprises is not a matter of choice, but an urgent need.

The financial problems of public enterprises in Serbia are so deeply embedded that their ignorance could undermine the reform processes and implementation of the strategy for economic development of Serbia or its results might fall below expectations. In this paper we put special emphasis on the quantification of inherited risks. In the first and second part we point out particular characteristics of public enterprises and their importance in some national economies. In the third part of the paper we deal with dimensioning of operating and financial risks with the aim of shedding some light on the scope of the problem, not only from the perspective of public enterprises, but also considering

a negative impact of these risks on the performance of the overall economy. In the fourth part the focus is on the problems of poor quality of corporate governance, need for fundamental changes in the state's attitude toward public enterprises, and means of enhancing corporate governance. Finally, in the last part of the paper we draw attention to potential manipulations in financial statements and their consequences as well as to a lack of the government's commitment to raising the quality of financial reporting in general.

Key words: *public enterprises, corporate governance, performance, operational risks, financial risks, liquidity, solvency, profitability, hidden losses*

Sažetak

U mnogim zemljama širom sveta javna preduzeća imaju veliki ekonomski i politički značaj. Država je često prisutna u infrastrukturnih sektorima od strategijskog značaja za razvoj nacionalne ekonomije. Preduzeća u državnom vlasništvu često imaju značajno učešće u GDP i ukupnom broju zaposlenih. Ne treba zanemariti ni uticaj ovih preduzeća na poslovanje i performanse drugih, nedržavnih preduzeća. Međutim, u brojnim istraživačkim studijama je dokazano da država svoju vlasničku funkciju ne obavlja na najbolji način i da su preduzeća sa državnim vlasništvom manje uspešna od privatnih preduzeća. Ista situacija je i u Srbiji. Neadekvatno upravljanje, nedovoljna transparentnost njihovog poslovanja i izostanak kvalitetnog sistema monitoringa uslovljavaju neracionalno trošenje resursa i velike gubitke. Srpska javna preduzeća su, kroz davanje državnih garancija za uzete kredite, postala jedan od generatora javnog duga. Značajne subvencije, neposredno iz budžeta ili

posredno preko neplaćanja računa drugim javnim preduzećima, pokriće gubitaka i otpis dugova u značajnoj meri opterećuju državni budžet. Otuda, sređivanje stanja u javnim preduzećima nije stvar izbora, već urgentna potreba.

Finansijske dubioze u javnim preduzećima u Srbiji su toliko velike, da bi njihovo ignorisanje moglo da ugrozi reformske procese i realizaciju strategije razvoja srpske privrede ili barem da rezultati ne budu na nivou očekivanih. Kvantifikovanje nasleđenih finansijskih rizika je najvećim delom predmet naše pažnje u ovom radu. U prvom i drugom delu rada akcenat je stavljen na specifičnosti javnih preduzeća i značaj koji ona imaju u pojedinim nacionalnim ekonomijama. U trećem delu rada bavimo se dimenzioniranjem poslovnih i finansijskih rizika, sa osnovnom namerom da skrenemo pažnju ne samo na veličinu problema u javnim preduzećima, već i na njihov negativni uticaj na poslovanje cele privrede. U četvrtom delu u središtu pažnje su problemi niskog kvaliteta korporativnog upravljanja, potreba korenitih promena u odnosu države prema javnim preduzećima i pravci unapređenja korporativnog upravljanja. Konačno, u poslednjem delu rada skrećemo pažnju na moguće manipulacije u finansijskim izveštajima, posledice koje iz toga mogu da proizađu i nedovoljnu brigu države za kvalitet finansijskog izveštavanja u celini.

Ključne reči: *javna preduzeća, korporativno upravljanje, performanse, poslovni rizici, finansijski rizici, likvidnost, solventnost, profitabilnost, skriveni gubici*

Introduction

Drawing clear demarcation lines between the public and private sector is quite complex. Criteria that can be used to distinguish them are manifold and have changed over time. As a result, boundaries between these sectors have also shifted. The private sector is primarily oriented toward commercial activities, while the state is mainly concerned with the establishment of legal system, production of certain goods and services of public interest, regulation of economic activities, securing funding for goods and services for the purpose of education, health care, national security, culture, social security, and so on. However, the state also takes part in certain commercial activities in a similar way as the private sector (electricity production, construction of transport infrastructure, provision of postal services, etc.). On the other hand, due to privatization process the private sector is becoming ever more involved in the areas that were traditionally associated with the public sector.

Public enterprises have often been equated with stated-owned enterprises (SOEs), which is not entirely true. In the past public enterprises were predominantly owned by the state. In many countries, the state still has

100% ownership interest in many enterprises. However, the fact is that many large enterprises have been partially or fully privatized and that ownership structure has changed significantly. Thus, for example, hundreds of large SOEs in China have differentiated ownership structure and now operate as publicly listed companies [12, pp. 3-5]. The reforms that were carried out in China in the period 1995-2000 reduced the size of the state sector. The state's share in total number of industrial enterprises decreased from 39.2% in 1998 to 4.5% in 2010, its share in total industrial assets dropped from 68.8% to 42.4%, while its share in employment shrank from 60.5% to 19.4%. In Russia, SOEs contribution to industrial production fell from 9.9% in 1994 to 6.7% in 2004, while the state has maintained ownership in strategically important sectors (machine building, natural resource exploration and extraction, broadcasting, etc.) [28, p. 5].

Public enterprise as a form of business entity can be established by the state, under the law or decision by the government (railways, trade of crude oil and natural gas, post offices and the like), following a decision by municipalities (public utilities), then by concluding concession contract that gives concessionaire the right to use and manage the goods granted by concession with the obligation to protect the public interest and pay agreed fee (road infrastructure, mining, etc.), by establishing mixed companies or the so-called "public-private partnerships", etc. [25, pp. 480-482]. Besides, competent authorities may also entrust the performance of the activities of public interest to other business entities and entrepreneurs. In some countries the most common form of public enterprise is joint stock company (e.g. Bulgaria, Chile, Peru, and Singapore), while in others public enterprises can take different legal forms [29, p. 7]. Sometimes public enterprises that are 100% owned by the state may be owners of other public enterprises which are organized as joint stock companies or limited liability companies.

Legal framework may vary depending on the government's goals, privatization process (model), the need to keep a particular level of control and the like. Namely, the state could remain the sole owner, maintain majority ownership or keep only minority ownership. The existence of various legal forms and possibilities of

different state’s ownership stakes in public enterprises may create the wrong impression of the size of these enterprises. However, a wide variety of legal forms provide the state with greater flexibility in conducting ownership policy of public enterprises, performing its control function as well as in finding the ways to raise their efficiency.

Bearing in mind the foregoing facts, it does not come as a surprise that the literature abounds with terms referring to companies of public interest: public enterprises, state-owned enterprises (along with the variations such as wholly or partially state-owned enterprises), statutory corporations, government limited companies, etc. In this paper, we opt for the term ‘public enterprises’.

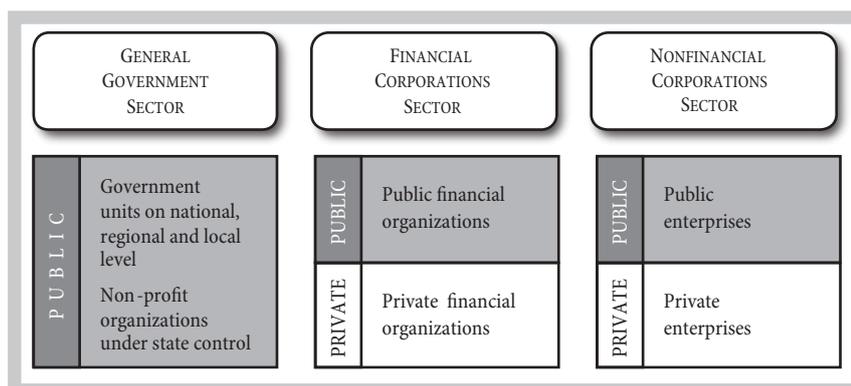
It is a well-known fact that public enterprises have considerable economic and political importance. The state is involved in potentially profitable infrastructure sectors that are of strategic importance for the development of a national economy. On the other hand, public enterprises are often unsuccessful, or rather, less successful than private ones. Their actual or prospective new losses are ultimately covered from the budget. Various subsidies do not provide a long-term solution to the problems faced by these enterprises, but they undoubtedly put a heavy burden on the budget. A particular problem is impact of public enterprises on the level of public debt (through activation of government guarantees for loans to public enterprises). The announced reform of public enterprises, among other things, should take account of the existing, inherited financial risks. Ignoring these risks may lead to a failure in this area or results falling below expectations. The primary focus of our paper is quantification of these risks.

Distinctive characteristics of public enterprises

Generally speaking, companies are business entities that are established for the purpose of producing particular goods and services with the aim of generating returns for their owners. Public enterprises that are involved in commercial activities could be defined in a similar manner. If public enterprises are organized as joint stock companies they must be accountable for their performance to shareholders, while enterprises that are wholly owned by the state must have responsibility to the public. According to *OECD Guidelines on Corporate Governance of State-Owned Enterprises*, the term SOE “refers to enterprises where the state has significant control, through full, majority, or significant minority ownership” [20, p. 11] or “any state-owned corporate entity recognised by national law as an enterprise should be considered as an SOE (this includes joint stock companies, limited liability companies and partnerships limited by shares)” [21, p. 11]. The Law on Public Enterprises defines it as “an enterprise that performs activities of general interest, established by the Republic of Serbia, autonomous province or local self-government unit” [30]. Public enterprises are an integral part of the public sector. The public sector comprises all activities and entities that are funded from public revenues as well as all other economic entities that are owned or controlled by the state. Bearing the above in mind, the structure of public sector and place of public enterprises within it could be presented as in Figure 1.

The general government sector is responsible for the judicial system, funds and directorates, maintenance of public order, national security, health care, social security,

Figure 1: Distinction between public and private sector



education, environmental protection, and the provision of other public services. This part of the public sector may as well include some non-market and non-profit organizations controlled by the government. The public sector also comprises public enterprises and institutions that may belong to financial (development banks, development funds, etc.) and nonfinancial sector (public enterprises under the authority of the state or provincial and local governments such as railways, national airlines, postal services, electric power transmission, gas transportation, utilities, etc.). Apparently, both public and private enterprises could operate within financial and nonfinancial sectors.

In order for an enterprise to be considered as public, the state does not need to be its exclusive owner. It is sufficient that it has controlling interest. In this regard, control is defined as the ability to influence general business policy of an enterprise or key financial and business policies related to its strategic objectives. The most significant factors in assessing the ability to control are as follows [22, pp. 8-10]: ownership of the majority package of voting rights (directly or indirectly through other public entities), control over the board of directors or other management bodies (based on the right to appoint or replace their members, whereby the mere existence of the veto power over the appointment can be viewed as a form of control), control over the appointment or removal of key executives (this could be decisive under the circumstances where the control over the board of directors is weak), control over key committees (if such committees have an important role in setting up the company's key business and financial policies), owning a golden share (this practice is especially found in privatized companies when the state decides to reserve certain rights with the aim of protecting the public interest, but so far it has remained an open question whether it exerts sufficient influence on the company's general business policy), the possibility of control by regulatory bodies (relevant only if control is strict enough to efficiently determine the direction of the company's business operations), control by a dominant customer (if company's total sales are directed toward one or a group of customers coming from the public sector), control imposed by the direct use of state funds or state guarantees (such a control is possible only if the state shows

readiness to enter into similar arrangements). Besides, control can be determined by only one influencing factor or by simultaneous effects of several factors. Therefore, sometimes it seems very easy to make a clear distinction, while in other situations that may be quite challenging and require a great deal of thought.

Public enterprises involved in commercial activities follow a very similar approach to business operations as private companies [15, pp. 135-136]. Still, despite similarities, public enterprises have a set of distinctive characteristics which distinguish them from private companies. For the sake of better understanding of the problems burdening the functioning of public enterprises, the key ones are listed below.

Firstly, public enterprises often have strategic importance for the development of a national economy. They usually operate in the so-called infrastructure sectors, such as energy sector (production and transmission of energy), transportation (road, rail, airport and waterway infrastructure), and telecommunications. Since these enterprises are big and financially strong they play a crucial role in improving performance of an economy as a whole and increasing GDP, but also in enhancing the quality of health care services, increasing energy efficiency, raising the efficiency of public administration, etc.

Secondly, public enterprises often require large investments. Examples thereof comprise investment in electricity production in the energy sector, investment in the development of broadband network in telecommunications, investment in road and rail infrastructure, investment in the production and transportation of gas and the like. This fact leads to very serious concerns regarding how to ensure their financing and sustainable growth.

Thirdly, it is not unusual for a public enterprise to have a monopoly position. But here we do not refer only to natural monopolies. Public utilities may also hold a monopoly position. The presence of monopoly power raises some very important questions about the efficiency of such enterprises, pricing policy with regard to utility services, quality of management, frequent reliance on subsidies, etc. It should not be forgotten that financially strong public enterprises could jeopardize competition in some market niches.

Fourthly, owing to the fact that public enterprises are controlled by ruling political structures, the management of these enterprises is likely to enjoy a pretty comfortable position in the absence of an adequate control. Although such enterprises are often inefficient, they are considered as “socially necessary”, which allows them to avoid bankruptcy even in the case of substantial losses and illiquidity since both the settlement of losses and their revitalization are financed from the budget.

Fifthly, a part of public enterprises falls under special regulatory regime. Specialized regulatory bodies are established particularly in sectors of telecommunications, energy, and air traffic. Among other things, their purpose is to ensure that enterprises under their authority operate in a socially responsible manner (in terms of service quality, price, efficiency, etc.). Accordingly, these regulators ought to protect customers against potential consequences of monopoly behavior but also to enable these enterprises to create reasonable profits, thus allowing them to remain attractive to investors and maintain sustainable growth.

Sixthly, by order of government public enterprises may be entitled to offer services at prices that are below market prices. A good example is the price of electricity. State financial institutions (development funds, state banks) could approve loans to enterprises at interest rates which are lower relative to the ones available in the market. Moreover, public enterprises are under pressure to make room for additional employment. All of the aforementioned adversely affects their performance.

Seventhly, public enterprises have been often criticized for the lack of transparency in their business operations. The transparency requirement entails a consistent way of financial reporting, focused not only on the performance of individual enterprises but also on the performance of the public sector as a whole, objective reporting on risks, reporting on transactions with related parties, public procurement, etc. Because of their importance, these enterprises are subject to double auditing: independent external audit in accordance with the Law on Auditing and, due to their public character, audit by the state auditor.

With a view of addressing the issue of inefficiency of public enterprises, but also seeking to maintain an adequate level of control, the state becomes a co-owner

through the process of privatization. This situation creates a need for the adoption of a new regime of corporate governance that implies the existence of an organized system of relationships among key stakeholders, greater competence and accountability of the management, hard budget constraints and adherence to financial discipline. Owing to public-private partnerships, ownership dispersion and transformation into joint stock companies, a number of formerly state-owned enterprises are now becoming important players in the capital markets around the world. Many companies from China, Russia, Brazil and India have become large investors in the international market.

Size and composition of public enterprises

Despite extensive privatization of public enterprises, it should be emphasized that they continue to play a significant role in national economies all over the world. Due to political and economic reasons the state remains if not an exclusive, then a key owner of numerous companies engaging in commercial activities. Typically, operations of such companies are always connected with a broader public interest or the production of goods and services of an appropriate quality at affordable prices. One of the reasons for their existence is solving the problem of natural monopolies. Examples thereof include the construction of water supply network, construction of railways, electric power transmission, natural gas transportation, etc. These kinds of operations require large initial investment, but in subsequent phases the costs are relatively small [24, pp. 193-200]. Also, the rationale for the presence of large public enterprises in the areas of infrastructure is their substantial contribution to the development of a national economy.

Political reasons for maintaining state ownership are also of paramount importance. They are characterized by different levels of legitimacy. If motives for maintaining state ownership in some enterprises arise from the need to preserve strategic national interests (e.g. to keep control over natural resources and companies of strategic importance for economic development, regional development, etc.), hence such efforts are understandable. But, if efforts toward maintaining ownership control over large material

resources serve only to safeguard the interests of ruling political parties, then the obstructions of the process of full or partial privatization of some public enterprises are unacceptable.

A certain number of large SOEs in developing countries now have the status of listed companies and are becoming major economic players in emerging markets (China, India, Russian Federation). Some countries are establishing new SOEs to develop strategic sectors and boost their competitiveness in the global arena. For instance, Russia has created state-owned holding companies and state corporations such as the United Shipbuilding Corporation and the Joint Stock United Aircraft Corporation [28, pp. 3-7]. Similar examples can also be found in other countries.

With the idea to provide a better understanding of the size and importance of SOEs in the world, we will present results of the research study undertaken within the OECD area [6, pp. 5-10]. The findings are based on questionnaire responses submitted by 27 OECD countries (Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Israel, Korea, Mexico, New Zealand, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom). In this regard, we should point

out that the analysis did not encompass all SOEs, but only those controlled by the government, namely the Ministry of Finance or the Ministry of Economy, including majority owned listed entities (MOLE), majority owned non-listed entities (MONL), and statutory corporations (SC).

The analysis has showed that in the reporting OECD countries 2,085 enterprises operate in SOE sector, employ more than 4.3 million people and have an estimated equity value of over USD 1.3 trillion. Since the analysis did not include the data from the USA, Japan and Turkey, it is estimated that, taking into account these countries, the total employment would exceed 6 million people while the value of the entire SOE sector would exceed USD 1.9 trillion. Figures 2, 3 and 4 show the number of SOEs, number of employees and value of equity for 12 out of 27 countries covered by the analysis.

Even though the quality of data is not at the highest level since all countries did not submit complete information, we can draw several conclusions from the results. *Firstly*, in spite of intense privatization of public enterprises, the state remains largely involved in commercial activities. *Secondly*, the state acts as a sole owner in a considerable number of enterprises. Also, it is interesting to note that in a relatively large number of enterprises the state holds

Fig. 2: Number of enterprises

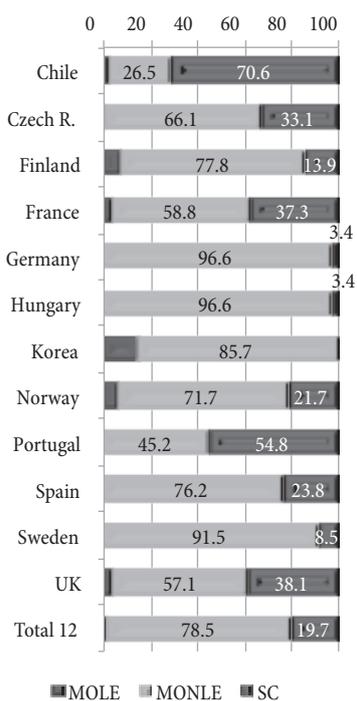


Fig. 3: Number of employees

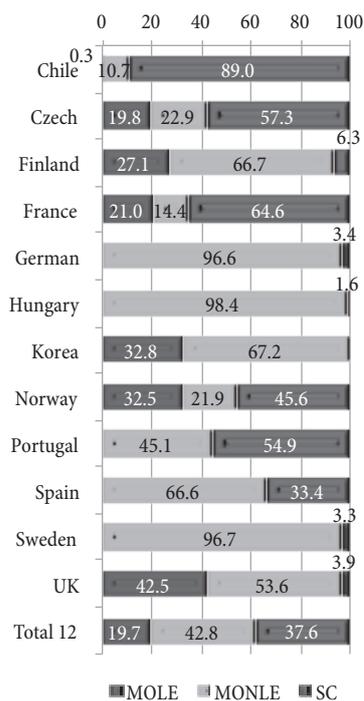
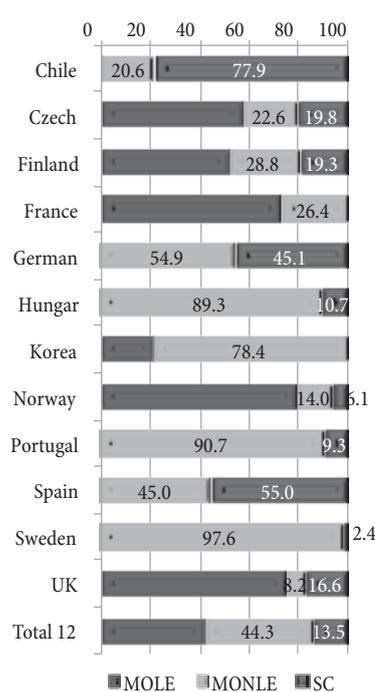


Fig. 4: Value of enterprises



Source: [6, pp. 7-8], author's own selection of countries and graph representation

significant (majority or significant minority) stakes in equity. In this regard, we can differentiate between publicly listed and unlisted companies. Despite the fact that the number of listed SOEs is smaller (about 2%) and that they have less employees relative to other SOEs (in 27 countries that were analyzed there are only 48 listed SOEs which account for about 20% of the total employment in SOE sector), their market value amounts to almost USD 520 billion, thus making up about 30% of the value of the entire SOE sector. *Thirdly*, in all analyzed countries the state holds 100% ownership in only 20% of enterprises, but the situation is markedly different between the countries. In Chile the state holds 100% ownership in 70.6% of SOEs, in Portugal 54.8%, UK 38.1%, France 37.3%, while in many countries this figure is less than 10% (Germany, Hungary, Sweden). For 7 out of 27 countries (26%) it was impossible to get data on the value of equity of wholly state-owned enterprises, which speaks volumes about the lack of transparency in business operations of these enterprises.

In addition to the listed companies in which the state has a majority stake, there are also the listed companies in which the state holds a minority stake. Thus, for example, in the aforementioned countries there are 54 enterprises in which the share of state ownership ranges between 10% and 50%. Partly state-owned companies (PSOEs) employ around 2.6 million of people and have market value of USD 767 billion. In France, for example, nine companies (including, among others, Air France KLM, EADS, France Telecom and Renault) employ around

925,000 people and have market capitalization of USD 244 billion. Three German PSOEs (Deutsche Telekom, Deutsche Post and Commerzbank) have around 757,000 employees and market capitalization of USD 77 billion, while Italian PSOE sector employs around 224,000 people and has market capitalization of just over USD 156 billion [6, pp. 9-13].

The reasons why the state opts for minority shareholdings may be different. The most commonly cited ones include unfinished privatization, avoidance of squeeze-outs (in most cases the threshold is 10%), prevention of hostile takeovers as well as the need to maintain a majority voting rights and dominant influence by entering into agreements with other shareholders [6, pp. 9-10].

It is evident that in almost all countries state-owned enterprises operate in the most important sectors: manufacturing, energy, natural resources, transportation, banking and other financial services (see Figure 5 and Figure 6). Accordingly, enterprises operating in infrastructure sectors (transportation, telecommunications, electricity and gas) have by far the largest value, accounting for around half of the total value of SOE sector. They employ about half of the total number of employees in SOE sector, notwithstanding the fact that they make up only about 25% of the total number of enterprises in SOE sector.

In order to provide a more complete picture of SOEs size, let us add a few more examples. In China, the central government controls 17,000 SOEs and over 150,000 SOEs are controlled by local governments. Moreover, 1,200 listed

Figure 5: Percentage of SOEs by sectors

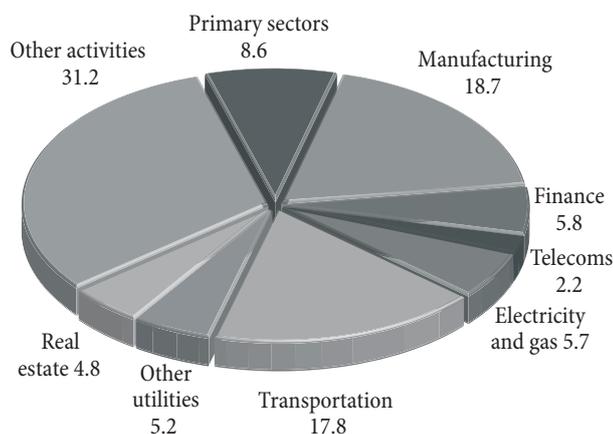
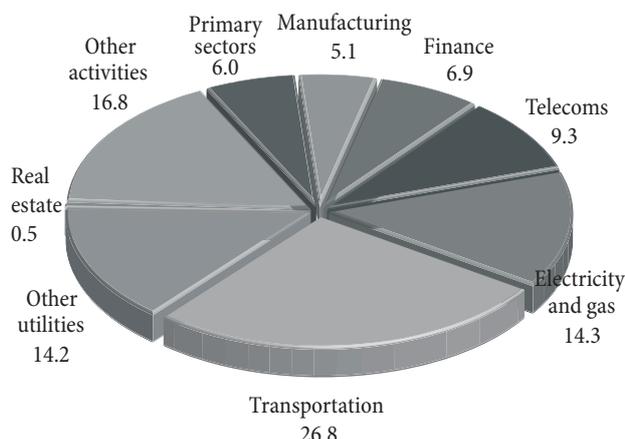


Figure 6: Employees of SOEs by sectors



Source: [6, pp. 7-8], author's own graph representation

Chinese SOEs generate about 18% of GDP, while their market capitalization accounts for about 40% of GDP. In India, there are around 240 SOEs which produce 95% of India’s coal, 66% of its refined oil, 83% of its natural gas, 32% of its finished steel, 35% of its aluminum, and 27% of its nitrogenous fertilizer. Indian Railways alone employs 1.6 million people. Financial sector SOEs account for 75% of India’s banking assets. In Russia, enterprises controlled by the federal government produce 20% of the total output of industrial sector, while the federal government controls over 20% of banking sector [29, p. 2].

Bearing all this in mind, the question arises as to what is the situation in public enterprises in Serbia. Our analysis encompasses all enterprises that are legally established as public enterprises and therefore are required to submit their financial statements to the Serbian Business Registers Agency. However, we have to underscore that this group does not include the enterprises which are wholly or partially owned by the state but have a different legal form. For this very reason, the companies such as Serbian Railways, Airport Nikola Tesla, Telekom Srbija, Corridors of Serbia, etc., have remained beyond the scope of the analysis.

To gain a better insight into the financial position of public enterprises and their importance in Serbian economy, first it is necessary to look into the share of public enterprises in the total number of companies as well as the share of their employees in the total employment in Serbia. The relative importance of these values will be assessed in relation to other legal forms. Apart from

public enterprises (PE), our analysis will also cover limited liability companies (LLC) and joint stock companies (JSC), while all other legal forms (general partnerships, limited partnerships, social enterprises, cooperatives, business associations, branches of foreign legal entities and other legal forms) will be grouped into a category hereinafter referred to as “Other legal forms” (OLF).

The structure of the economy in terms of the number of companies and the number of employees by individual legal forms in 2013 is displayed in Figure 7 and Figure 8. Please note that the groups relating to joint stock companies and limited liability companies also include some enterprises in which the state holds, directly or indirectly, whole or partial ownership.

In 2013 there were 510 state-owned enterprises in Serbia, which are required to prepare their financial statements in accordance with the Law on Accounting. From the perspective of the number of companies, limited liability companies have a dominant share, amounting to 93% of the total number of companies. However, the share of public enterprises is not significant and accounts for about 0.5% of a total of 94,362 companies doing business in Serbia. The fact that the share of public enterprises was stable throughout the entire analyzed period from 2007 to 2013 does not mean that their number has not changed. For instance, their number in 2013 (510) was by 13.3% larger relative to 2010 (450).

The number of employees in public enterprises (9.91% of the total number of 999,030 employees in all companies) is not in proportion to the number of public

Figure 7: Structure of the economy in terms of the number of companies

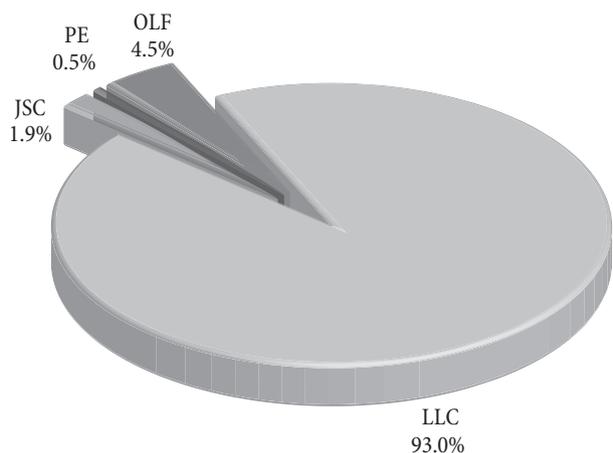
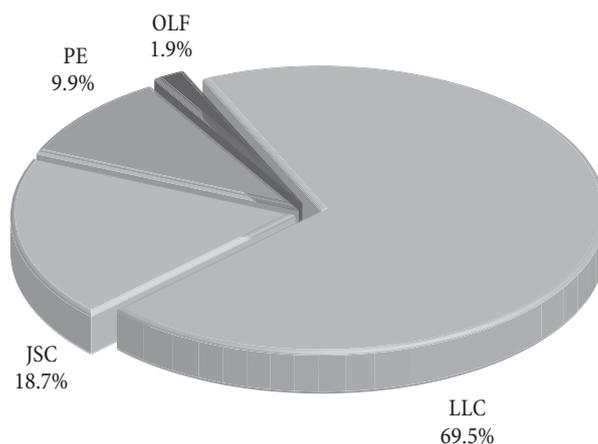


Figure 8: Structure of the economy in terms of the number of employees



enterprises. We can observe that in the seven-year period covered by the analysis the share of public enterprises in the total number of employees was over 19 times greater than their share in the total number of companies in the economy. The largest share in the employment structure in 2013 belongs to limited liability companies (60.5%) and joint stock companies (18.7%). The remaining 1.9% fall into the category of other legal forms.

In order to examine in more detail the financial position of public enterprises, we will analyze several important balance sheet items, such as: total assets, net owner's equity, accumulated losses, operating revenue, financial expenses, net income, and net losses. A share of individual legal forms in overall performance of the economy is shown in Table 1.

Table 1: Positioning of public enterprises

	2007	2008	2009	2010	2011	2012	2013	Average
1. Share of total assets								
LLC	51.92	55.96	58.75	59.50	61.69	63.06	63.78	57.50
JSC	25.77	23.93	22.25	22.30	21.78	20.68	19.97	23.15
PE	19.45	17.52	16.86	16.02	14.57	14.20	14.34	16.86
OLF	2.86	2.59	2.15	2.18	1.96	2.06	1.91	2.49
Economy	7,498.1	8,614.0	9,117.2	9,648.5	11,230.1	12,073.8	12,289.7	9,580.0
2. Share of net equity								
LLC	44.58	47.47	50.87	50.92	56.50	59.27	61.31	51.18
JSC	24.05	22.19	20.03	20.93	19.50	17.51	15.97	20.75
PE	30.52	30.09	29.26	28.07	24.31	23.52	23.00	27.81
OLF	0.85	0.26	-0.17	0.08	-0.31	-0.30	-0.28	0.26
Economy	3,531.0	3,562.9	3,501.9	3,385.6	4,452.4	4,486.1	4,485.0	3,801.6
3. Share of accumulated losses								
LLC	40.90	43.45	44.41	48.55	50.72	50.46	50.44	45.16
JSC	29.04	29.62	31.10	28.47	34.70	34.20	34.55	31.73
PE	20.12	18.08	17.45	16.57	8.57	9.71	10.41	15.51
OLF	9.94	8.85	7.04	6.40	6.01	5.63	4.60	7.60
Economy	1,100.9	1,374.3	1,649.9	1,947.9	2,233.1	2,507.1	2,856.7	1,823.2
4. Share of operating revenue								
LLC	66.75	69.82	72.12	72.39	73.70	75.60	76.77	71.28
JSC	24.61	22.08	19.34	19.05	18.15	16.82	15.30	20.22
PE	6.40	6.13	6.71	6.61	6.03	5.54	5.91	6.31
OLF	2.24	1.97	1.83	1.95	2.13	2.04	2.02	2.19
Economy	5,323.9	6,209.0	5,889.0	6,638.0	7,445.1	8,188.5	8,268.4	6,546.4
5. Share of financial expenses								
LLC	48.99	55.72	59.42	60.83	65.59	63.86	64.20	57.64
JSC	37.51	33.99	30.55	27.12	28.26	26.36	25.48	31.22
PE	8.86	7.68	7.41	9.77	4.47	7.29	8.74	7.93
OLF	4.63	2.61	2.62	2.28	1.68	2.49	1.58	3.21
Economy	201.9	476.8	419.2	525.0	420.2	561.4	333.3	389.4
6. Share of net income								
LLC	70.33	74.51	73.93	69.85	69.17	70.84	71.35	70.99
JSC	25.32	21.16	20.92	24.84	27.28	25.82	24.72	24.45
PE	2.96	2.79	4.09	3.51	1.99	1.63	1.99	2.87
OLF	1.39	1.54	1.06	1.80	1.55	1.71	1.94	1.69
Economy	328.9	300.0	282.9	316.5	458.6	433.2	446.0	356.6
7. Share of net losses								
LLC	64.37	51.45	52.76	64.94	61.54	56.45	53.19	55.74
JSC	21.03	30.05	37.22	23.39	30.90	28.14	32.40	29.95
PE	9.39	10.74	4.91	8.49	4.48	11.80	12.69	9.17
OLF	5.21	7.75	5.11	3.19	3.07	3.61	1.72	5.14
Economy	279.0	343.5	385.1	406.2	373.7	520.2	469.2	369.8

Note: All values are shown in billions of RSD

The data presented in Table 1 help deepen our understanding of the importance of public enterprises. Consequently, we can draw several important conclusions from the presented overview.

Firstly, financial indicators suggest that the dominant position belongs to the companies that have a legal form of limited liability companies. Their average share in total assets for the whole analyzed period was 57.5%, in net owner's equity 51.2%, in operating income 71.3%, and in net income 71%. However, one should not lose sight of the fact that these companies have the largest share in financial expenses (57.6%), as well as in accumulated losses (45.16%) and net losses (55.7%). Bearing in mind that these companies are dominant in terms of number compared to other legal forms (75,473 companies or slightly more than 86% in 2007, while in 2013 their number increased to as much as 87,760 enterprises or 93%), and that during the entire analyzed period they employed slightly more than 650,000 workers on average (more than 60% of total employment in the economy), it is realistic to expect their performance to be far better than it currently is. However, a more thorough analysis of this issue is beyond the scope of this paper.

Secondly, a similar trend is present in joint stock companies. Financial indicators show that they are somewhat between limited liability companies and public enterprises. Yet we should have in mind that in developed market economies joint stock companies, albeit their relatively small number, generally have the best performance, generate the greatest revenues, deploy the largest amounts of capital, and create a substantial shareholder value. As far as Serbian economy is concerned, they make losses (almost a third of total accumulated losses are attributed to them), account for about 20% of total assets and only about 16% of net equity.

Thirdly, a cursory glance at all parameters analyzed herein gives an impression that public enterprises lag behind limited liability companies and joint stock companies. On average, 16.9% of total assets, 27.8% of net equity, and 2.9% of net income belong to public enterprises. But if we remember that there are only about 500 public enterprises (0.5% of a total number), we can conclude that public enterprises are far more important than we might think

based only on the data on their number. Regardless of such financial strength, public enterprises generate modest revenues, with an average share of 6.3% in total operating revenue, and even more modest net income amounting to 2.9% of total net income. The situation has turned out to be much worse given that such a small number of public enterprises account for, on average, 15% of total accumulated losses and 9.2% of net losses.

Fourthly, if we observe changes in the structure of financial performance in 2013 compared to 2007 (when financial statements were not burdened by the effects of economic crisis), we can get more insights about the extent of their recovery from the consequences of the crisis. Unfortunately, we can see that the share of public enterprises in total assets, net equity, operating revenue and net income declined, while they increased their share in net losses.

In order to grasp the gravity of the problems faced by public enterprises, it is necessary to quantify the degree of their exposure to particular types of risk. Further analysis of public enterprises will be based on official abridged financial statements for the period 2007-2013. Once again, we have to underline that the analysis encompasses all entities which submitted their financial statements to the Business Registers Agency as public enterprises, whereas the enterprises that are wholly or partly owned by the state were not covered by this analysis. Abridged financial statements, i.e. balance sheet and income statement, can be found on the author's webpage.¹

Dimensions of operational and financial risks

Analysis of the performance of a company or a group of companies and associated risks is important for at least two reasons. First, insight into performance allows us to assess the company's ability to create value for shareholders and other stakeholders, potential threats to its continuity as well as the quality of asset management. Second, evaluation of existing risks is even more critical considering the fact that already present, inherited risks place a huge burden on the future performance and growth not only of individual companies, but also of the overall

¹ See: http://w3.ekof.bg.ac.rs/dejan_malinic

economy. Ignorance of inherited risks is often seen as one of the main reasons why the implementation of adopted strategies fails.

Financial statements serve as a valuable source of information for the research on liquidity risk, solvency risk, profitability risk, credit risk, bankruptcy risk, financial reporting manipulation risk, etc. The results of the analysis of financial statements of public enterprises which may be used for the evaluation of these risks are summarized in Table 2.

Analysis of liquidity risk. Lack of liquidity is often proclaimed the greatest and most urgent problem of Serbian economy. This view partly stems from the misunderstanding

of the fact that illiquidity is actually a consequence of other serious financial and structural disorders [14, pp. 41-62]. As regards its causes, public enterprises are perceived as one of the key generators of illiquidity mainly due to the inability to meet their maturing obligations. The question is whether there are reasonable grounds for similar views. In this section, we will try to quantify existing risks arising as a result of illiquidity.

Traditional indicators of liquidity (i.e. current ratio and quick ratio), which are most frequently used in Serbia, have values that are far below standard ones (2 for current ratio and 1 for quick ratio). In the last year of analyzed period the value of current ratio is by 72%

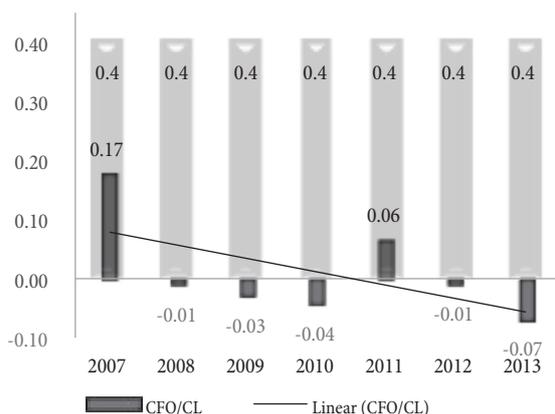
Table 2: Indicators of liquidity, solvency and profitability of public enterprises

Indicators	Public enterprises							PE Average	Economy Average
	2007	2008	2009	2010	2011	2012	2013		
LIQUIDITY									
1. Current Ratio	0.63	0.63	0.65	0.65	0.66	0.60	0.56	0.62	0.97
2. Quick ratio	0.49	0.51	0.53	0.52	0.55	0.49	0.45	0.51	0.60
3. Cash ratio	0.19	0.19	0.20	0.19	0.20	0.15	0.14	0.18	0.18
4. Defensive Interval	42.49	46.92	55.80	57.11	60.60	57.40	53.53	53.41	37.97
5. Cash Flow from Operations Ratio	0.17	(0.01)	(0.03)	(0.04)	0.06	(0.01)	(0.07)	0.01	0.00
6. Average No. Days Inventory in Stock	30.8	28.4	29.6	33.8	35.6	34.2	35.3	32.5	76.9
7. Average No. Days Receivables Outstanding	70.4	72.3	85.8	87.3	93.7	106.1	108.2	89.1	89.9
8. Average No. Days Payables Outstanding	197.3	186.4	192.7	158.9	165.1	197.9	219.4	188.2	148.4
9. Cash Cycles	(96.0)	(85.6)	(77.2)	(37.8)	(35.9)	(57.7)	(75.9)	(66.6)	18.4
SOLVENCY									
1. Fixed Assets Coverage Ratio	0.82	0.80	0.76	0.72	0.77	0.72	0.69	0.75	0.66
2. Fixed Assets and Inventories Coverage Ratio	0.91	0.90	0.89	0.87	0.89	0.85	0.83	0.88	0.77
3. Debt to Equity	0.35	0.41	0.50	0.63	0.51	0.62	0.71	0.53	1.55
4. Deficiency NWC/Total asset	7.59	8.54	9.08	10.66	9.67	12.32	14.41	10.33	16.29
5. Interest Coverage Ratio	0.05	0.14	0.69	0.47	0.53	(0.41)	(0.81)	0.09	0.92
6. Cash Flow from Operations/Interest Expenses	1.98	(0.07)	(0.26)	(0.27)	1.17	(0.08)	(1.03)	0.21	0.11
7. Cash Flow from Operating to Debt	0.10	(0.01)	(0.02)	(0.02)	0.04	(0.01)	(0.04)	0.01	0.00
8. CAPEX ratio	28.17	(4.41)	(16.06)	(25.70)	21.72	(3.63)	(30.83)	(4.39)	(0.55)
PROFITABILITY									
1. Fixed assets turnover	0.27	0.29	0.29	0.33	0.33	0.32	0.33	0.31	1.19
2. Current assets turnover	2.60	2.52	2.21	2.11	1.98	1.89	1.92	2.18	1.81
3. Total Assets Turnover	0.24	0.26	0.26	0.28	0.28	0.27	0.28	0.27	0.72
4. EBIT Margin	0.24	1.31	5.45	5.46	2.20	(3.74)	(4.85)	0.87	5.48
5. Return on asset -ROA (3 x 4)	0.06	0.34	1.41	1.56	0.62	(1.01)	(1.36)	0.23	3.92
1. Operating revenues	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2. Operating expenses ratio	102.56	102.77	97.71	97.63	100.51	100.52	95.97	99.67	96.22
3. Operating income margin	(2.56)	(2.77)	2.29	2.37	(0.51)	(0.52)	4.03	0.33	3.78
4. Operating assets turnover	0.35	0.36	0.36	0.39	0.38	0.36	0.36	0.36	0.85
5. Return on operating asset -ROOA (3x 4)	(0.88)	(1.00)	0.82	0.92	(0.19)	(0.19)	1.46	0.12	3.21
1. Leverage	1.34	1.38	1.45	1.56	1.56	1.57	1.67	1.50	2.50
2. Total assets turnover	0.24	0.26	0.26	0.28	0.28	0.27	0.28	0.27	0.72
3. EBIT Margin	0.24	1.31	5.45	5.46	2.20	(3.74)	(4.85)	0.87	5.48
4. Interest burden	(19.89)	(5.73)	(0.34)	(0.98)	(0.77)	3.20	2.14	(3.20)	(0.08)
5. Return on equity - ROE (1x2x3x4)	(1.57)	(2.65)	(0.70)	(2.37)	(0.75)	(5.08)	(4.86)	(1.12)	(0.80)

lower than desirable value, while the value of quick ratio is by 55% lower than desirable value. Cash ratio indicates that only 14% of current liabilities in 2013 were covered by cash and cash equivalents. Finally, defensive interval reveals that operating expenses could be financed from current assets only about 53 days on average for the entire analyzed period. Such a discrepancy between current assets and current liabilities suggests why these companies tend to encounter problems with the settlement of their maturing liabilities.

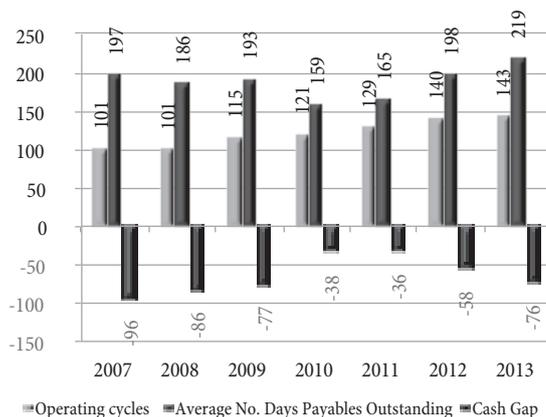
The ratio of cash flow from operations to average current liabilities represents a much more reliable measure of liquidity. It refers to the company's ability to cover maturing current liabilities from internally generated cash flow. The movements of this indicator are displayed in Figure 9. Wide lighter bars indicate liquidity threshold, while narrower darker bars inside them show the values achieved by public enterprises. Public enterprises were far from passing this important liquidity test since they reported negative cash flow from operations in five out of seven analyzed years, which in the case of private companies would mean being on the sure path to bankruptcy. The average value of this indicator for the entire analyzed period is 0.01, which is 40 times lower than its standard value of 0.4. Moreover, the fact that this indicator shows a downward trend is another serious cause for concern. Empirical research studies that explored the interdependence between movements in this indicator and bankruptcy of companies have found that as much as 90% of companies which for several years in a row had the values of this ratio below 0.4 faced bankruptcy [4, pp. 61-66].

Figure 9: CFO/CL



All things considered, a logical question arises as to how these companies are able to operate at all. The analysis of cash cycles presented in Figure 10 gives a clear answer to this question. It is well known that in order to ensure normal functioning companies must provide financing of their operating cycle, encompassing the period from the procurement of raw materials, through production and sales of their products, to the collection of receivables. In part, financing is secured from the so-called spontaneous sources of financing (where suppliers have a key role). Difference between operating cycle and spontaneous sources of financing represents the so-called cash gap that is closed by having recourse to additional sources, which is usually done by means of short-term credit sources [3, pp. 27-32]. In normal functioning economies where financial discipline is not called into question, reduction in cash gap is most often a consequence of increased efficiency across the operating cycle (i.e. reduced number of days inventory held and accelerated collection of receivables). However, cash gap does not exist in public enterprises. The average length of operating cycle, including days inventory held and days accounts receivable outstanding, is 122 days, which is by 67 days shorter period than days accounts payables outstanding. Besides, the trends are unfavorable. The length of operating cycle constantly extends, which is an obvious sign of inefficient asset management in public enterprises, while at the same time the average number of days payables outstanding increases, which points to unfair treatment of suppliers in the process of financing the activities of public enterprises.

Figure 10: Analysis of cash cycles



If we compare the movements of previous indicators with the average values for the economy as a whole, we can see that no matter how the performances at the economy level look bad, they nonetheless have proven to be better relative to comparable performances of public enterprises. This fact allows us to conclude that the liquidity problem is deeply embedded in public enterprises and that they actually are one of the greatest generators of illiquidity in the whole economy. In this regard, a huge burden of the financing of operating cycle is passed on suppliers. The liquidity problem is further exacerbated by the fact that suppliers are unable to meet the obligations toward their own suppliers, thus taking the form of liquidity spiral. As a result, even the healthy parts of the economy become affected by liquidity risk [16, pp. 105-106]. Since a delay in fulfilling obligations toward suppliers does not provide for long-term sustainable cash flow [27, pp. 386-387], the liquidity problem is only postponed, becoming even more complex to deal with.

Analysis of solvency risk. Solvency risks are related to the inability to pay interest and debts as they fall due. The crisis of insolvency may arise as a consequence of inadequate financial structure, decline in profitability, inability to generate a sufficient amount of positive cash flow from operations, and high cost of capital. The indicators of solvency and profitability, systematized in Table 2, seem informative enough to provide a detail insight into long-term solvency risks faced by public enterprises.

Specific financial structure of public enterprises may lead us to draw erroneous conclusions on their long-term financial stability. Therefore, we must bear in mind that public enterprises are capital-intensive, which means that they dispose of large amount of fixed assets. Over the entire analyzed period the share of fixed assets in total assets of public enterprises accounted for 87.1% on average, while at the economy level this share was considerably lower, amounting to 60.2%. Since fixed assets are considered the most risky part of assets, it would be reasonable to expect them to be financed from own equity as high-quality source of funding. A potential decision to rely on short-term sources in the financing of fixed assets bears a high degree of risk.

Different structure of assets calls for a cautious approach when comparing the indicators of public enterprises with the indicators for the overall economy whose calculation is based only on the balance sheet [11, p. 68]. At first glance, the analysis leads us to conclude that, in terms of solvency, public enterprises are in a far better position compared to the average values for the economy as a whole. The changes in values of fixed assets coverage ratio, fixed assets and inventories coverage ratio, debt to equity ratio, and deficiency net working capital (NWC)/total assets ratio support this conclusion. However, a more thorough analysis reveals a few important things. *First*, the values of fixed assets coverage ratio and fixed assets and inventories coverage ratio (although higher than the average for the economy) fall below values that would reflect financial stability of a company (below 1). *Second*, over the entire analyzed period the value of long-term equity was less than the value of fixed assets, which suggests that fixed assets are partly financed from short-term sources. This situation increases the exposure of public enterprises to financial risks. *Third*, negative net working capital continuously increases (see Figure 11), which jeopardizes not only a company's growth but also its very survival. For example, NWC deficiency exceeds EUR 2 billion in 2013. In the same year the share of NWC deficiency in total assets is 14.4% (see Figure 12), which points to the mismatch between the maturity structure of assets and the maturity structure of sources of financing. *Fourth*, the value of public enterprises capital is substantial due to a high share of fixed assets in total assets, but not sufficient. Its share in total net equity and liabilities is about 65.6% on average, which is not enough given the fact that an average share of fixed assets in total assets stands at already mentioned 87.1%. Anyway, a specific structure of assets and sources of financing in public enterprises is the reason for a much more favorable value of debt to equity ratio in comparison to the average value of this ratio for the economy. This is certainly a good sign, but it does not provide enough evidence in favor of the conclusion that the financial position of public enterprises is better from the rest of the economy. Furthermore, we have to take into account that the equity structure of public enterprises is somewhat questionable, given a relatively high share of

revaluation reserves in equity. *Fifth*, an issue of particular concern is the fact that all of the above-mentioned indicators show a significant negative trend, including debt to equity ratio whose value of 0.71 in 2013 is twice as high as in 2007 when it stood at 0.35.

The previous indications of public enterprises serious exposure to solvency risks were fully confirmed as soon as the indicators that take into account profitability and cash flow were introduced into analysis. Let us briefly enumerate the key results. A ratio of earnings before interest and taxes (EBIT) to financial expenses is a widely used to measure the solvency risk. An average value of this indicator for public enterprises is 0.09, which is 10.2 times lower than the average value for the economy. Besides, in 2012 and 2013 its values are negative amounting to -0.41 and -0.81, respectively. To illustrate the gravity of the situation, let us note that some authors stress that the values in the range 5 to 7 point to good performance [18, pp. 70-77], while the values below 2 indicate an extremely risky situation [23, pp. 298-299]. Similar conclusions can be made based on the values of the ratio of cash flow from operations to interest expenses, which are negative in five of seven years covered by the analysis (desirable value should be greater than 0.2). At the first glance, its positive value in 2011 seemed encouraging but more detailed analysis of the origins of this positive cash flow reveals that it is a consequence of unpaid accounts payables (they increased by RSD 16.1 billion year-on-year) and increase in liabilities in the form of VAT and accruals (about RSD 7 billion). At the same year, financial expenses are the lowest in the observed period from 2008 to 2013.

The presence of serious risks related to solvency is confirmed by the values of CFO to debt ratio that indicates the company's ability to cover total debt with its internally generated cash flow. The above-mentioned empirical studies have shown that most of the companies having the value of this ratio less than 0.2 over a period of five years go bankrupt [4, pp. 61-66]. In public enterprises in five out of seven analyzed years these values were negative and far away from the reference value of 0.2. In general, we can conclude that public enterprises experience huge difficulties in paying off their debts. This means two things. First, activated guarantees that were granted by the government for individual loans directly affect public debt and budget and, second, public enterprises must continue to borrow. Anyway, debts are not the only problem. Another one is how to finance new capital investments that are necessary for maintaining or extending the existing capacities. The analysis of CAPEX ratio shows that investments cannot be financed from internally generated sources since the cash flow from operations is negative (as we have already seen, even the positive one from 2011 is not sustainable in the long run). Such a situation again creates the need for additional borrowing. The problem is that the financing of growth exclusively by debt is not sustainable in the long term. Consequently, the problem of profitability in public enterprises comes to the fore.

Profitability of public enterprises. Profitability is a prerequisite for the survival and sustainable growth of companies. Only profitable companies are able to provide more wealth for their owners and a national economy, stable growth rates, higher employment, greater certainty

Figure 11: Analysis of net working capital

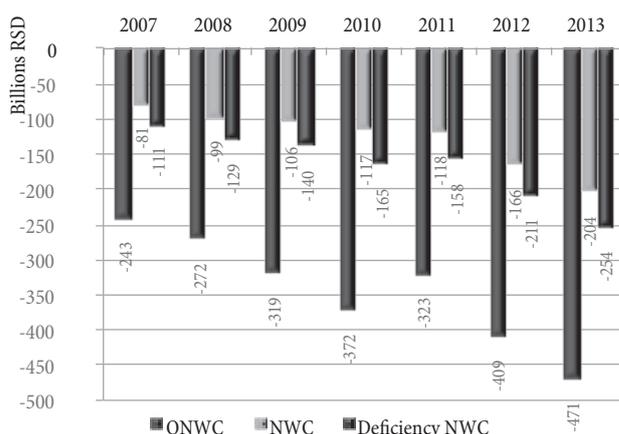
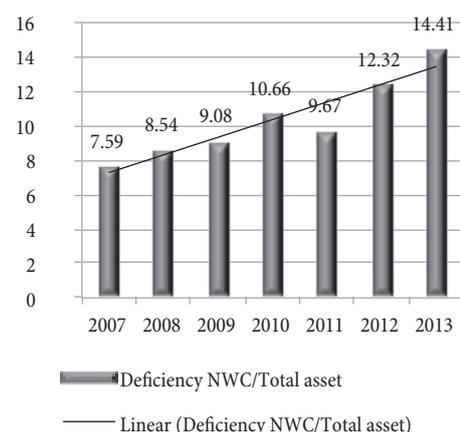


Figure 12: Deficiency NWC/Total asset



for investors, more favorable borrowing terms, and lower cost of capital. On the other hand, the lack of profitability is associated with the problems such as illiquidity, insolvency, increased risk of bankruptcy, fall in employment, and the like. Having all this in mind, profitability makes a suitable measure of the quality of management.

Numerous empirical studies have proved that the state is not a good owner. Therefore, the problem of profitability of public enterprises is a highly sensitive issue for their managers, but also a very interesting field of research for financial analysts. Analyses of the amount and structure of net income and loss and changes in corresponding rates of return (see Figures 13, 14, 15 and 16) are the most common instruments for evaluating the profitability of public enterprises.

The fact is that public enterprises report net losses over the entire analyzed period. In order to detect the causes of their losses let us look at Figure 13 which presents income and loss figures for different areas of business. A matter

of special concern is the fact that they reported losses in the sphere of operating activities that includes results of core business activities. In four of the seven years covered by the analysis, public enterprises reported net operating losses (i.e. the sum of net operating losses is greater than the sum of net operating incomes). Moreover, even in the years when net operating income is recorded, operating income margin is quite modest (see Table 2) in the sense that the average operating income margin for the whole analyzed period amounts to only 0.33%. In comparison to very low average operating income margin at the level of the economy of 3.78%, this margin is 11.5 times lower. The fact that in three fiscal years (2007, 2009, and 2011) the growth of operating income significantly lags behind the growth of operating revenues is especially worrisome and clearly illustrates the inefficiency of public enterprises. A general pattern of behavior of fixed costs implies that the growth of revenues is followed by a faster growth of operating income.

Figure 13: Analysis of structure income/loss

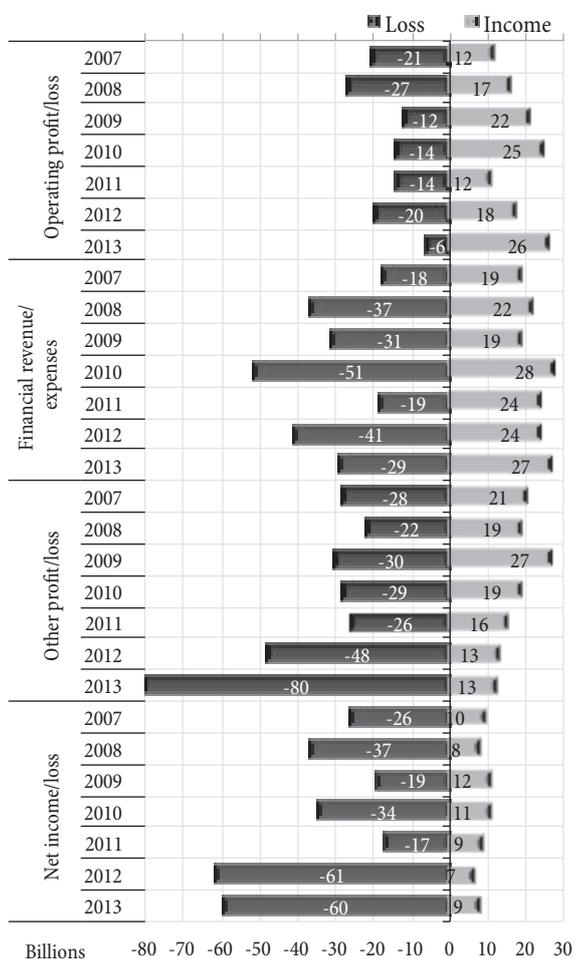


Figure 14: ROA

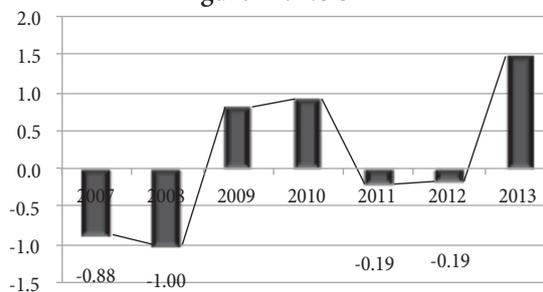


Figure 15: ROA

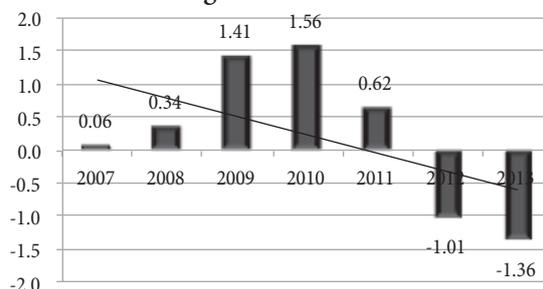
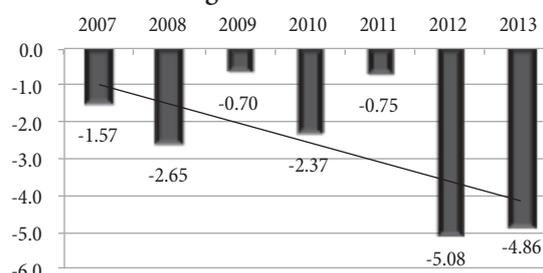


Figure 16: ROE



There are also obvious problems in the area related to the use of external credit sources of financing and allocations of internal sources. Financial revenues are lower than financial expenses in all years, except in 2007 and 2011. We could say that the situation in 2013 is not particularly unfavorable compared to other years, given that public enterprises reported financial revenues that are by about RSD 2.2 billion lower than financial expenses. Such a conclusion stems from the fact that this year was marked by an increase in long-term and short-term loans of RSD 46.1 billion, but nevertheless financial expenses were reduced relative to 2012 by RSD 11.8 billion. In all other years (2008, 2009, 2010, and 2012) public enterprises reported serious losses in this section of income statement. The explanations for this trend should be sought in increasing borrowing, but especially in changes in foreign exchange rate. Namely, it is precisely in 2007, 2011 and 2013 that the dinar exchange rate was stable and only in those years financial expenses margin was below 10% (9.91%, 6.29%, and 8.93%, respectively). It is apparent that occasional reduction in financial expenses of public enterprises is not a consequence of debt repayment. The most substantial losses in this section of income statement are reported in the years when there was a significant drop in the value of the dinar [17, pp. 7-42].

Moreover, it would be also interesting to observe changes in net other gains (expenses) which were negative in all analyzed years. In this section of income statement for 2013 public enterprises reported income of RSD 12.8 billion, while the losses amounted to as much as RSD 80.2 billion. What concerns us is the fact that this section includes expenses incurred as a result of depreciation of property, plant and equipment, revalorization of assets, and direct write-offs of receivables and similar items. All this shows a significant impact of accounting policies on the companies' performance. In spite of their transitory nature, these expenses are recurring year after year and are constantly growing. In 2012 they were by 86% higher relative to 2011, while in 2013 they were by 66% higher than in 2012.

Trends in the values of ROA, ROOA and ROE as well as their components (see Figures 14, 15, and 16, and Table 2) make more visible the consequences, but also the causes, of

unenviable position of public enterprises. The mentioned rates of return are burdened by low assets turnover, whose values are affected by high capital intensity and inefficient asset management. In this regard, the average total assets turnover in public enterprises is 2.7 times lower than the average for the economy, while operating assets turnover is 2.4 times lower than its equivalent. Low level of turnover in combination with very low income margins (often negatives) which, in addition, show a downward trend, leads to unacceptably low rates of return (often negative) that lag far behind comparable rates of return (also very low) for the economy as a whole.

All things considered, what are the consequences for the state as an owner? The answer is easy to find if we look at ROE, which measures the profitability of owner's equity (in this case – the state's equity). From Table 2 we can see that the values of ROE were less than zero in all years. That means that the return achieved on borrowed capital is not sufficient to cover the costs of the same capital. The negative difference has spillover effect on ROE which then becomes lower than ROA. The effect of financial leverage, as a measure of financial risk, is therefore negative in all analyzed years. Public enterprises have left the state only with losses and debts. Let us recall that in private companies owners bear the greatest risk and, consequently, expect the highest returns.

When it comes to profitability, a general conclusion is that public enterprises are unprofitable due to inefficient asset management (low values of turnover ratios), low level of the profitability of revenues (low income margins), growing indebtedness, and a huge burden of financial expenses. There a number of reasons for this state of affairs. *Firstly*, revenues of public enterprises are not sufficient to allow them to be profitable. The previous may be a consequence of technical and technological obsolescence of assets that cannot generate higher revenues, insufficient volume of activities, and inadequate pricing policy conceived with the aim of ensuring a social peace. *Secondly*, when there are shortages on the revenue side, as is often the case in public enterprises, the management than turns to costs, thereby attempting to achieve better performance by means of more efficient cost management. Unfortunately, modern management techniques that can lead to improved

performance are almost non-existent in public enterprises primarily due to the lack of effective management and adequate control. *Thirdly*, collection of otherwise insufficient revenues is seen as particularly problematic. Unsatisfactory collection of receivables endangers cash flows, which could result in a smaller or greater degree of discrepancy between operating income and cash flow from operations. Write-off of uncollectible receivables is actually recognition of losses, whereas keeping them in financial statements implies the existence of hidden losses. *Fourthly*, poor quality of corporate governance and operational management is one of the key reasons for disappointing performance of public enterprises.

The quality of corporate governance

The financial risks that have so far been identified are very worrying. Remedies such as granting subsidies to public enterprises to ensure their survival or transferring their obligations to the state with the view of enabling them for a fresh start do not provide a long-term solution to these risks. We could say that the long-standing, intolerably high risks arising from underperforming management have brought public enterprises into serious financial troubles. The attitude of the state toward public enterprises must be radically changed. The first step in the right direction would be to create conditions for raising the quality of corporate governance in public enterprises.

Ongoing trends in the field of corporate governance may reduce or increase the existing risks. Numerous studies have shown that in many countries (China, India, Malaysia, etc.) the level of financial performance of public enterprises has been significantly improved during the last decade, mainly thanks to various measures of operational and financial restructuring, ownership dispersion, access to capital markets, and creation of level playing field for all businesses. Hence the increased contribution of these enterprises to the state budget [28, p. 9].

Corporate governance involves a set of relationships between management, shareholders, and other stakeholders affecting the operations of companies, their approach to goal setting, and the means of attaining these goals. Corporate governance defines expected behavior of management

with respect to financial performance, efficiency, growth, financial structure, employment, attitude toward investors, etc., and therefore represents a major determinant of a company's value. From the perspective of normative framework, corporate governance implies that companies should behave in accordance with the rules established by the current legal system, judiciary system, and regulations governing the functioning of financial and labor markets [7, p. 2]. Consequently, the establishment of a robust regulatory framework and strengthening of internal and external control mechanisms are key prerequisites for enhancing the quality of corporate governance.

Regardless of the fact that a number of company generally deal with similar problems of corporate governance, we have to bear in mind that there are differences depending on whether companies are under state or private ownership. Also, the situation could be somewhat different depending on whether the state is in the position of sole, majority or minority owner. A special character of public enterprises calls for a specific approach to the area of corporate governance. In that regard, we can identify several important issues.

- Presence of information asymmetries. More precisely, information asymmetries in public enterprises exist between the board of directors and government institutions that control it, executives and the board of directors, as well as between internal and external members of the board, but one should have in mind that the former are always in a superior position in terms of access to information compared to the latter.
- Composition of the board of directors. The fact is that the board's agenda and decisions could be directly influenced through the agency of their members. Since the composition of the board is often under the influence of political authorities, we can easily imagine that it is rather tailored to follow instructions and do what should be done, which is not always in accordance with the general interest [1, pp. 96-97].
- Incompetence of members of the board of directors. Competence is often overshadowed by a member's political partisanship, which is in stark contrast to the *OECD Guidelines on Corporate Governance of State-Owned Enterprises* that state the following

[20, p 17]: “The boards of state-owned enterprises should have the necessary authority, competencies and objectivity to carry out their function of strategic guidance and monitoring of management. They should act with integrity and be held accountable for their actions.”

- Conflicting goals. Dominance of political over economic goals leads to conflicts in priority setting. In this regard, underestimation of the importance of the objective of achieving a reasonable return on equity and prioritization of political goals instead increase agency costs, destroy the company’s value, and erode its competitiveness in the market economy.

Numerous empirical studies have confirmed the link between political affiliation of the board’s members and performance of public enterprises. *Agrawal* and *Knoeber* found a negative correlation between the presence of external members on the board of directors and the enterprise’s value [2]. *Menozzi*, *Gutiérrez Urtiaga* and *Vannoni* showed that politicians dominate the boards of directors in Italian SOEs, that the presence of these directors triggers an increase in employment (increase in the number of employees is more pronounced if the boards of directors are greater in size or mostly composed of politicians), as well as that there is significant negative correlation between composition of the board of directors (percentage share of politicians on the board) and performance of Italian SOEs [19, pp. 694-696]. It would be interesting to mention the study of *Faccio* (on a sample of about 20,202 enterprises from 47 countries) who concluded that the enterprise value increases after one of the top officers enters politics (CEO, director, large shareholder) [9, pp. 384-385]. Comparing enterprises with political connections (enterprises where large shareholder holds at least 10% of voting rights or a top officer, such as CEO, vice-president, chairman, or secretary, is a member of parliament, a minister, or is closely related to a top politician or party) with enterprises that are not associated with politicians. The same author concludes that enterprises with political connections exercise greater market power, pay less tax, report lower value of ROA and lower market value. The differences between these groups of enterprises become even more marked when connection is established through a minister

rather than through a member of parliament, as well as when enterprises operate in the countries with higher level of corruption [8, pp. 924-925].

It is more than obvious that the management of public enterprises is in much more favorable position in relation to the management of private companies. Such a position is a consequence of their connection with political authorities that appoint them, inadequate control, and lack of competition. Besides, we should not forget that public enterprises are less likely to be subject to external control mechanisms than private ones. Unlike private companies, these enterprises are not exposed to the risk of a hostile takeover which, among other things, results in the change of management team. This situation directly reflects in the lack of initiative of top managers to maximize the value of company. Furthermore, the fact that most of public enterprises do not have the option of filing for bankruptcy and that their losses are covered by the state implies the need for soft budget constraint, which additionally diminishes the efforts aimed at increasing revenues and reducing costs. In the absence of important external control mechanisms, there is a dominant use of rather ineffective internal control mechanisms by various political authorities that are far from being immune to the practice of taking advantage of public enterprises to attain political goals.

There is no doubt that we have to take decisive steps to improve the corporate governance of public enterprises in Serbia. The state should first learn from its own mistakes and solutions that have turned out to be unsustainable in the past as well as from positive experience of other countries that have reformed public enterprises, and then to create a framework that would allow ownership rights to serve as a basis for deriving benefits which would be of general, rather than of particular interest. The key elements of the reform of corporate governance could be as follows [28, p. 18]:

- Establishing a sound legal and regulatory framework for corporate governance in public enterprises (enacting high-quality, consistent and harmonized legislation, formulating and adopting a code of ethics that would provide guidelines on best practice in public enterprises);

- Enhancing the state's ownership role (increasing accountability, separating the state's ownership function from its regulatory function, limiting state intervention, etc.);
- Developing an accountability system based on monitoring of the performance of public enterprises (setting mandates, objectives and strategies, selecting key financial and non-financial performance indicators, measuring and comparing performance with targeted values, etc.);
- Strengthening financial and fiscal discipline of public enterprises (reducing public enterprises' preferential access to public finance, managing the fiscal risk, etc.);
- Professionalizing boards of directors of public enterprises (transparent nomination of directors, increasing responsibility for the implementation of objectives, putting in place evaluation and remuneration procedures, providing training to directors, etc.);
- Enhancing transparency and disclosure (applying the private sector's reporting standards, strengthening control mechanisms, carrying out independent external audits, etc.);
- Ensuring investors protection in mixed-ownership companies (providing for equitable treatment of all shareholders, ensuring participation of minority shareholders in shareholders' meetings, protecting against the abuse of related-party transactions);
- Building support and capacity for implementation (sincere commitment to reform, building institutional capacity to manage processes, disclosing information on the enterprises' true performance, imposing discipline on public enterprises by listing them on capital markets, publishing results of reform processes, gaining public support, etc.).

Of course, the reform of public enterprises requires the implementation of a wide range of measures that go beyond the improvement in corporate governance. Apart from enhancing corporate governance, it is also necessary to simultaneously undertake the processes of restructuring, privatization, establishment of public-private partnerships, to lift barriers to public enterprises

access to capital markets and so on. Addressing major challenges in the functioning of public enterprises could bring considerable benefits for both enterprises and their employees and the state and wider community.

Improvement of operational performance of public enterprises is closely associated with raising the quality of corporate governance. Increasing profitability and strengthening financial structure of public enterprises are expected to ensure greater protection of enterprises' assets, their more productive use, efficient internal allocation of resources, adequate financing, increased awareness of the necessity of fulfilling obligations toward creditors, etc. Profitability stands out as the best protection against potential financial difficulties. Requirement for more accountability of public enterprises' managers is aimed at motivating them to put more efforts in managing revenues, expenses and profits. This implies a broad application of modern management accounting techniques that could largely contribute to improving operational performance of public enterprises. Higher net income provides more opportunities for financing capital projects from internally generated sources, thus reducing the need for additional borrowing. *Greater transparency* of operating performance also comes with the increase in quality of corporate governance. Requirement for transparency and disclosure restricts behavior that is not in accordance with the general interest, reducing the space for eventual misrepresentation of results and corruptive actions. Transparency mitigates the risk of moral hazard and increases owner's protection. The importance of transparency lies in the fact that it makes more visible whether the state is efficient in performing its ownership function, to what extent public enterprises rely on government assistance, whether there are considerable related party transactions and the like. *Reducing budget and fiscal deficits* is of paramount importance. Enhanced profitability of public enterprises helps alleviate pressures on the budget. If earnings are achieved there is a strong likelihood that a portion of these earnings will end up in the budget. As a part of efforts toward improving the corporate governance of its major SOEs, the Lithuanian government has estimated that annual dividend could be increased by 1% of GDP as a result of better quality of corporate governance, thereby helping to significantly

reduce its budget deficit. Improvement in profitability of Serbian public enterprises would cut down the number of requests for subsidies and reduce fiscal risk [28, p. 17]. Of course, the issue of distribution of income, i.e. the portion of earnings that will be returned to owners versus the one that will be retained in company, is a highly sensitive and goes beyond the scope of this paper. In addition to the aforementioned, it should be pointed out that improvement in the quality of corporate governance *also allows public enterprises to be better equipped for privatization, public-private partnerships and access to capital market.*

Substantial results could be achieved in public enterprises in which the state is a majority shareholder or holds a significant stake as a minority shareholder. By going public and entering the capital market public enterprises *would gain access to alternative sources of financing.* Availability of a broad spectrum of sources of financing reduces the costs of financing. IPOs of large, financially strong enterprises would contribute to the development of the capital market. Shallow capital markets, like Serbian market, look forward to high-quality securities as they tend to energize their activities. Finally, participation in the capital market could *increase the value of enterprise as well as its attractiveness to investors.*

Financial reporting manipulation risk

Undertaking serious reform action is possible only with sound financial statements. Unfortunately, there are a number of cases from practice which testify about dramatic jeopardizing of otherwise extremely high informational capacity of financial statements, primarily because of managers' behavior. Contaminated financial statements impede proper risk assessment, mislead the state as an owner, prevent effective decision-making, increase the risk of adopting wrong policies and strategies, and discourage potential investors. In this regard, practice in public enterprises attracts a great deal of interest of researchers in this field.

Although there are differing opinions, it is generally considered that financial statements of public enterprises are of lower quality compared to those of private companies, especially the ones that are listed on the stock exchange.

Based on a sample consisting of 4,500 companies from 19 countries *Chaney, Faccio and Parsley* found that the quality of accounting information reported by politically-connected companies is significantly poorer than of the companies that do not have such connections [5]. The key reasons include: hiding of the benefits gained by virtue of their favorable "political" position, lower requirement regarding the transparency of reporting in relation to the companies involved in capital markets, which is in line with "demand hypothesis" [10, p. 222], considerable irresponsibility of executives who do not afraid of being penalized for the low quality of financial reporting since they enjoy strong political support. Besides, it should be outlined that public enterprises, as a rule, do not suffer the consequences of an increase in cost of debt incurred as a result of poor-quality financial reporting as is the case with other companies. In contrast to the foregoing and similar conventional views, there are also research studies that show that the quality of financial reporting is better in public enterprises [26, p. 810]. A main argument in favor of this view is the fact that protective attitude of the state toward public enterprises implies that managers are less prone to manipulate information in financial statements.

Irrespective of the previous argument it is apparent that the motives for manipulation of financial reporting in public enterprises exist. The most important are: executives' intention to keep their positions at any cost, even by hiding true performance when targets are not met, opportunity to receive larger bonuses, need to avoid the public pressure due to poor performance, cover-up of unjustified expenses, preparation for privatization or IPO, etc. Hence the need to address potential financial reporting risks with due care [13, pp. 7-32].

Undervaluation or overvaluation of assets, liabilities, income and losses distorts information in financial statements, thus making them an unreliable basis for decision making. The biggest threat comes from hidden losses appearing as a result of overvalued assets and undervalued liabilities, leading to overvalued earnings and undervalued losses. Because in this way overestimated earnings and underestimated losses tend to adversely affect future performance, their disclosure causes damage to all stakeholders, and especially to shareholders who

suffer substantial losses. Although hidden reserves, in terms of financial reporting considered as the opposite of hidden losses, are less harmful, their presence in financial statements is not always welcome. Here we do not refer to reasonable hidden reserves recommended by accounting best practice, but to excessive hidden reserves. Anyway, in our paper we mainly deal with public enterprises that do not have access to capital market and are wholly state-owned, and therefore not exposed to risks of hostile takeover and undervalued equity. But with the creation of hidden reserves a portion of achieved income is left aside, which means that it is not available for distribution and, as a result, the state does not collect revenues on that basis. A particular problem is the fact that hidden losses and hidden reserves are not visible in financial statements so that an average reader of these financial statements most probably will not be able to discern them.

Is there a problem of hidden losses in public enterprises in Serbia? The answer to this question requires a much thorough analysis that would be based on individual financial statements rather than on summary statements which are the subject of our analysis. Though there is not enough room for such an analysis in this paper, let us at least give some basic information on potential risks related to the quality of financial reporting in public enterprises. To this end, we will observe a few indicators that are widely used to evaluate financial reporting manipulation risk. Their overview is given in Table 3.

Obtained results have led us to several conclusions. *Firstly*, operating income quality, measured by a ratio of operating income to cash flow from operations, varies from year to year, which indicates that income is shifted across accounting periods and has lower quality. Of course, the quality of income of individual enterprises

may be better or worse relative to herein reported results. *Secondly*, the quality of assets declines in the first five years as a result of an increasing share of intangible assets in total assets. This finding is especially important given that a number of manipulations are often associated with this type of assets and the practice of capitalizing certain categories of expenses within these intangible assets. However, it should be outlined that the share of intangible assets in total assets is relatively small, thus leaving less maneuvering room. *Thirdly*, there is a very high risk inherent to account receivables. Receivables growth rate shows that this part of assets grows at faster pace than sales revenue, indicating collection problems and potential risk that some of these assets could be potential hidden losses. During the whole analyzed period (2007-2013) receivables increased 2.23 times, while operating revenues increased 1.43 times. Furthermore, the share of receivables in revenues of over 15% implies the risk of hidden losses. As far as public enterprises are concerned, the share of receivables accounted for much more than 15% in all years, showing a continuous increase (except in 2013). *Fourthly*, a greater share of transitory income (loss) which in this paper is referred to as other income and loss, points to significant informational risks. Other revenues come from the sale of buildings, plant and equipment, raw materials inventories, etc., adjustment in asset value, etc. On the other hand, other expenses arise as a result of depreciation of assets, write-off of uncollectible receivables, devaluation of assets, etc., which explains their transitory character. In the entire analyzed period public enterprises recorded net transitory losses exceeding net operational income 8.92 times. For example, as much as 71.9% of total net losses of public enterprises in the period 2007-2013 are attributed to other net losses.

Table 3: Manipulation risk evaluation in financial statements

	2007	2008	2009	2010	2011	2012	2013
1. Operating Income Quality	(0.25)	4.09	(1.13)	(0.76)	(0.11)	0.68	(0.66)
2. Asset Quality Index	1.17	1.25	1.71	1.06	1.33	0.81	1.00
3. Receivables Growth Rate	0.98	1.31	1.17	1.10	1.09	1.19	1.02
4. Share of receivables in revenues	19.09	22.46	25.21	24.98	26.68	31.49	29.75
5. Total return on operating asset	(1.65)	(1.28)	0.49	0.10	(1.03)	(2.93)	(3.54)
• Sustainable return	(0.88)	(1.00)	0.82	0.92	(0.19)	(0.19)	1.46
• Transitory return	(0.77)	(0.28)	(0.33)	(0.82)	(0.83)	(2.74)	(4.99)
6. Revaluation Reserves Growth Rate	1.57	1.11	1.00	0.99	2.75	1.06	0.45

Namely, when we decompose total return on operating assets (i.e. to sustainable and transitory components), we see that the share of transitory return in total return is substantial and the volatility of transitory return is high. This situation should be regarded with the utmost caution as it may indicate possible errors in the classification of particular revenues and expenses, but also the need to reconsider existing accounting policies relating to items classified under other revenues and expenses. *Fifthly*, special attention should be paid to revaluation reserves. They were constantly growing until 2012, recording an increase of RSD 265 billion by that time, but in 2013 they suddenly shrank by RSD 212 billion. At the same time, reserves increased by RSD 263 billion. Having in mind the way in which these reserves are formed, their purpose, as well as the possibilities for their use, we must say that this trend is quite worrying. Revaluation reserves are the only component of equity that have significant upward trend, thereby creating an illusion that there are some real inflows on the basis of the growth of internal sources. This situation creates a false impression of the changes in debt of public enterprises.

Taking into account the above-mentioned facts, we must stress that financial reporting manipulation risks exist and that they are substantial. But more precise quantification of these risks can be performed only for individual companies. In our opinion, these risks do not receive enough attention and the same goes for the quality of financial reporting in general.

Conclusions

Despite existing privatization processes, public enterprises nonetheless continue to play an important role in national economies around the world. A number of research studies confirmed that public enterprises are less efficient than private companies, but we should not lose sight of the fact that many countries have managed to considerably enhance the performance of these enterprises. As regards the present situation in Serbia, improving performance of public enterprises should be seen as a top economic priority and, we believe, also as a political priority.

Due to a long delay in addressing accumulated problems in public enterprises, these problems have gradually become more pronounced, and their solving more challenging. Reform of public enterprises is no longer a matter of choice, but an urgent need without the possibility of further delay. From the macroeconomic perspective, public enterprises are perceived as one of the generators of public debt mainly as a result of the policy of providing state guarantees for their loans. Coverage of their substantial losses has directly or indirectly burdened the state budget. The same holds true for significant subsidies that have been granted to public enterprises either directly from the budget or indirectly, due to their failure to meet their obligations to other public enterprises. For all these reasons, the reform of public enterprises is considered as one of the prerequisites for restoring the health of public finance.

In order to successfully solve the problems of public enterprises, first of all, it is necessary to take into account inherited risks. Financial woes are so deep that they may undermine efforts aimed at tackling the problems in public enterprises. Illiquidity problem of public enterprises is so serious that it has a huge spillover effect on the liquidity of the entire Serbian economy. Debt of RSD 349.4 billion, liabilities of RSD 356.5 billion, loss of RSD 297.3, and a gap in net working capital of RSD 254 billion place an enormous burden on the economy. Moreover, due to negative cash flow from operations it is impossible to finance new capital investments in maintenance and expansion of capacities from internally generated sources, while relying exclusively on financing from borrowing is unsustainable. Continuous losses, negative return on equity, and negative financial leverage reveal an even bleaker picture of the performance of public enterprises. The situation might turn out to be much worse if we take into account the level of risk associated with low quality of information in financial statements.

Bearing in mind the importance of public enterprises and their huge financial problems, there is a need for a concerted effort to raise their financial performance to a higher level. This would require a wide range of carefully selected measures, such as full or partial privatization with

different dispersion of ownership, establishment of public-private partnerships, operational and financial restructuring, empowerment of some enterprises to access the capital markets and the like. A major step in the right direction should be a fundamental shift in the state's attitude toward public enterprises (to all, not just large ones), which will lay the basis for the improvement of corporate governance. To this end, it is necessary to increase the accountability of the state as an owner, to separate its ownership function from its regulatory function, to establish competent bodies that would monitor performance of public enterprises, to enable professionalization of management, to strengthen financial and fiscal discipline, to enhance transparency and to provide greater security to investors in mixed companies. Only if those conditions are met, we could expect an improvement in the performance of public enterprises.

A large burden of uncollected receivables, recognized and hidden losses, unfavorable pricing policy, high indebtedness, insolvency, workforce surpluses and similar problems affect in many different ways the performance of individual companies. Therefore, reform measures for individual public enterprises should be tailor-made and carefully selected. The strategy based on principle "grasp the large and let-go the small" can be effective in the short run, but it is certainly not sufficient. First of all, there is a need for a radical and comprehensive shift in the mindset and behavior of public enterprises irrespective of their size and whether their founder is the state, province or local government.

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