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INTERNATIONAL MONETARY FUND

REPUBLIC OF SERBIA

SELECTED ISSUES

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CONTENTS

FIGURES

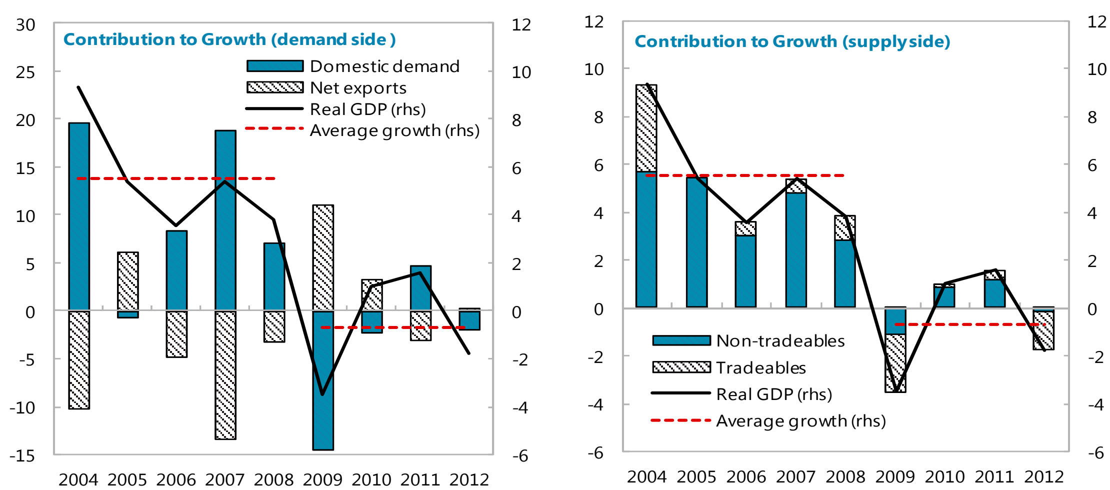
BOX

IN SEARCH OF AN EFFECTIVE GROWTH MODEL[1]

The brisk growth experienced by Serbia during 2004–08 was associated with rising vulnerabilities, in particular a higher share of nontradables and deteriorating external position. While Serbia's integration into global markets modestly increased throughout this period, structural bottlenecks continue to undermine overall competitiveness and constrain growth potential. Tackling these challenges through comprehensive structural reforms would be essential to achieve a more sustainable long-term growth.

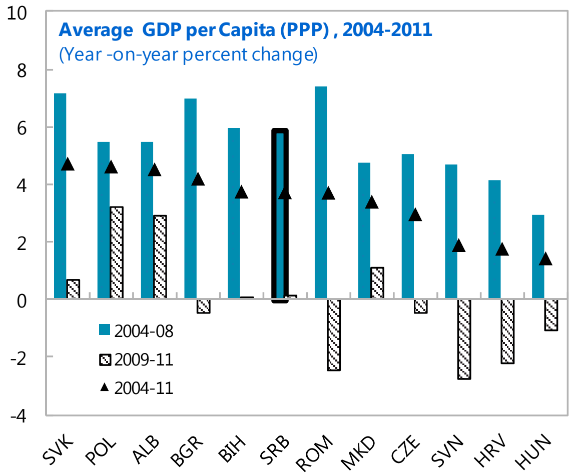
A. The Pre-Crisis Growth Paradigm and its Legacy Vulnerabilities

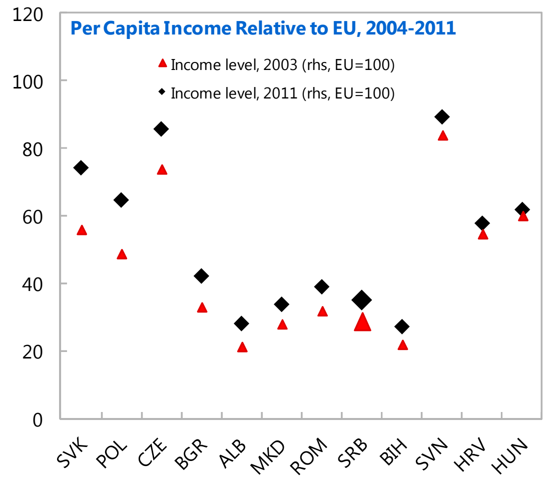
1. **Serbia experienced brisk growth during 2004–08 on the back of capital inflows that supported a boom in the domestic demand.** However, the underlying growth model proved vulnerable to shocks, being associated with a high share of nontradables, low domestic savings and a fragile external position. Yet, convergence to EU income levels was relatively moderate. Economic growth fell following the onset of the global financial crisis and further slowed the pace of convergence. As a result, Serbia's post-crisis income gap remains larger by comparison to more advanced regional economies.



Source: State Staistical Office; World Bank; and IMF staff estimates.
1/ Tradables include agriculture, manufacturing, mining and tourism

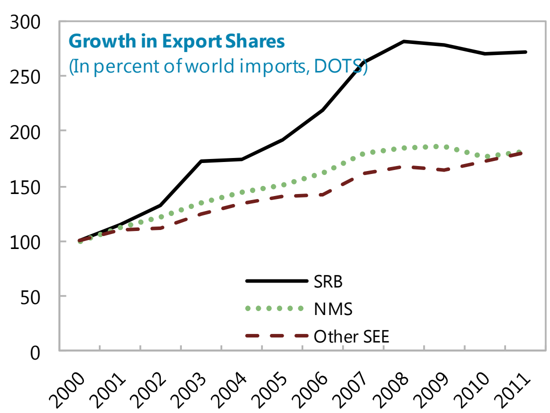
[1] Prepared by Eugen Tereanu (EUR).

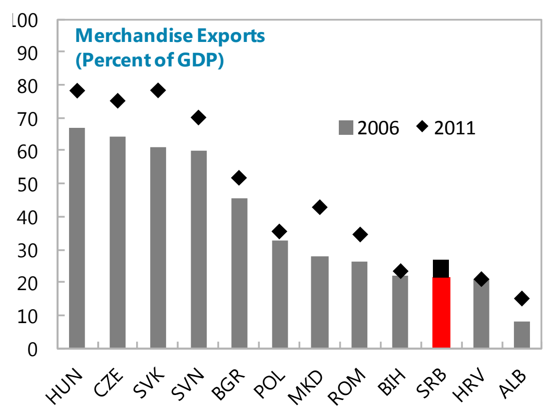




Source: World Bank Development Indicators.

2. International trade and financial integration increased, albeit from a low base. In recent years growth in world market shares was above comparable SEE countries, though current trade shares remain substantially below those of EU CEE new member states.[2] Relative to its size, Serbia is a closed economy by regional standards, with a stable ratio of goods exports to GDP of about 20 percent over 2006–11. Exports are concentrated in agricultural products, textiles and metal industries, with automobiles being a more recent addition. Remittances and foreign borrowing have been predominant in financing the trade deficit, while FDI inflows have been volatile.





Source: World Bank Development Indicators.; and DOTs

[2] Southeastern European countries (SEE) include Albania, Bosnia and Herzegovina, Croatia and Macedonia. CEE EU new member states comprise Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic, and Slovenia.

3. **Structural bottlenecks continue to undermine overall competitiveness and constrain growth potential.** They include a difficult business environment, inflexible labor markets as well as a large and inefficient public enterprise sector. The presence of these bottlenecks is due in part to the late start in the transition towards a market economy.

- *A complicated system of business laws and regulations* hampers nonprice competitiveness and acts as a deterrent to solid FDI inflows, in turn a key contributor to the feeble private sector growth and persistently high unemployment rates (see Figure 1).

- *Entrenched rigidities in labor market institutions*, such as a peculiar severance pay system, centralized wage bargaining and complex firing procedures, further hinder investment (Selected Issues Paper "Labor Market Reforms").

- *The heavily subsidized and protected public enterprise sector* includes both companies in the portfolio of the Privatization Agency[3] as well as state owned enterprises (SOEs) in the utility and commercial sectors, many of which are loss making and would not be able operate without government subsidies and guarantees. The privatization process has lost momentum[4] and progress towards enterprise reform has been modest, in part due to unfavorable market conditions (see Figure 2).

  In addition, the fiscal burden generated by many enterprises in the Privatization Agency portfolio as well as commercial and utility SOEs is significant, with total direct state support estimated at 2.5 percent of GDP over 2010–11.[5] De facto wage policy in many SOEs, although in principle related to the public sector wage salary scale, is set relatively liberally (including through bonuses, creation of advisory positions and ad-hoc increases) and further distorts the already high public/private wage ratio. Tariff setting below cost recovery levels in public utilities also has a negative impact on profitability and disincentivizes investment.

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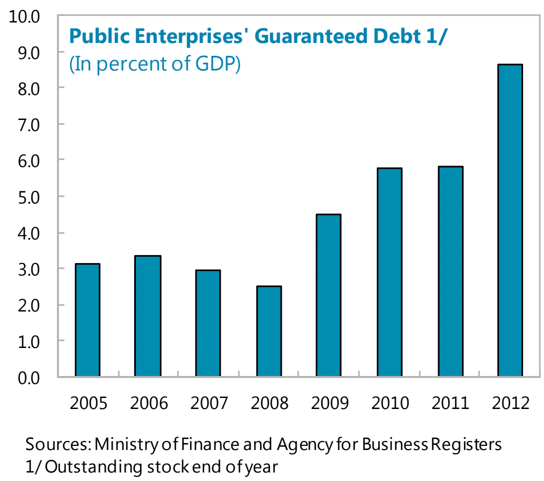
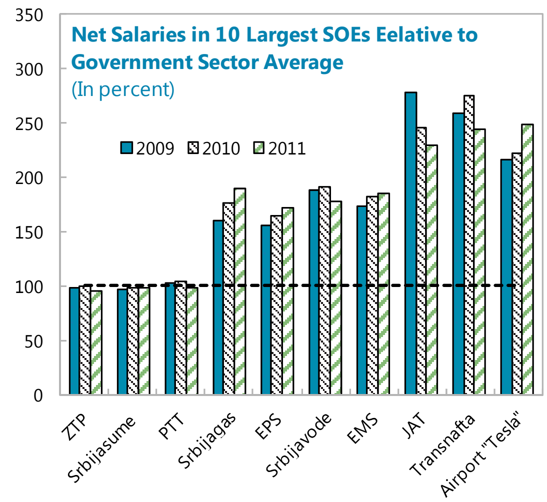
[3] These are mostly socially owned enterprises, a legacy concept dating from the days of former Yugoslavia, whereby many companies were under the collective ownership of employees (rather than the state) and had a goal of maximizing return to labor instead of profits.

[4] According to the World Bank, the number of privatized companies decreased from an annual average of 320 over 2002–2008 to about 47 over 2009–2011 with the most difficult cases remaining in the Privatization Agency (PA) portfolio. At the end of 2010, enterprises in the PA portfolio accounted for about 5 percent of the formal employment, while employment in large public utilities and commercial SOEs represented another 6 percent.

[5] Includes the average over 2010–11 of direct subsidies, debt servicing and transfers for unpaid social contributions. In addition, the stocks of guaranteed debt and arrears are estimated at some 12 percent of GDP at end 2011 (World Bank figures, cited by Ministry of Finance, Republic of Serbia: Fiscal Strategy for 2013 with projections for 2014 and 2015).





B. Policy Recommendations Towards an Effective Growth Model

4. Key reforms to remove the major structural bottlenecks are therefore essential to achieve durable economic growth. More recently, the authorities have recognized the importance of structural adjustment policies in their medium-term fiscal strategy.[6]

- **Improving the business environment through a multi pronged approach is necessary to support a dynamic private sector.** A recent initiative to abolish a number of parafiscal charges is a first step in this direction; in addition, the authorities' strategy brings to fore the need for further measures in the areas of competition policy, tax administration, property rights and legislation governing real estate.

- More generally, prioritizing among the business environment reforms is crucial to their success, as is setting a clear timeframe for implementation.

- **Labor market reforms are essential to improve the cost competitiveness of the Serbian economy. Policies** should focus on removing disincentives for job creation and make the wage bargaining and employment procedures more flexible, while maintaining adequate social protection (Selected Issues Papers "Labor Market Reforms" and "Pension Reform In Serbia").

- **The reform of public enterprises should be comprehensive and carefully designed.** It should be planned and budgeted under a detailed cost-benefit analysis, given the fiscal costs and extent of employment. In addition, implementation should be front loaded, yet sustainable.

[6] Ministry of Finance, Republic of Serbia: Fiscal Strategy for 2013 with projections for 2014 and 2015.

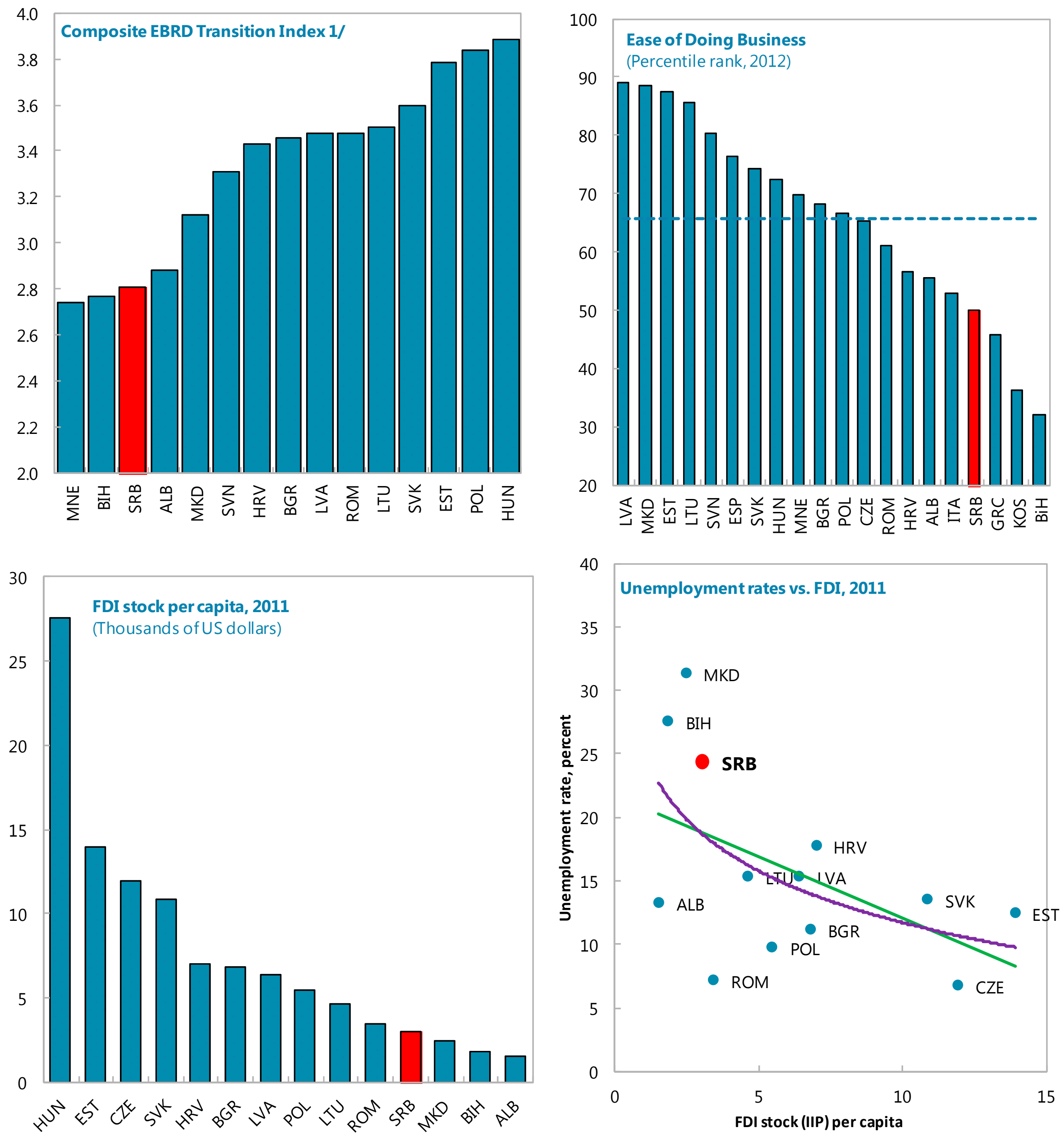
Given the extensive subsidization and protection of public enterprises, the authorities' intention to accelerate (in coordination with the World Bank) the privatization and corporatization plans of public enterprises and improve the transparency of their operations is welcome.

In addition, a number of difficult but necessary reforms need to be pursued. They include rigorous wage and employment policies based on performance criteria, a gradual increase in public utility tariffs to cost recovery levels, and the enforcement of strict limits on subsidies and the issuance of guarantees.

5. Tackling the structural bottlenecks should improve competitiveness, leading to a more durable export oriented growth model. The experience of the EU new member states suggests that comprehensive reforms are a necessary precondition to fully reap the benefits of EU integration, while being able to sustain the competitive pressures of open markets. Also, maintaining macroeconomic stability through prudent policies would be all the more essential to mitigate the inherent volatility resulting from stronger external linkages. Ultimately, calibrating the breadth, balance, and sequence of structural reform initiatives is essential for their successful implementation. Many of them carry short-term costs yet tend to yield long run benefits. Moreover, a well targeted package of reforms should also boost confidence in the economy, including with positive consequences for growth in the near term.[7]

[7] See also Valdés et al., "Fostering Growth in Europe Now; IMF Staff Discussion Note 2012.

Figure 1. Serbia: Business Environment and Growth Constraints



Sources: EBRD Transition Report; IIP Database; LFS unemployment rates

1/ Average of all EBRD transition indicators. The measurement scale for the indicators ranges from 1 to 4+, where 1 represents little or no change from a rigid centrally planned economy and 4+ represents the standards of an industrialized market economy.

2/ ALB data publishes only registered rates.

IMPROVING THE LABOR MARKET: CHALLENGES AND OPTIONS[1]

Labor market outcomes in Serbia are worrisome: the unemployment rate is one of the highest in Europe and the labor force participation rate is one of the lowest. These outcomes can be attributed to the unfinished transition to a market-based economy: the late start of reforms and their uneven implementation constrained FDI inflows, slowed down structural transformation and therefore hampered employment creation. In addition, a sharp increase in unemployment without adjustment in the labor cost is indicative of lack of flexibility in Serbia's labor market. Cross-country comparison suggests that the average total labor cost in Serbia has risen faster than productivity: this could be partly attributed to (i) the strong role of the public sector in setting wages, (ii) excessive protection of insiders, and (iii) a centralized wage bargaining process. A comprehensive structural reform is needed to strengthen private sector and boost the demand for labor in Serbia. Reforms should aim to reduce the total labor cost and to increase labor market flexibility.

A. Background

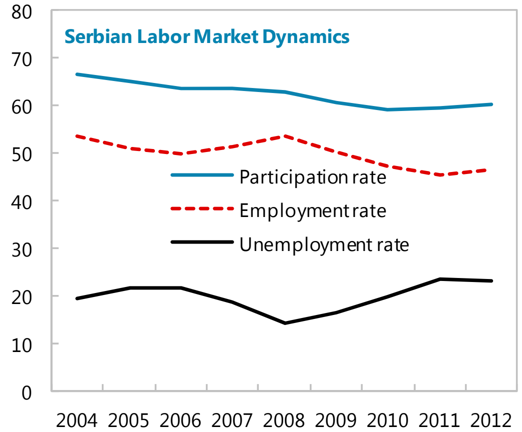
1. **Serbia's labor market is characterized by low labor force participation and high unemployment.** The participation rate—defined as a percentage of working age population, either employed or actively seeking job—declined from 66 percent in 2004 to about 60 percent in 2012, which is lower than in most of Serbia's peers and other European economies (Figure 1). The rate of unemployment, as measured by the Labor Force Survey (LFS), has increased to more than 23 percent and is now one of the highest in Europe. Low labor force participation and high unemployment result in exceptionally low rate of employment, which fell to 46 percent in 2012—much below most European economies and New Member States of the EU (NMS) in particular. High unemployment reduces labor force participation as many workers who lost their jobs became "discouraged" and leave the labor force.

2. **High youth unemployment and a significant rate of long-term unemployment are particularly worrisome.** The rate of unemployment for the group aged 15–24 exceeded 51 percent in 2012 (Figure 1). This entails negative implications for potential GDP growth given poor chances for young people entering the labor force to acquire needed on-the-job training and human capital. High rate of long-term unemployment—reaching 78 percent in 2012—could also be a detriment to accumulation of human capital.

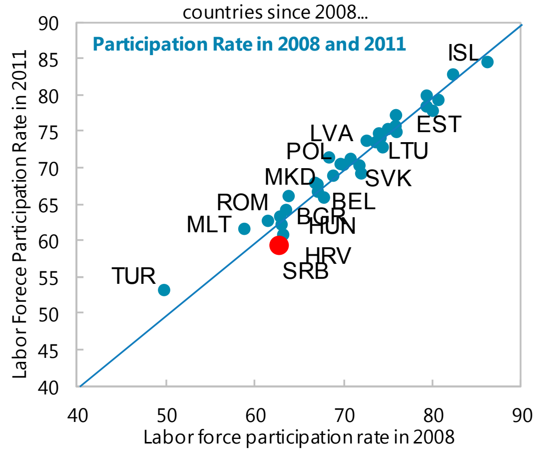
[1] Prepared by Srdjan Kokotovic (formerly Belgrade Office) and Dmitriy Kovtun (EUR).

Figure 1. Serbia: Labor Market Indicators, 2004-2012

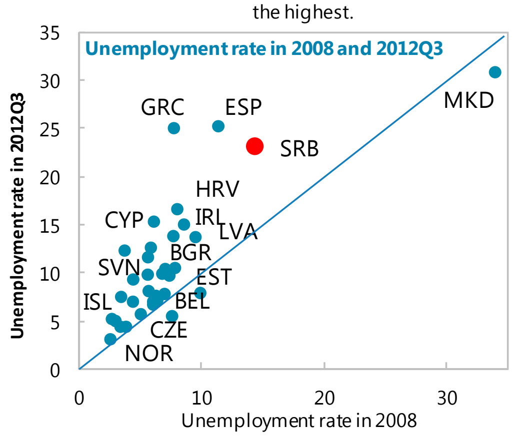
The unemployment rate has been increasing since the onset of the crisis.



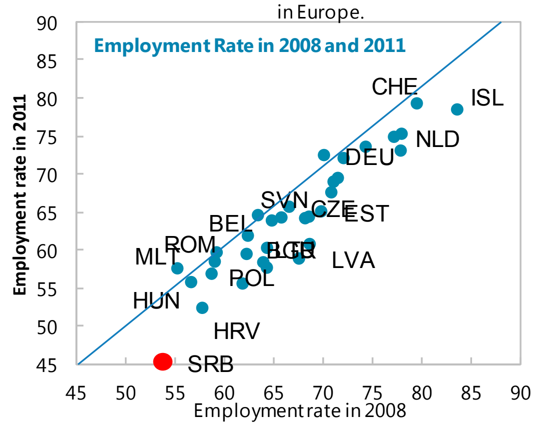
Labor participation rate fell by more than in other countries since 2008...



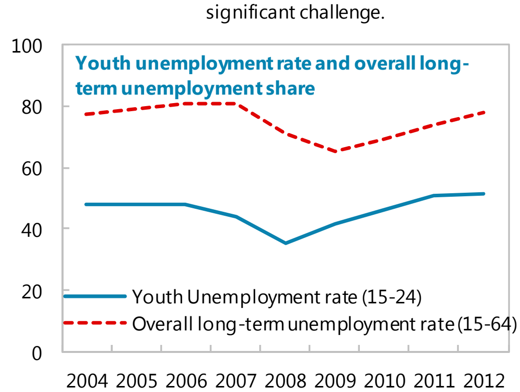
...whereas unemployment rate increased to one of the highest.



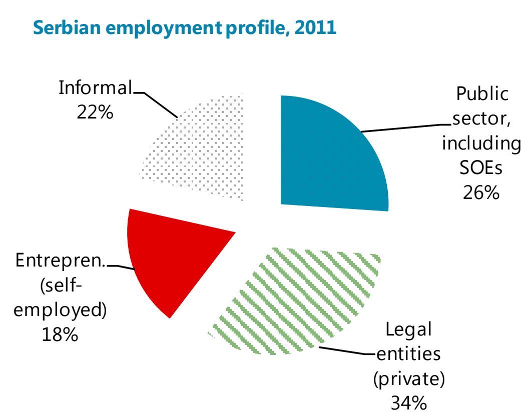
As a result, the employment rate is one of the lowest in Europe.



Youth and long-term unemployment rates pose a significant challenge.



The share of informal employment is significant.

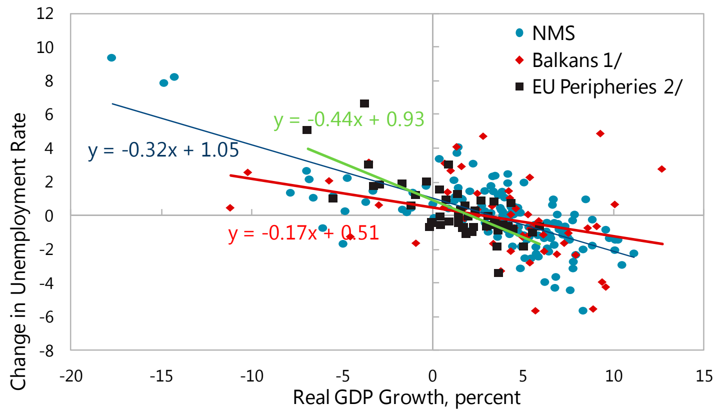


Sources: SORS, FREN, and Eurostat.

3. Other notable features of the Serbia's labor market are significant shares of informal and public sector employment. Informal employment—as estimated by a difference between overall employment and registered employment—amounts to almost 500 thousand persons, or 19 percent of overall employment.[2] The public sector employs 43 percent of registered employment in legal entities, or 26 percent of overall employment.[3]

4. A significant share of unemployment in Serbia—as well as in other Balkan economies— is structural. Labor markets in the Balkan economies are characterized by a low value of Okun's coefficient, which shows the responsiveness of unemployment to the business cycle. This suggests that unemployment in Serbia cannot be explained by the downturns over the business cycle and the roots of the problem are structural.

GDP Growth and Changes in Unemployment, 1993-2011



Sources: WEO; and IMF staff calculations.
1/ Albania, Bosnia and Herzegovina, Kosovo, Macedonia, Montenegro, and Serbia.
2/ Greece, Italy, Portugal and Spain.

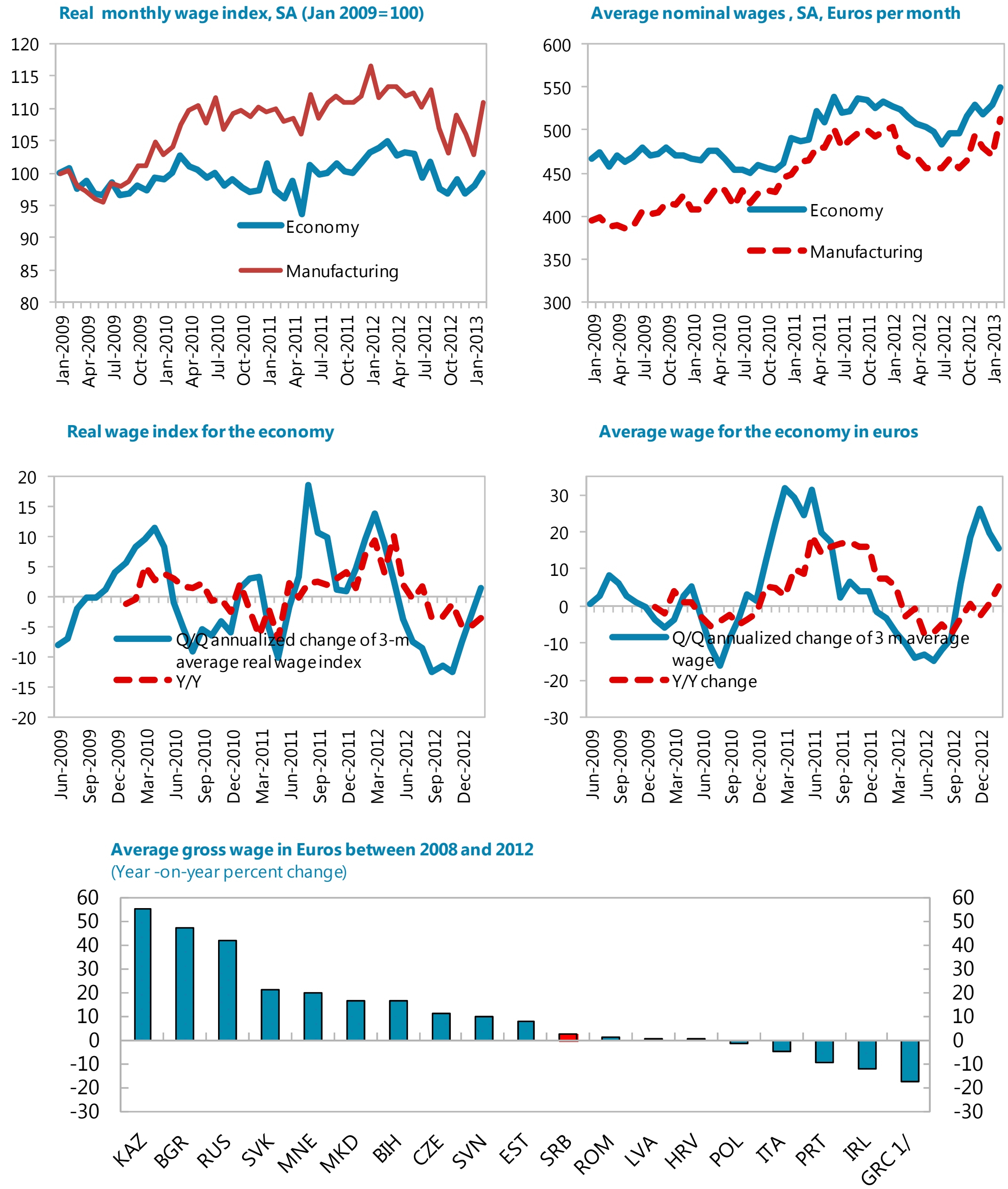
5. The absence of adjustment in the real wages despite increasing unemployment since 2008 is puzzling. An excess supply of labor should lead to a downward pressure on wages, but this was not the pattern observed in the data (Figure 2). There could be a statistical explanation: wage pressures should be judged by looking at the wage for a given skill level. However, the wage data aggregates different skills level into an average, leading to a possible upward bias of wages as the composition of labor is rebalanced—it is likely that average wage was affected by attrition of low-skilled workers.[4]

[2] Registered employment includes all employees in legal entities or workers for whom employers are paying taxes and social contributions or at least officially register their employment status (in the case when employer's financial position does not allow paying taxes and social contributions).

[3] Public sector here includes administration, education, health, social insurance, armed forces, police, public utilities, municipal public utilities and other companies owned by government with a majority stake.

[4] LFS data provides some support for this hypothesis—27 percent of those with only primary school were laid off, 18 percent of those with secondary and only 6 percent of those with tertiary education.

Figure 2. Serbia: Wage Indicators, 2009-13



Sources: Eurostat, SORS and IMF staff calculations.
1/ 2011 data used in place of unavailable 2012 data.

6. There could also be significant labor market rigidities explaining the lack of wage adjustment. Possible rigidities are (i) the significant role of the public sector in setting the wage level, (ii) excessive insider protection imposed by the Labor Law and other institutional arrangements, (iii) restrictive wage bargaining system, and (iv) binding minimum wage. The remainder of this paper examines structural causes of Serbia's high unemployment, assesses wage competitiveness using several indicators in the cross-country setting and sheds light on possible rigidities.

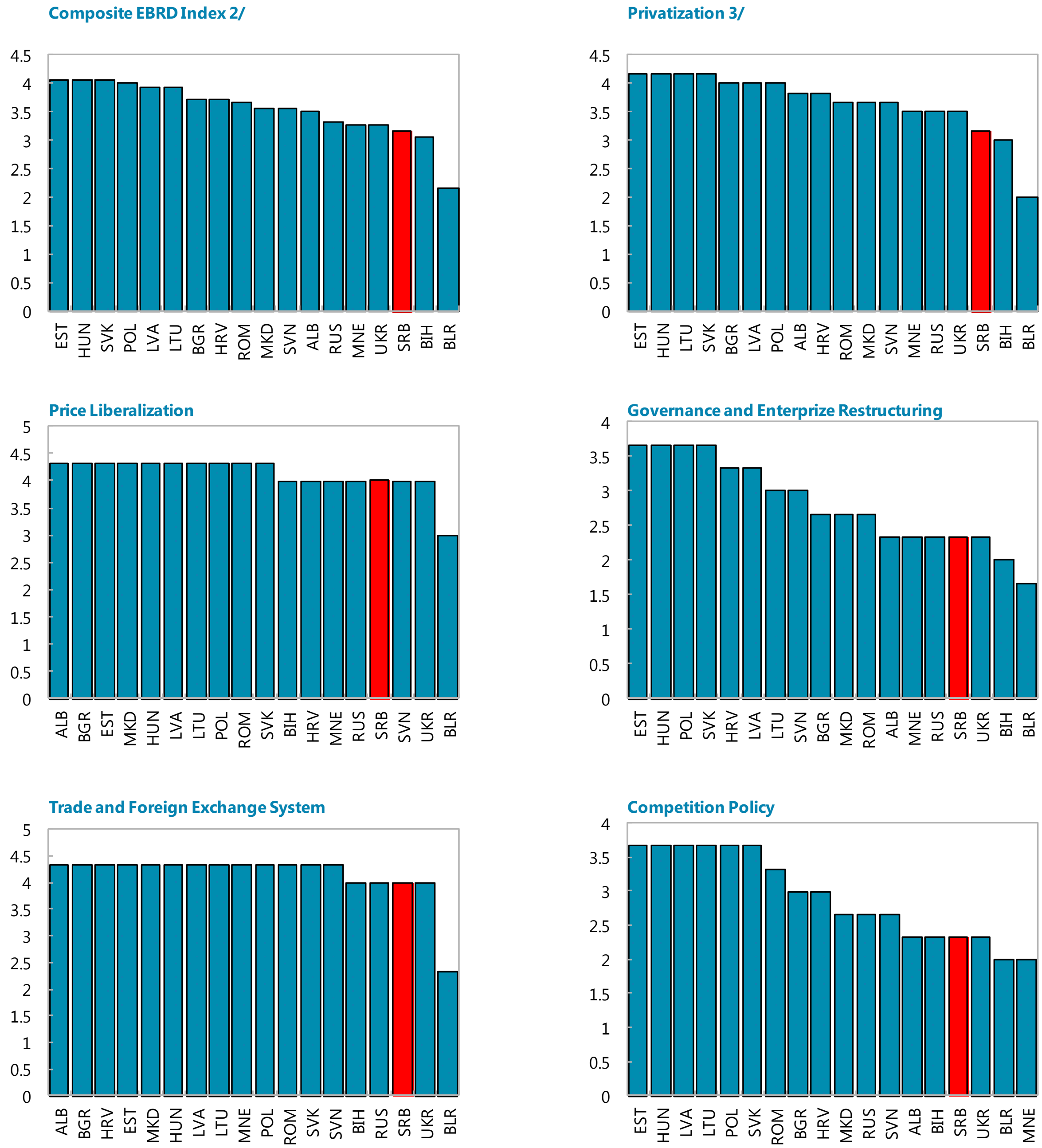
B. What Are the Possible Causes of Meager Labor Market Outcomes?

The Role of the Unfinished Transition to a Market Economy

7. Successful transitions of the 1990s in emerging Europe and particularly NMS were generally associated with comprehensive structural reforms. These reforms attracted significant inflows of foreign direct investment (FDI) and promoted job creation. Despite the fact that unemployment may have increased in the short run, the reforms allowed development of the private sector that eventually provided conditions for reducing unemployment rates. The infusion of capital from abroad—especially via greenfield FDI—played a key role as it helped to develop new businesses or even entire new sectors in the economy and provided a chance for workers dismissed from the declining sectors to be reabsorbed by new economic activity. While other types of capital movements, such as equity flows, have also shown positive relationships with growth under specific circumstances, only FDI proved to be a robust and significant driver of output growth (Aizenman et al., 2011). The reasoning behind that particularly beneficial relationship is that FDI offers a more stable and long-term foundation for technology, know-how, managerial skills, and international marketing networks to be transferred than other more volatile forms of capital flows. FDI inflows, however, critically depended on favorable business environment, macroeconomic stability and strong track record in structural reforms.

8. Unlike NMS, Serbia as well as other Balkan economies were delayed in their structural transformations. Significant reforms largely began nearly a full decade behind NMS. Serbia made significant progress in transition in the first half of 2000s, but many needed reforms still remained incomplete when the global financial crisis erupted. As a result, the unfinished structural reform agenda remained substantial, with more progress needed in such essential areas as privatization, enterprise restructuring, and competition policy (Figure 3).

Figure 3. EBRD Transition Indicators, 2012 1/



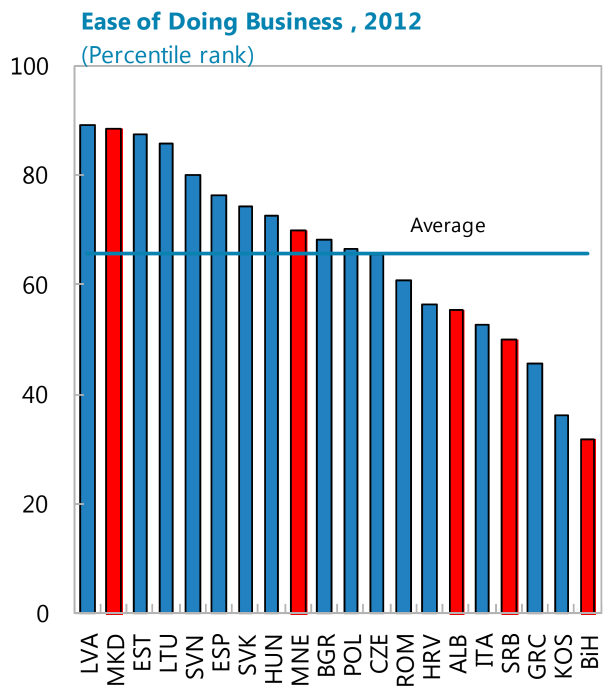
Source: 2012 EBRD Transition Report and IMF staff calculations.

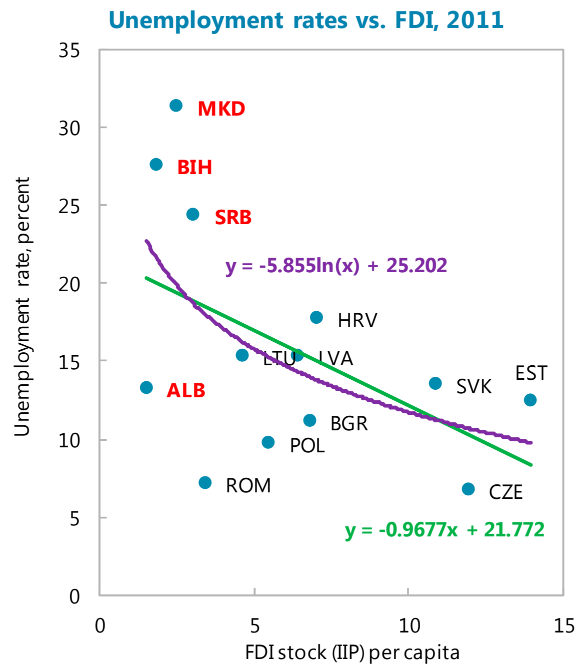
1/ The measurement scale for the indicators ranges from 1 to 4+, where 1 represents little or no change from a rigid centrally planned economy and 4+ represents the standards of an industrialized market economy.

2/ Average of all six EBRD transition indicators.

3/ Average of large scale and small scale privatization indicators.

9. The delay in reforms led to a relatively weak business environment, reduced attractiveness to foreign investors and therefore constrained job creation. Serbia—as well as several other Balkan economies—are lagging behind in terms of ease of doing business, and the FDI stock per capita is significantly lower than in peer countries. These factors put Serbia at a disadvantage in terms of diversifying away from traditional sectors and therefore created a drag on employment creation. A scatter plot of per capita stock of FDI and unemployment rates in the Balkan countries and NMS suggests that countries that attracted more FDI tend to have lower unemployment rates.





Source: LFS unemployment rates (except ALB which publishes only registered rates); IIP database; Doing Buisness (2012); and IMF staff calculations.

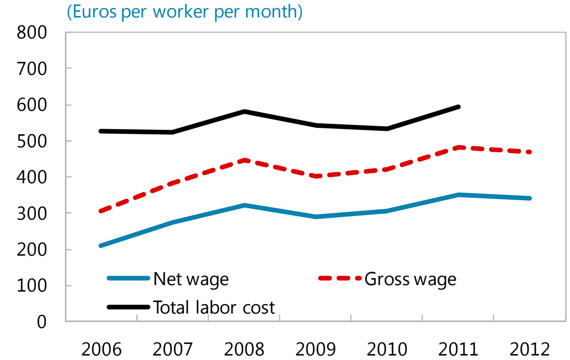
10. Structural employment losses since 2008 were partly attributed to layoffs related to the pre-crisis privatization and restructuring. Former socially-owned enterprises had contractual obligations to refrain from layoffs for three years following privatization. As privatization peaked in 2005-06, the layoffs coincided with the onset of the 2008–09 financial crisis. Layoffs were significant as post-privatization restructuring appears to have been focused on employment cuts rather than wage cuts: wage data suggest that companies shed labor rather than reduced wages (Figure 2). Another important factor was that Serbian tradable sector faced growing competition—the first wave of trade liberalization took place in early 2000s and the second wave began in 2009 with the launch of the Stabilization and Association Agreement with the EU. The employment losses were undoubtedly compounded by the onset of the global financial crisis in 2008.

Wage Competitiveness: Are Labor Costs Too High?

Distinguishing between net wages, gross wages and overall labor costs

11. **Analysis of labor market competitiveness calls for examining net wages, gross wages and total labor costs (TLC) separately.** Net wage—defined as gross wage accrued to an employee less taxes and social security contributions paid by the employee—should be the most important determinant of labor supply. The demand for labor, however, should depend not on the net wage but rather on the TLC, which is defined as gross wage plus social security contributions and any labor-related costs (e.g. severance payments) paid by the employer. The wedges could be illustrated using data for the manufacturing sector in Serbia:[5]

Total labor cost and wages in manufacturing, 2006-12
(Euros per worker per month)

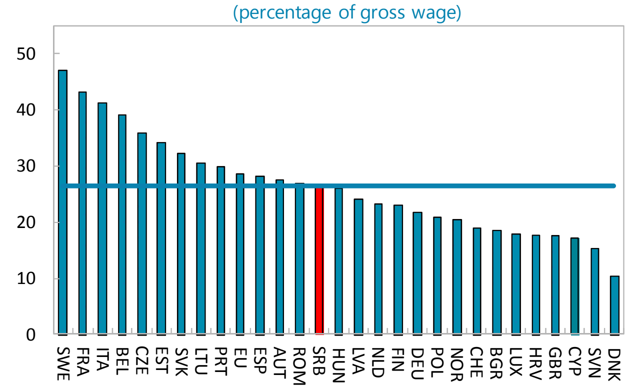


Source: Structural Business Statistics, SORS and IMF staff estimations.

- ***Gross wage vs. net wage:*** This wedge consists of personal income tax (12 percent on a taxable base) plus employee's contribution to the social security system (17.9 percent of the gross wage). In 2012, net average wage in manufacturing was about 27 percent lower than the average gross wage.

- ***TLC vs. gross wage:*** In 2011, TLC in manufacturing (expressed in Euros per worker per month), as reported in SORS' Structural Business Indicators, was about 23 percent higher than the gross wage. The difference is explained mainly by the employer's contribution to the social securing system (17.9 percent). The remaining difference arises from severance payments, allowance for business trips abroad and allowance for transport to work, jubilee awards, directors' fees and scholarships but also wages for occasional employment other than fixed-term employments (external salesmen, security workers and others). Cross-country comparison suggests that this wedge is in line with the EU average, but it does not

Wedge between total labor cost and gross wage in manufacturing, 2010
(percentage of gross wage)



Source: Eurostat, SORS and IMF staff calculations
1/ Total labor cost is calculated as a ratio of total personnel cost in manufacturing to the number of persons employed as reported by the Structural Business Statistics.

[5] Comparing economy-wide wedges is challenging given data-related constraints.

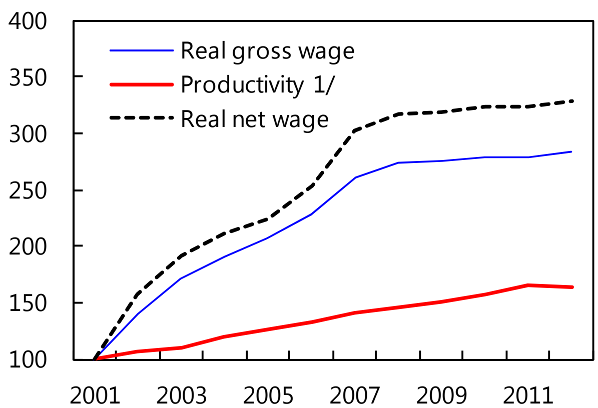
necessarily mean that this is optimal for Serbia.

- **The overall wedge.** In 2011, the overall tax wedge in manufacturing, defined as a difference between TLC and the net wage, amounted to 41 percent of TLC or 70 percent of the net wage. For comparison, Fiscal Council estimated the fiscal burden to equal 64 percent of the net wage.[6] Their estimate is lower because the fiscal burden does not include severance payments and other labor-related expenditures captured in structural business statistics.

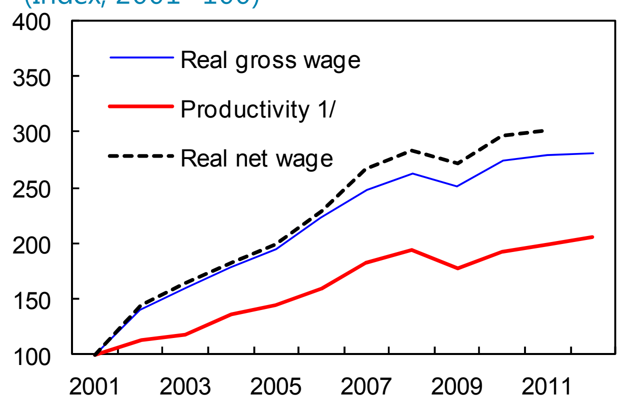
Analyzing trends in wages and productivity

12. Average gross real wage in the economy grew faster than productivity in 2001-08, but this trend was reversed during the period from 2009 to 2011. Average real wage increased by 174 percent between 2001 and 2008 whereas productivity increased by only 47 percent, suggesting erosion of competitiveness (in manufacturing sector, this pattern appeared to be somewhat less pronounced). It should also be noted, however, that wage growth in the earlier part of the decade could have been overestimated as the low-wage earners were gradually dropping out of the sample, creating an upward bias in the average wage (World Bank Labor Market Review, 2006). During 2009-2011, the growth of real wages slowed down but the gap between wages and productivity persisted.

Real wages and productivity, 2001-12
(Index, 2001=100)



Real wages and productivity in manufacturing, 2001-12
(Index, 2001=100)

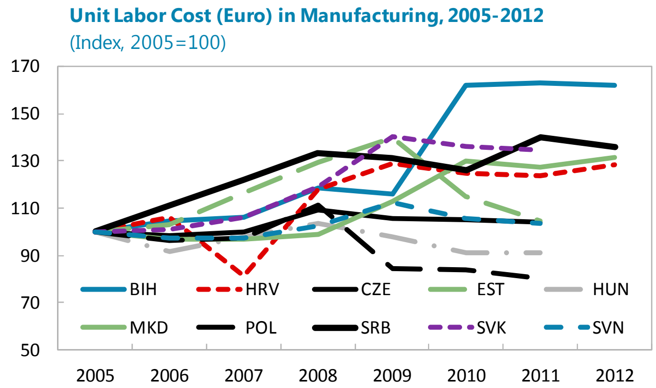


Sources: SORS and IMF staff calculations.
1/ Productivity index is based on the formal employment.

[6] Fiscal Council, 2012, "Proposed Fiscal Consolidation Measures for 2012–2016".

Analyzing trends in the unit labor cost

13. Unit labor cost (ULC) in manufacturing based on the average gross wage increased faster than in peers until 2008 but declined during 2009–10.[7] ULC growth before the crisis led to concerns about competitiveness: IMF staff noted that while Serbia's euro wage levels relative to labor productivity were in line with most transition peers, they significantly exceeded those of key regional competitors, including Bulgaria and Slovakia.[8] The erosion of export competitiveness was reversed in 2009 and 2010 when ULC declined by 7 percent on account of significant dinar depreciation. However, ULC indexes do not provide information regarding the relative "level" of competitiveness (i.e. how "competitive" a country is relative to its peers).



Sources: National authorities and IMF staff calculations.

Cross-country comparison of wages and productivity

- **Cross-country comparisons reveal strikingly low productivity in Serbia.** In 2012, Serbia's productivity was four times lower than in the Euro Area, and was lower than in most peer countries: it was only about a half of productivity in Croatia and Romania (Figure 4). Productivity in manufacturing was also low.

- **Gross and net wages appeared to be broadly in line with productivity.** In 2012, wages appeared to be broadly in line with these in peer countries taking into account low level of productivity and adjustment that took place since the onset of the crisis.

- **On the contrary, TLC was somewhat higher than warranted by Serbia's relative productivity.** A regression line estimated on a sample of EU-27 countries in 2010 (excluding Ireland that was an outlier) suggested a "fitted" level of labor cost in manufacturing per employee for a given level of productivity. Serbia's monthly total labor cost of 534 euros per employee was 11 percent higher than the TLC suggested by the regression.

[7] ULC is calculated using euro-denominated gross average wage in manufacturing. Ideally, the ULC index should be based on the total labor cost rather than gross wage. However, sufficiently long total labor cost data are not available.

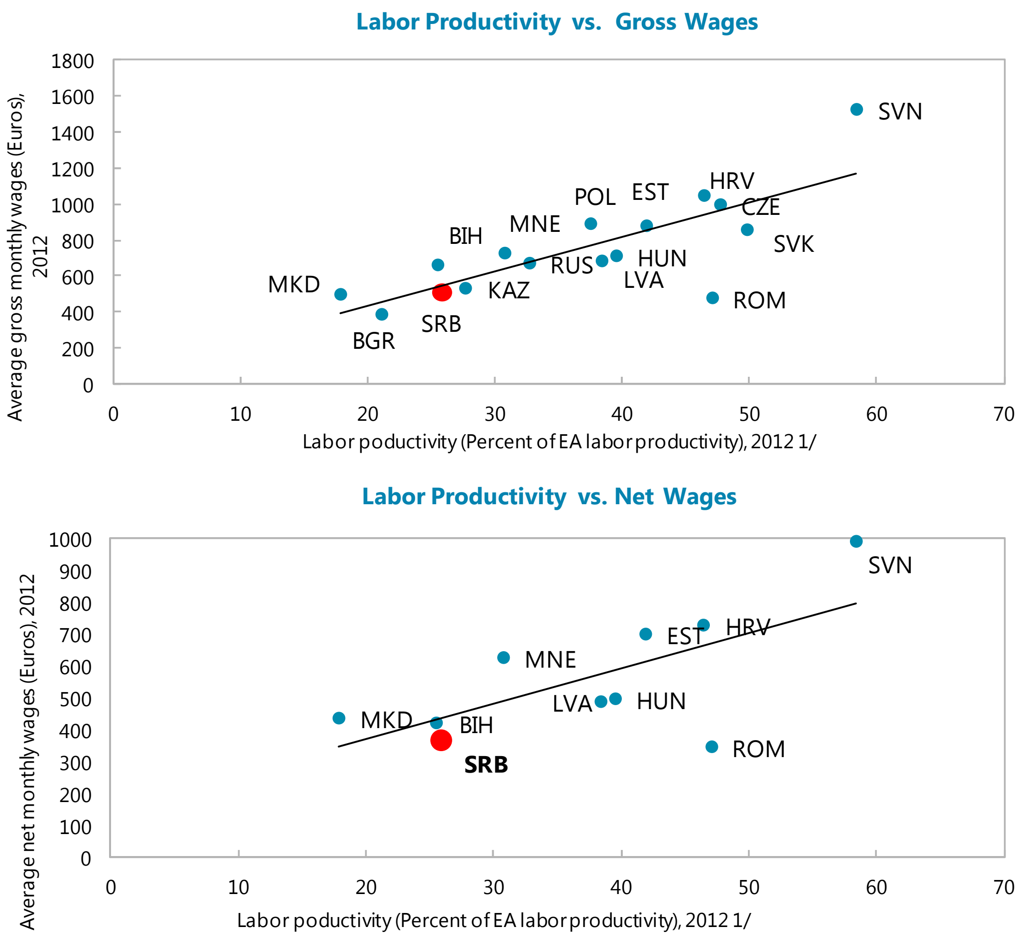
[8] See "Republic of Serbia: Request for Stand-By Arrangement—Staff Report," 2009.

Regression Results for Total Labor Cost (TLC) in Manufacturing, 2010

	2010
Relative productivity (percent of the EU productivity)	20
Actual TLC, Euros per worker per month	534
"Fitted" TLC, Euros per worker per month	475
Deviation from the "fitted"TLC, percent	11.4

Source: IMF staff estimations.

Figure 4. Serbia: Wage and Productivity Indicators, 2012



Sources: Haver; EMED; WEO; and IMF staff calculations.
1/ Labor productivity = [(* nominal GDP in euros / * employment) / (EA Nominal GDP / employment)]
(*) = Each country

Is Employment Protection too Strong?

14. Employment protection legislations (EPLs) refer to laws, regulations, or customary procedures that govern employers' ability to dismiss workers. These come in various forms such as restrictions on layoffs, required notice periods, penalties for unfair dismissals, mandatory severance payments, etc. (OECD, 1994). EPLs protect workers' rights and are often guided by the International Labor Organization's (ILO's) Termination of Employment Convention. At the same time, excessive EPLs constrain job creation as employers adopt greater caution in hiring. This means that EPLs tend to protect those that are already employed but reduce opportunities for the unemployed. Over time, this creates a bottleneck for young workers joining the labor force and prolongs the jobless spells for the unemployed. Very rigid labor legislations, therefore, impede labor re-allocation and may protect the employed at the expense of the unemployed, thereby exacerbating unemployment. Indeed there is empirical evidence that protective labor regulations tend to increase unemployment, particularly for the young (Nickell et al., 2005, Feldmann, 2009, Botero et al., 2004), and decrease labor force participation (Feldmann, 2009).

15. The 2005 Serbia's Labor Law Amendment increased the level of regulation, aligning it with more advanced European countries, primarily those in the Southern Europe. It made it more restrictive relative to Serbia's regional peers. Enacted at the peak of privatization and restructuring, the amendment sought to strengthen job security by introducing disincentives for firing and shortening length of temporary employment.

16. Rules governing severance payments constitute a unique feature of the Serbia's EPLs embodied in the Labor Law. The severance payment is calculated on the basis of lifetime employment rather than on the period with the last employer. It is calculated as the sum of ⅓ of most recent average monthly salary for each year of employment for the first 10 years and ¼ for each subsequent year of employment. In the case of an employee with 30 years of employment this adds up to 8⅓ monthly salaries. The rule creates disincentives for laying off older employees. Cross-country comparisons indicate that Serbia's severance payment rule is unique: other European countries have implemented either fixed severance payments or linked it to the length of service with the last employer.

17. Aside from severance payments, dismissing permanent employees is subject to administrative and legal hurdles. The Labor Law distinguishes between collective or individual dismissals, and the latter comprises dismissals for (i) economic reasons, and (ii) poor performance/inadequate skills.

- *Collective dismissals* have to be preceded by attempts of alternative employment and preparation of a program intended to mitigate the consequences by providing training, shorter work hours and similar along with providing causes for dismissal and dismissal criteria. The program must be discussed with trade unions and the National Employment Service, both of which are required to provide non-binding suggestions.

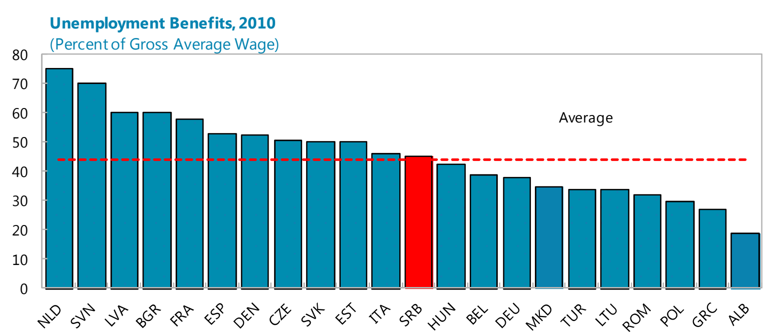
- *Individual dismissals due to inadequate skills, low productivity or other performance-related reasons* generally require "proofs" of inadequate performance or skills. Following trade union's opinion, the employee can be dismissed after a notice period of 1 to 3 months (without notice period in the case of misbehavior and criminal acts) depending on the length of career (no severance payment is required in this case). A dismissed employee can appeal to the court and be reinstated if the employer fails to justify the dismissals (in which case the employee has to be reimbursed for the loss of wage income).

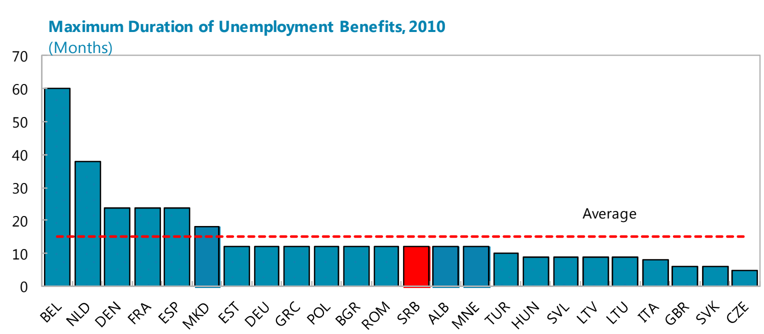
- *Individual dismissals for economic reasons* require a letter from the employer justifying the reasons for dismissal and a severance payment. Also, the employer must rehire the same person if the same position opens up again within the following six months.

18. Resorting to fixed-term contracts—which is a common solution in other countries for bypassing excessive insider protection—is limited by the Labor Law. The Labor Law limits fixed-term contracts to one year and allows such contracts to be concluded only in the case of seasonal jobs, projects, temporarily increased workload, replacement of absent employees and other similar tasks. The likely motivation was to eliminate potential loopholes that would help avoid the above severance requirements. Thus, fixed-term contracts are effectively prohibited for hiring employees to perform permanent tasks. Additionally, employment lasting 5 days more than the prescribed maximum of 12 months, is treated as a contract of indefinite duration.

Do Unemployment Benefits Create a Disincentive for Work?

19. Unemployment benefits in Serbia do not appear to be overly generous and therefore are unlikely to create disincentives for work. They are on average below the minimum wage while their duration is limited to 12 months in the case of dismissed employees with more than 20 years of service. As the majority of unemployed persons have been unemployed for over 12 months, they are not eligible to receive it.



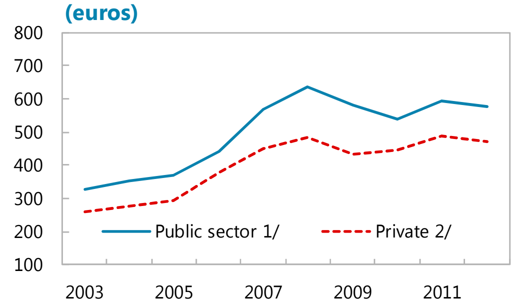


Sources: OECD; country authorities; and IMF staff calculations.

Role of the Public Sector

20. The average wage in the public sector is higher than in the private sector. The difference of euro-denominated wages in public and private sectors was modest in the beginning of the last decade but grew progressively larger, peaking before the 2008 global crisis. This might have created an impediment for wage adjustment: higher public sector wages created an incentive to seek employment in the public sector, effectively setting a "reservation wage" for a given level of skill. The differential was reduced during the 2009-10 period as public sector wages were frozen, but it still remains sizeable.

Average monthly gross wage, 2003-12 (euros)



Source: SORS.
1/ Public administration (all levels), education, culture and social services.
2/ Excluding entrepreneurs and enterprizes with social and mixed ownership.

21. In addition, trade unions are dominated by member unions from the public sector. This tilts the collective bargaining and trade unions' pressure for wage increases to the benefit of public sector employees.

Does the Collective Bargaining Process Create Rigidities in Serbia's Labor Market?

22. Collective agreements play an important role in Serbia's labor market. Collective agreements are concluded at the national, regional and company level, although the bargaining process is being moved to the industry level after the general collective agreement (GCA) expired in May 2011.The following features of the bargaining process pose challenges for the employers:

- Collective agreements specify so-called "base wages" for different levels of skills via a set of special multipliers. Base wages effectively set wage floors for different skill levels. Anecdotal evidence suggests that actual wages are generally higher than "base wages"; however, this mechanism is subject to risk of posing undue wage rigidities if the minimum wage pushes base wages above the market-clearing levels, or if there is a need of downward wage adjustment. Minimum wage negotiations take place under the Social Economic Council and when agreement is reached, the minimum wage becomes mandatory for all employers including those not represented by the participating employers' association.

- The Ministry of Labor, Employment and Social Policy extends application of recently concluded industry-level agreements to companies not represented in the bargaining process (Foreign Investor Council's White Book, 2011) and these companies were forced to abide by various obligations specified in the agreements. This poses a challenge for companies that do not have sufficient resources to comply with requirements specified in the agreements.

Labor Market Efficiency: Evidence from Global Competitiveness Report

23. Survey-based evidence confirms that Serbia is lagging behind in terms of overall flexibility of the labor market. Serbia ranked 122 out of 142 countries on the overall labor market efficiency in 2011 Global Competitiveness Report.[9] The ranking was done using 9 sub-indicators: cooperation in labor market relations (136 place among 142 ranked countries); flexibility of wage determination (64); rigidity of employment (90); hiring and firing practices (89); redundancy costs (50); pay and productivity (103); reliance on professional management (133); brain drain (139), and female participation rate (69). The rankings suggest significant room for improvement along nearly all dimensions

C. Policy Implications

24. Poor labor market outcomes are symptoms of Serbia's unfinished transition and therefore require a comprehensive strategy that goes well beyond the labor market itself. In order to alleviate unemployment, Serbia needs a dynamic private sector capable of generating demand for labor. This implies that there is no "silver bullet" solution for generating employment—Serbia faces the unfinished reform agenda that needs to be addressed with a comprehensive package of structural reforms (Selected Issues Paper "In Search of an Effective Growth Model").

25. The structural reforms should include a set of measures to reduce labor costs and removing disincentives for hiring. The wedge between total labor cost and wage is too high and should be lowered, if fiscal space allows, by reducing employers' contribution to social security as well as other labor-related expenses. The following measures could be considered:

- *Reducing the social security contribution rates paid by employers to reduce the TLC and increase demand for labor when there is fiscal space.* One way to achieve this is to strengthen capacity of the Tax Administration and Labor Inspection in order to increase collection rates—broadening the tax base could create scope for reducing the tax wedge.

- *Revising the formula for calculating the severance payment could provide more opportunities to job-seekers, especially older workers.* The severance pay should be calculated on the basis of the length of employment with the last employer (consistently with the practice in other European countries).

- *Simplifying dismissal procedures.* The Labor Law should clarify conditions for fair dismissals in order to reduce room for misinterpretation.

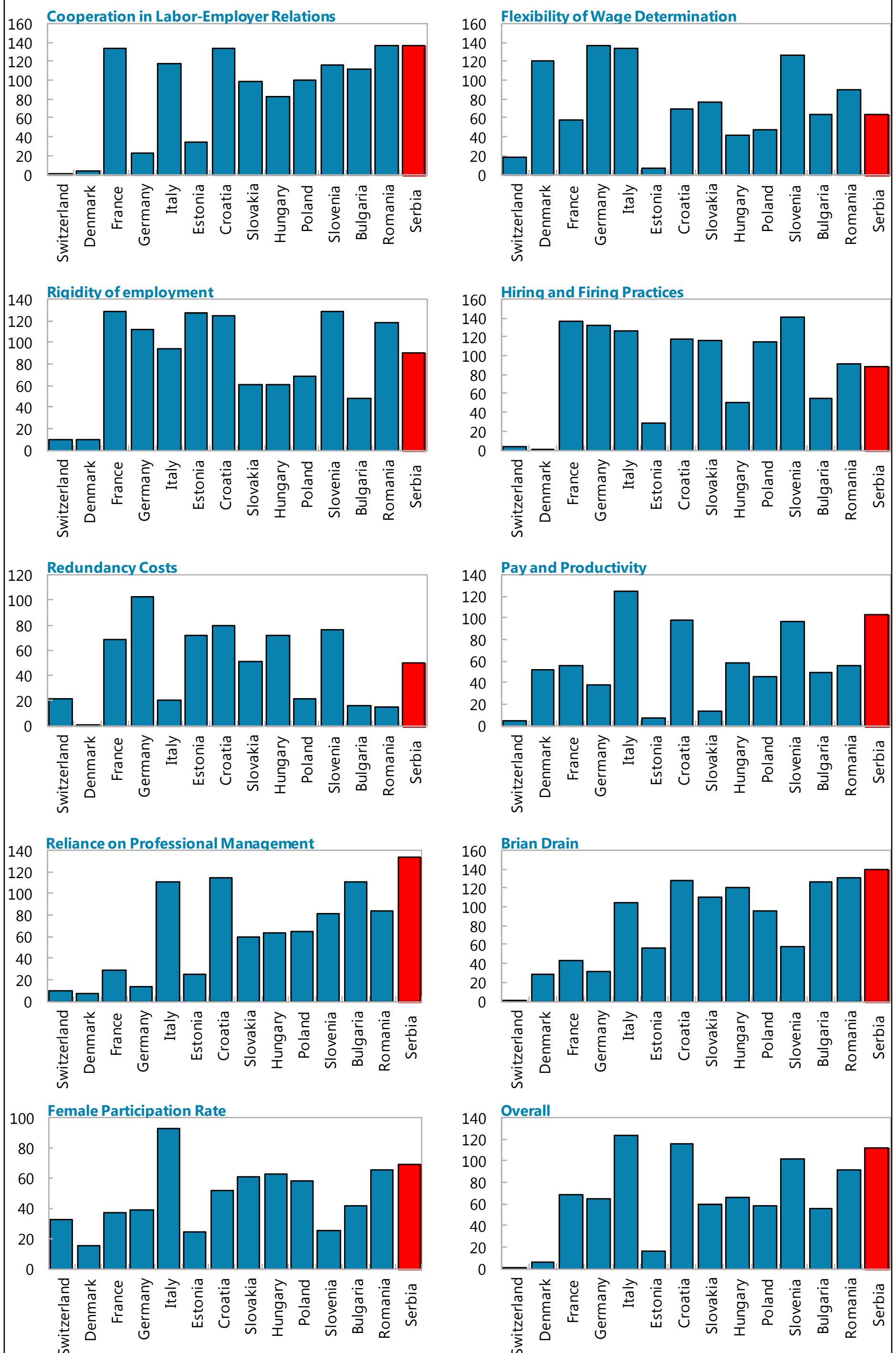
[9] All rankings except rigidity of employment, redundancy cost and female participation in labor force rely on Likert-scaled executive surveys. The "rigidity of employment" ranking is taken from the WB's Doing Business Report 2010 (which examined labor market conditions in 2009). It is based on three sub-indexes: difficulty of hiring, rigidity of hours and difficulty of firing.

- Making collective agreements less restrictive and bringing bargaining process to the company level. As the first best, giving priority to firm-level agreements over higher level collective bargaining and allowing wages setting at the company level (firms that do not have resources to administer their own agreements could have a choice to "opt-in" for a higher level agreement). As a second best, discontinue the practice of extending these agreements to all companies in a given industry.

26. More active use of active labor market policies (ALMP) would alleviate the skills mismatch and help unemployed adjust to the changing environment. Serbia's spending on ALMP is significantly lower than that of Serbia's peers (World Bank Country Economic Memorandum) and boosting these programs could alleviate skills mismatch.

27. An adequate social safety net would be needed for those who would be affected by increasing labor market flexibility. A reform could lead to reallocation of employment between economic sectors and also to layoffs. In order to avoid social tension, there should be an adequate social safety net protecting the poor.

Figure 5. Serbia: Labor Market Indicators from The Global Competitiveness Report 2011



Source: World Economic Forum: Global Competitiveness Report 2011.

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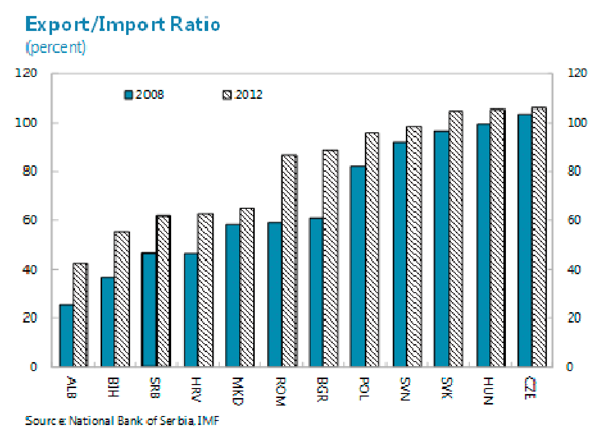
EXTERNAL COMPETITIVENESS ASSESSMENT[1]

Serbia faces significant external competitiveness challenges. Deep rooted structural problems and volatile and large real exchange rate appreciation in the past have held back a stronger export recovery from the global crisis. While FDI inflows have been robust during the pre-crisis period, they have mainly been destined for nontradable sectors. Expanding Serbia's low export base is needed to anchor sustainable growth and to enhance external sustainability. This will crucially depend on the implementation of structural reforms to improve the business environment and restructuring of socially and publicly owned enterprises.

A. Export Performance

1. Serbia's low export base points to deep rooted competitiveness problems. Serbia's economic structure has been characterized by a low and undiversified export base,[2] with one of the lowest export-import ratios in the region.[3] A surge in capital inflows and a credit boom during the 2000s fueled domestic demand and the nontradable sectors at the expense of exports (Selected Issues Paper,"In Search of an Effective Growth Model").



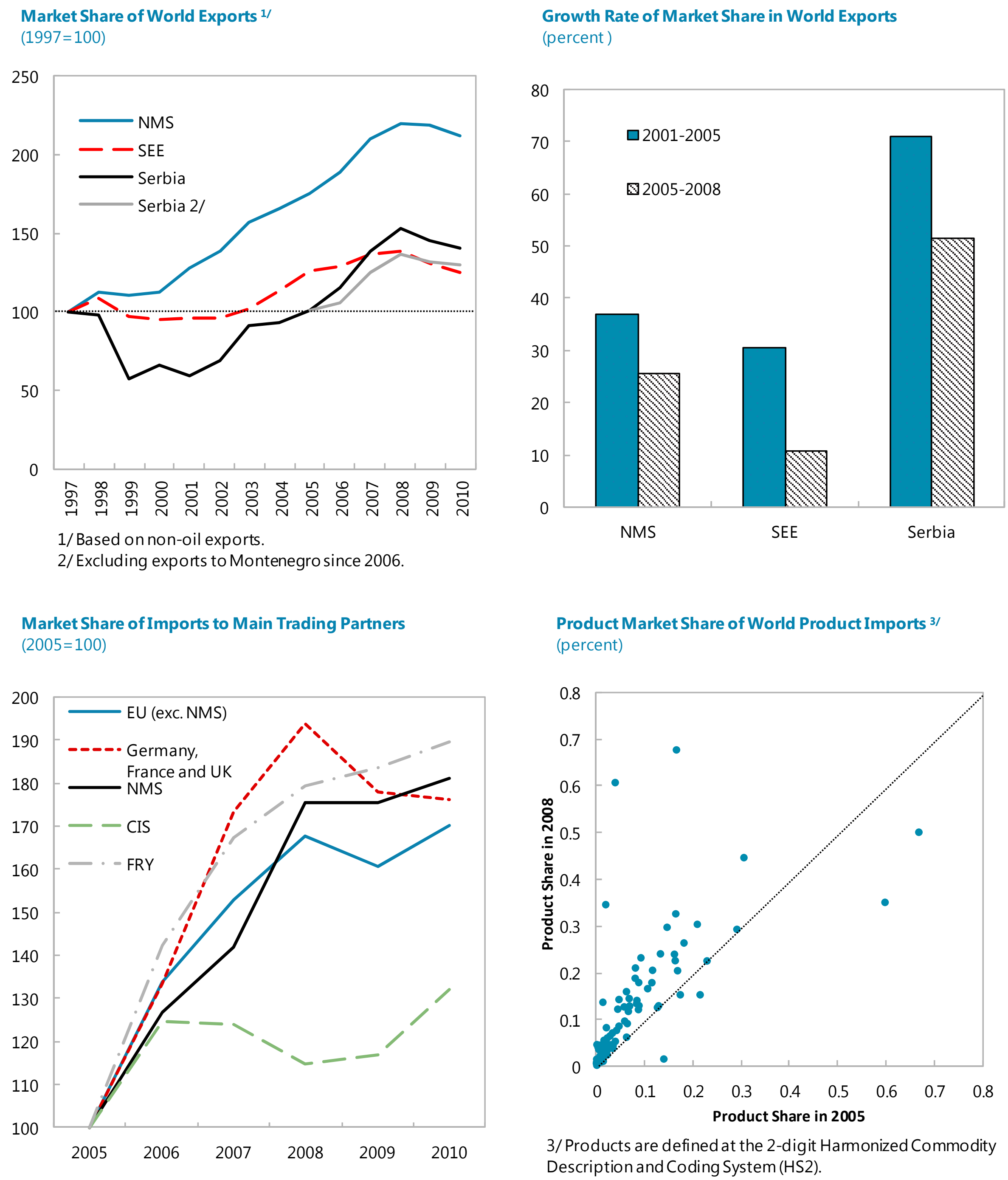
2. Though Serbia's exports expanded notably prior to the global crisis, its export base as percentage of GDP or imports remained broadly unchanged. Serbia's exports expanded rapidly between 2005 and 2008. Serbia's market share (measured as exports in percentage of world's imports) grew by 51 percent compared to its regional peers' average growth of 18 percent, with such an expansion recorded all across its main trading partners and products (Figure 1). However, these favorable dynamics of Serbia's competitiveness are partly explained by the low starting base as Serbia embarked on its transition path later than its peers, and by the newly accounted trade with Montenegro, leaving Serbia as a relatively closed economy with exports of goods at about 20 percent of GDP at the onset of the crisis.

[1] Prepared by Cesar Serra (SPR).

[2] Crops, food and metal products represent over 40 percent of Serbia's exports.

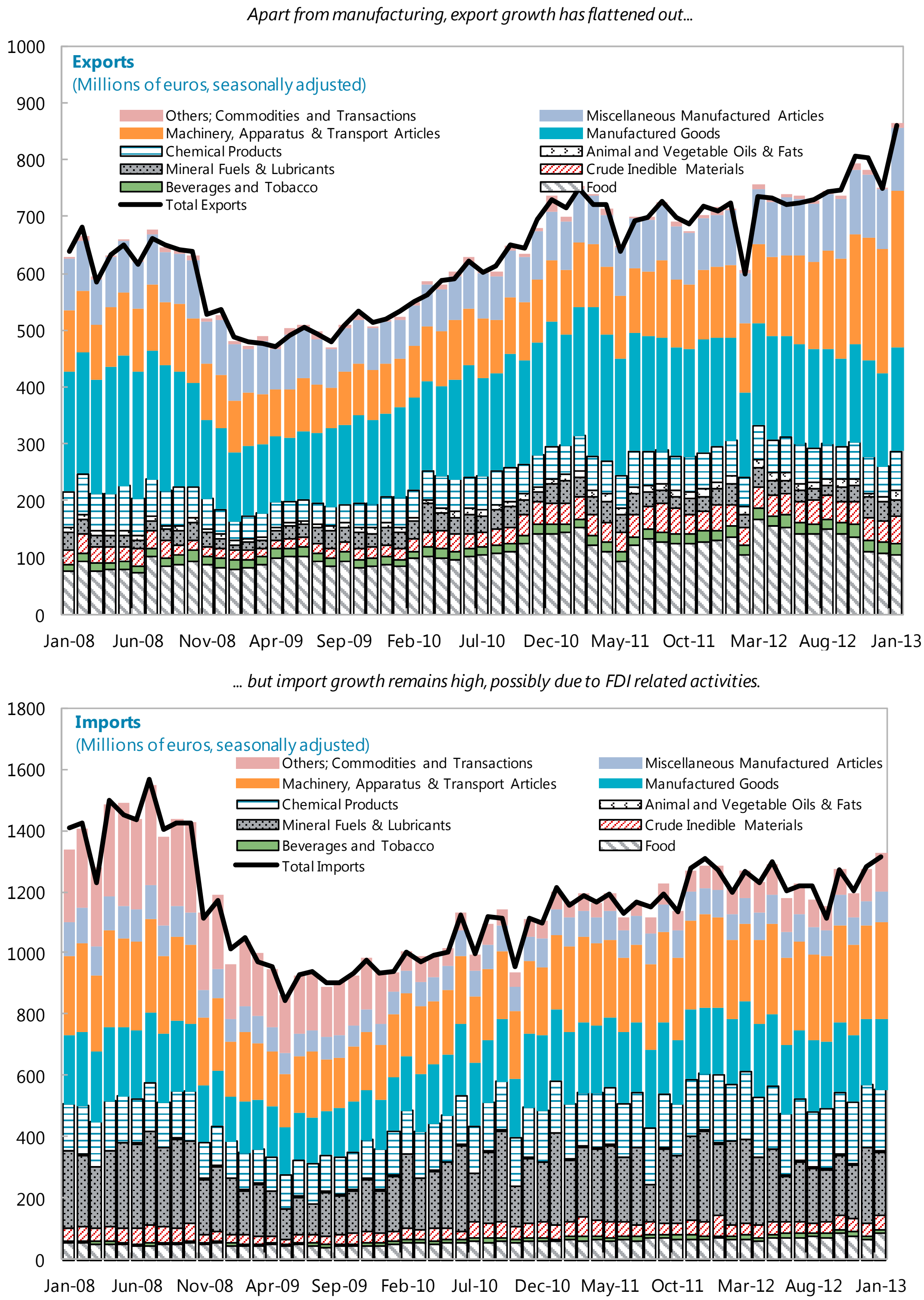
[3] Regional comparators include: CEE EU new member states (NMS: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovak Republic and Slovenia) and Southeastern European countries (SEE: Albania, Bosnia and Herzegovina, Croatia and Macedonia).

Figure 1. Serbia: Recent Trade Developments



Source: UN Comtrade, National Bank of Serbia and IMF staff calculations.

Figure 2. Serbia: Trade, 2008-2012

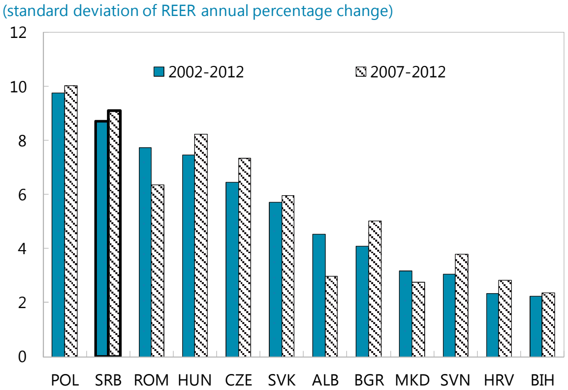


Sources: Haver; and IMF staff calculations.

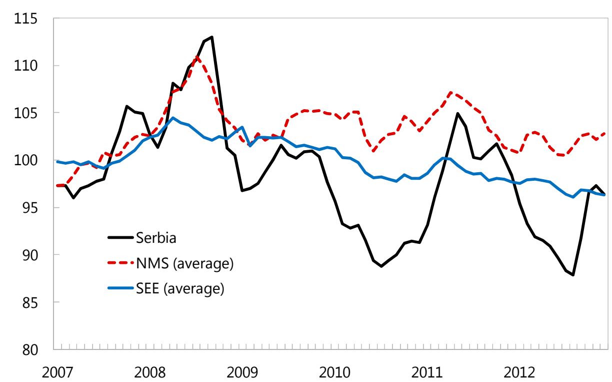
B. Competitiveness Pressures

3. Serbia's real exchange rate has been one of the most volatile in the region. Though exchange rate flexibility is essential for an economy to buffer against external shocks, excessive real exchange movements can cause volatile relative prices, create uncertainty, and shorten investment horizons, thus affecting export performance. Several studies have shown a negative link between real exchange rate uncertainty and export growth, especially relevant for financially-vulnerable firms in countries with low financial sector development.[4] High real exchange rate volatility could have undermined the competitiveness of Serbia's exports, as financial markets are not developed enough to allow firms to hedge against exchange rate risk.

Real Exchange Rate Volatility
(standard deviation of REER annual percentage change)



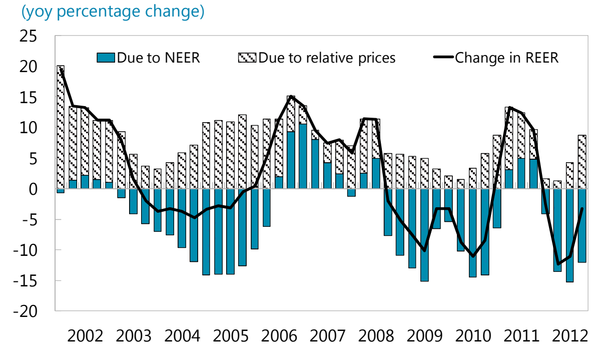
Real Effective Exchange Rate
(2007=100)



Source: WEO and IMF staff calculations.

4. Yet Serbia's price competitiveness has improved since the onset of the crisis. While a significant real appreciation during 2011 may have held back a stronger export recovery from the global crisis, price competitiveness seems to be in a better position as of end-2012 than before the crisis (with the real exchange rate weaker by nearly 15 percent relative to the pre-crisis peak). Yet a new cycle of real appreciation could hinder the needed recovery in exports to reduce external vulnerabilities (Selected Issues Paper "External Sustainability Assessment").

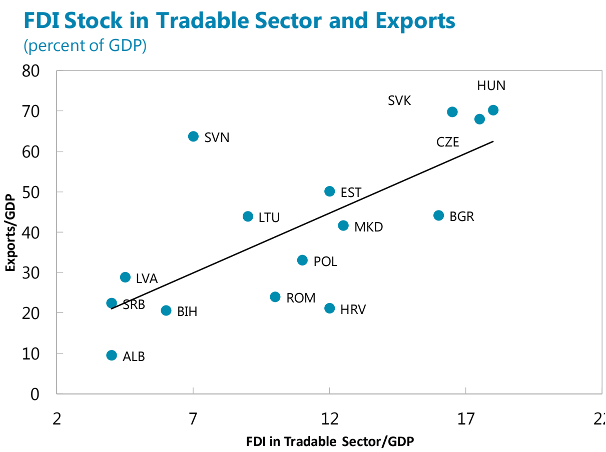
CPI-Based Real Effective Exchange Rate 1/
(yoy percentage change)

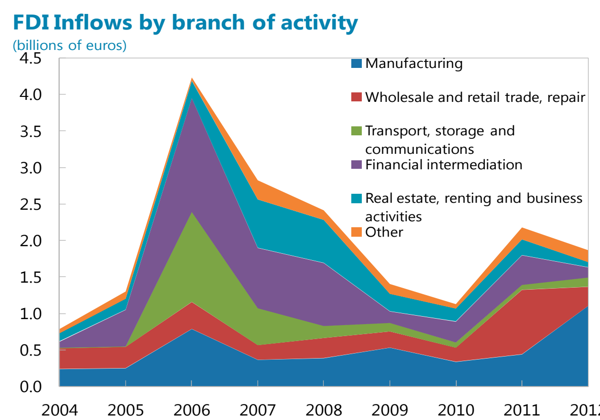


1/ Positive NEER and REER means appreciation.
Source: WEO and IMF staff calculations.

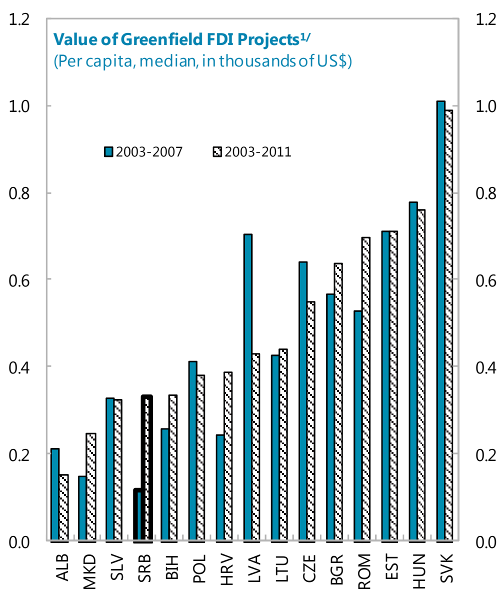
[4] See Berman and Hericourt (2010), Grier and Smallwood (2007) and Hericourt and Poncet (2012).

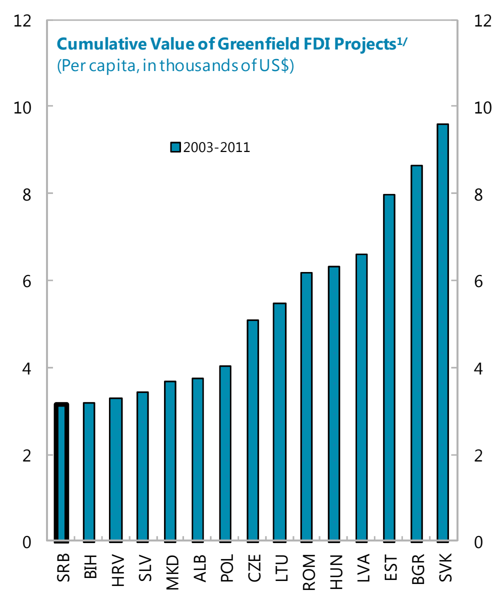
5. Attracting more FDI inflows to the tradable sector would help raise Serbia's export potential. Kinoshita (2011) shows that positive effects on external vulnerability from FDI inflows crucially depend on the sectors in which these flows accrue. The stock of FDI to the tradable sectors is positively correlated with export-to-GDP ratios. In contrast, FDI in the nontradable sector is positively associated with domestic demand booms and large trade deficits. Across this sample, Serbia ranks the lowest in having attracted FDI to the tradable sector. FDI into financial intermediation and other services dominated. While in Serbia only about 20 percent of FDI has been destined for the manufacturing sector before the crisis, the average of new EU members was about 36 percent. Additionally, Serbia ranks among the lowest in having attracted greenfield FDI, which is critical to enhance its export capacity. Increasing the share of FDI to the tradable sector and enhancing the incentives to attract more greenfield FDI should be an important priority to reap the export gains from FDI inflows.





Source: National Bank of Serbia, Kinoshita (2011), and IMF staff calculations.

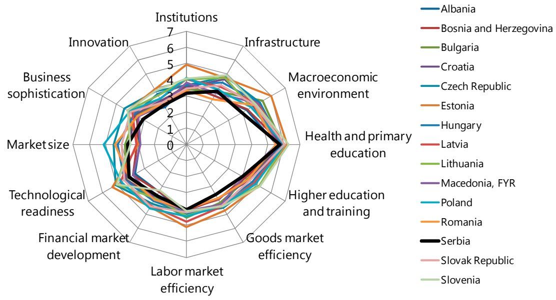




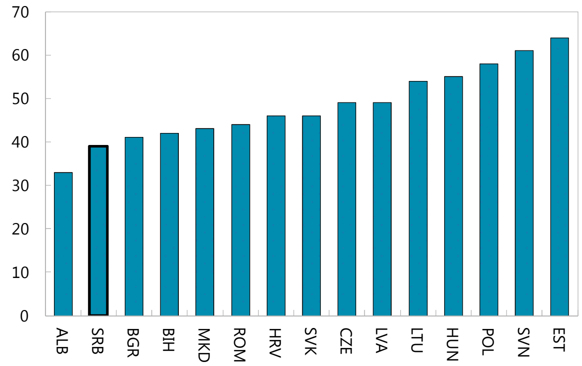
Source: UNCTAD.
1/ Data refer to estimated amounts of capital investment in greenfield FDI projects.

6. Serbia's global competitiveness ranks below its regional peers. The World Economic Forum's Global Competitiveness Index, based on a comprehensive assessment of countries' competitiveness, ranks Serbia 95th out of 144 countries in 2012–13. Serbia has scored lower than the regional average in each area considered. In particular, Serbia's competitiveness appears to be hindered by its macroeconomic environment, business sophistication, goods market efficiency, higher education and training, and institutions. Perception of corruption could also be holding back Serbia's attractiveness to international investors.

Global Competitiveness Indicators (2012-13)
(Score, 1-7, higher is better)



Corruption Perceptions Index
(Score, 0-100, with 0=highly corrupt and 100=highly clean, 2012)



Source: World Economic Forum and Transparency International.

7. Expanding Serbia's low export base to anchor sustainable growth and external sustainability will crucially depend on reforms to improve competitiveness. As there seems to be some space for real appreciation during the medium-term in line with Balassa-Samuelson effects that could be expected from productivity increases in an emerging economy, as well as from its slow convergence to EU standards, there is urgency to accelerate reforms that tackle competitiveness issues related to non-price factors (Selected Issues Paper,"In Search of an Effective Growth Model").

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EXTERNAL SUSTAINABILITY ASSESSMENT[1]

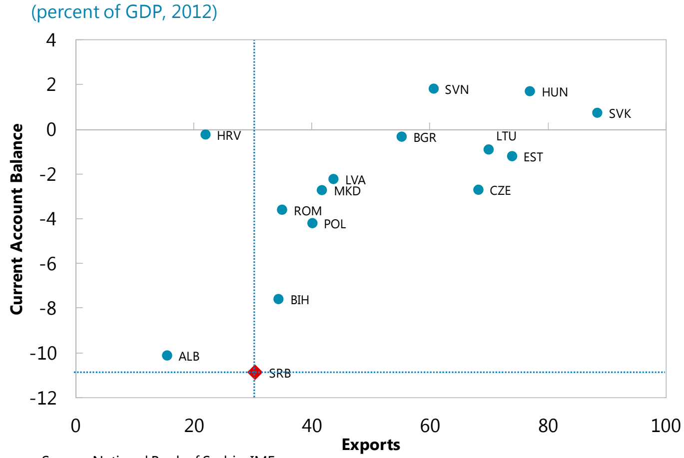
Serbia faces serious external vulnerabilities that are currently mitigated by large reserve buffers and a relatively flexible exchange rate. Yet Serbia's ability to service external debt could be endangered by adverse shocks, in particular to the exchange rate. Going forward, policy choices are crucial for medium-term external solvency. Under unchanged policies, significant exchange rate overvaluation could lead to persistently large current account deficits and a further deterioration of the net international investment position. In addition, projected external financing needs, roll-over risks, and drawdown of reserves would pose a challenge to external liquidity. Durable fiscal consolidation and structural reforms are therefore needed to reduce the current account deficit to a sustainable level, maintain adequate reserve buffers, stabilize the net international investment position, and help mitigate exchange rate misalignment.

A. Partial External Adjustment

1. Serbia's large current account deficit partly improved since the onset of the global crisis. The current account deficit has consistently been higher than that of regional peers due to low domestic savings, and was on an increasing path during the pre-crisis period. The crisis led to a sharp reduction in domestic demand, external financing, and net imports, and consequently led to a significant current account deficit adjustment (Figure 1). Yet at end-2012, Serbia and Albania were the only two countries in the region with current account deficits of over 10 percent of GDP.

Current Account and Exports

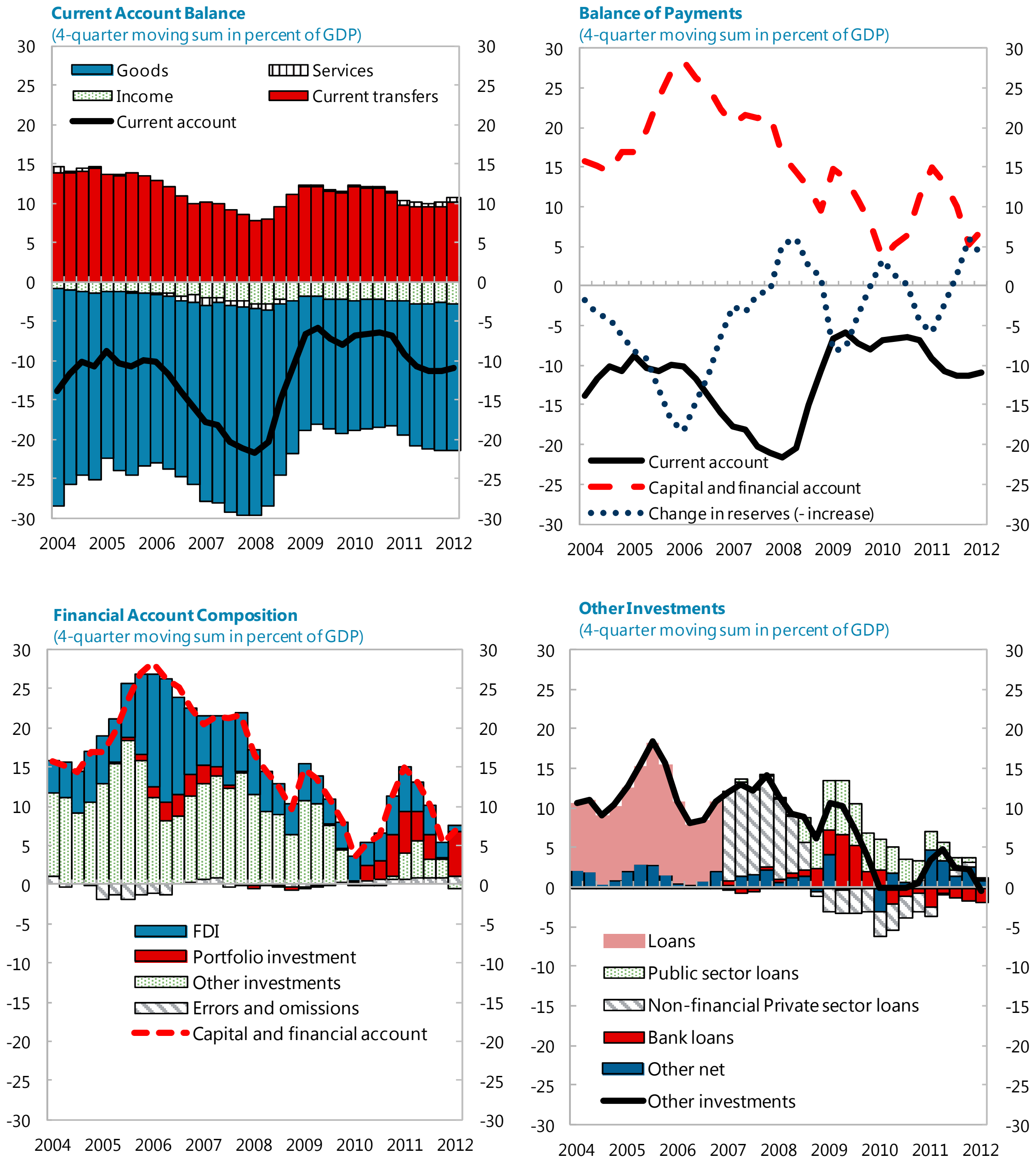
(percent of GDP, 2012)



Source: National Bank of Serbia, IMF

[1] Prepared by Cesar Serra (SPR).

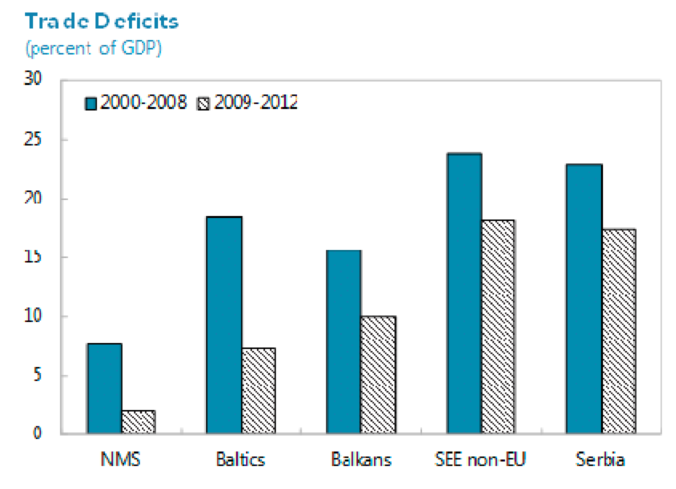
Figure 1. Serbia: Balance of Payments, 2004–12

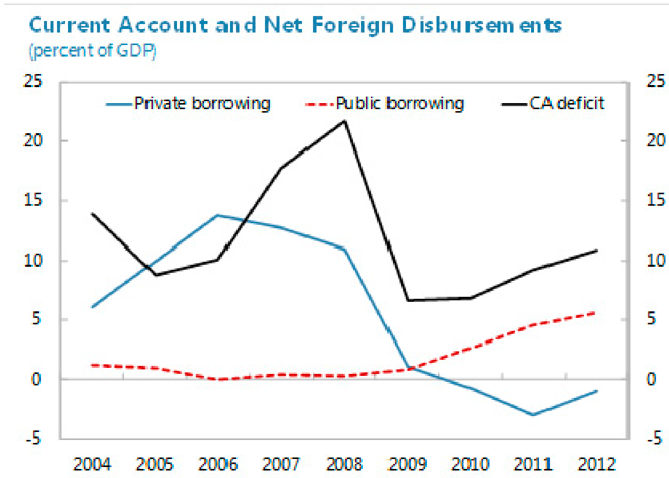


Sources: NBS and IMF staff calculations.

2. Trade deficits have narrowed after the crisis, but remain very large. This reflects a low export base and a recent plateauing of exports—despite a recent boost from Fiat exports—as Serbia's exports faced several exogenous shocks including a closure of a steel-exporting plant, temporary effects of draught on agricultural exports, and lower demand from euro area trading partners.

3. Current account deficits were financed by rapid accumulation of private external debt, and recently by public indebtedness. External indebtedness of the private sector peaked at 53 percent of GDP in 2010 from a low of 12 percent in 2004, implying a significant rise in foreign exchange risk. Additional vulnerability arises from nonfinancial firms' high share of private external debt (70 percent), as their ability to hedge FX positions is limited. At the same time, public external debt more than doubled since 2008 to 41 percent of GDP in 2012.

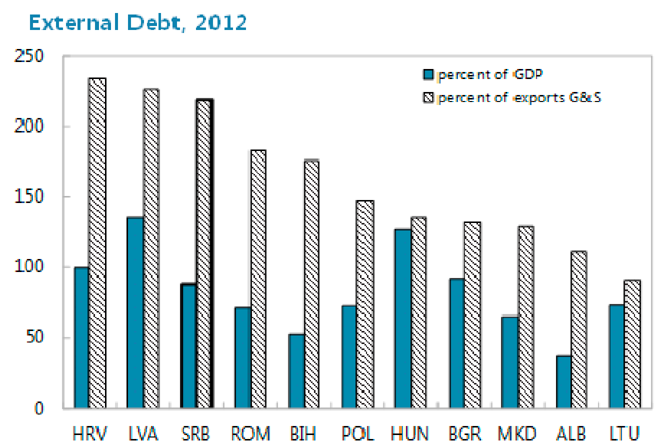




Source: National Bank of Serbia and IMF.

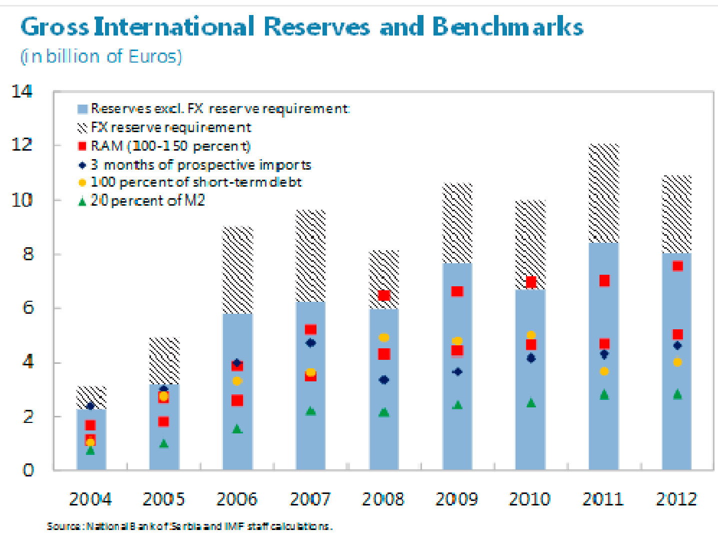
B. External Vulnerabilities and Buffers

4. High external deficits and debt pose external vulnerabilities. At end-2012, Serbia's external performance was weak relative to its peers, with one of the lowest export-to-GDP ratios and one of the highest current account deficits as percentage of GDP. Its undiversified and low export base makes it vulnerable to terms-of-trade shocks. Given Serbia's external debt of 86 percent of GDP, higher global risk aversion could increase the cost of financing and heighten rollover risks of the private and public sectors.

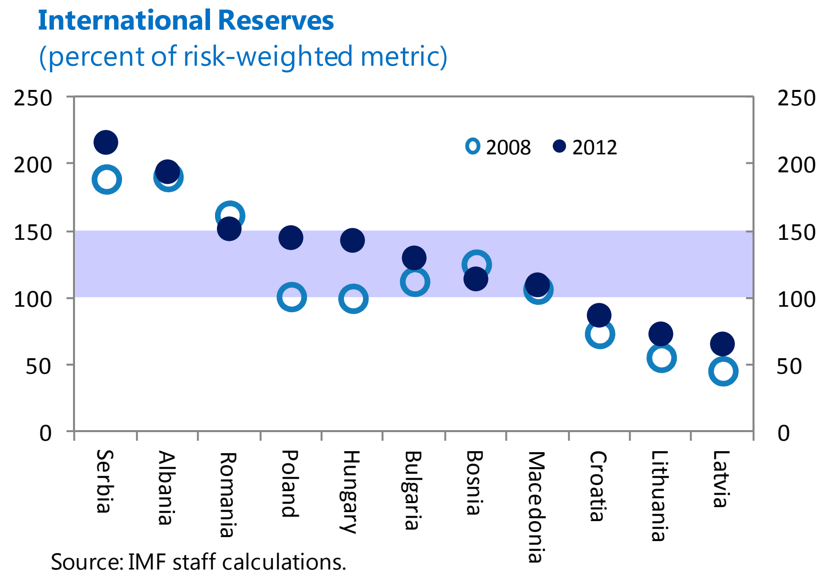


Source: National Bank of Serbia and IMF.

5. Serbia's ample reserves mitigate somewhat the large external vulnerabilities. Gross international reserves at EUR 10.9 billion at end-2012 were above the standard rules-of-thumb for three months coverage of prospective imports of goods and services, 100 percent of short-term debt (at remaining maturity), and 20 percent of broad money. Reserve coverage is higher than suggested by the risk-weighted metric recently developed by Fund staff.[2] Under such a metric, Serbia recorded the highest coverage in the region in 2012. All the above holds even if the assessment is based on reserves net of FX reserve requirements held at the central bank.

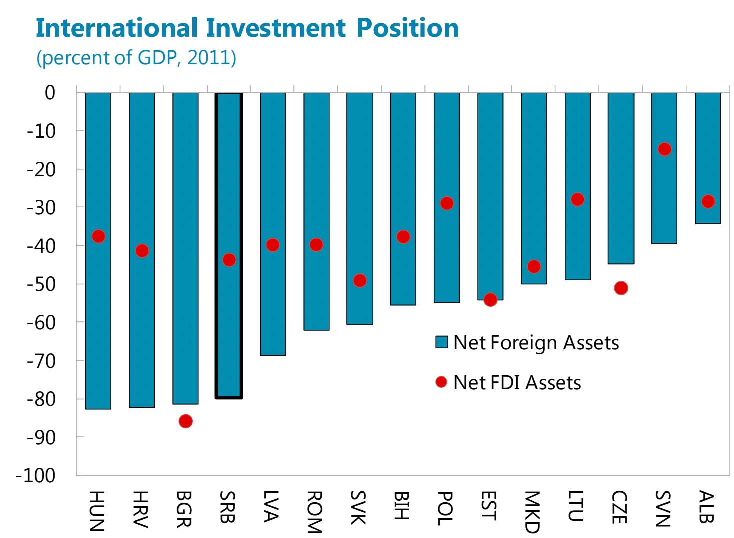


[2] The suggested appropriate range is 100–150 percent of the risk-weighted metric. The risk-weighted metric for countries with floating exchange rate is computed as 0.3*short-term debt (at remaining maturity) +0.1*(stock of portfolio and other investment liabilities)+0.05*(broad money) +0.05*(exports of goods and services).



Source: IMF staff calculations.

6. **Yet despite the large reserve buffers, Serbia's net indebtedness to the rest of the world is high.** Serbia's net foreign liabilities are large in cross-country comparison, and net FDI stock represents only about half of the total. Serbia's large accumulation of net foreign liabilities stems from protracted external imbalances associated with long-delayed structural reforms, fiscal imbalances, and the over-indebtedness of the private sector before the crisis. Catao and Milesi Ferretti (2013) argue that external crisis risks increase significantly when net foreign liabilities exceed 50 percent of GDP. Hence Serbia's large negative net international investment position is an indicator of external vulnerability.



Source: National Bank of Serbia, IMF

C. External Sustainability Illustrative Simulations

7. **Assessment of external sustainability hinges on assumptions about future macroeconomic variables and policies.** External sustainability requires the real exchange rate to be in line with its equilibrium value. The assessment under the two illustrative scenarios described below involves modeling the medium-term equilibrium value of the real effective exchange rate and comparing it to the country's projected level of the current account deficit, to investigate the need for further adjustment. The most widely used approaches are the macroeconomic balance, external sustainability, and equilibrium real exchange rate methods. In Serbia's case, absence of long time

series precludes the use of the equilibrium real exchange rate method. Hence results from the other two methodologies are presented. The current account norm is obtained by modeling the current account balance as a function of saving and investment in medium-term equilibrium without explicitly taking the real effective exchange rate into account. The underlying current account deficit is instead based on the determinants of exports and imports in medium-them equilibrium and is a direct function of the real effective exchange rate. The degree of exchange rate misalignment relative to medium-run fundamentals is then inferred as the proportional change in the real effective exchange rate needed to reconcile the underlying current account balance with its norm.

8. Under the illustrative unchanged policies scenario, persistent external imbalances would be associated with an overvalued exchange rate. The projected underlying current account deficit at about 10 percent of GDP would remain above the current account norm estimated at 6 percent of GDP. Under this scenario, the dinar appears overvalued compared to medium-term fundamentals in the absence of fiscal consolidation and meaningful structural reforms. The macro balance (MB) and external sustainability (ES) approaches suggest overvaluation in the range of 15–20 percent. Serbia's current adequate reserve coverage would be depleted as a result of external financing constraints and its negative international investment position would follow a decreasing path.

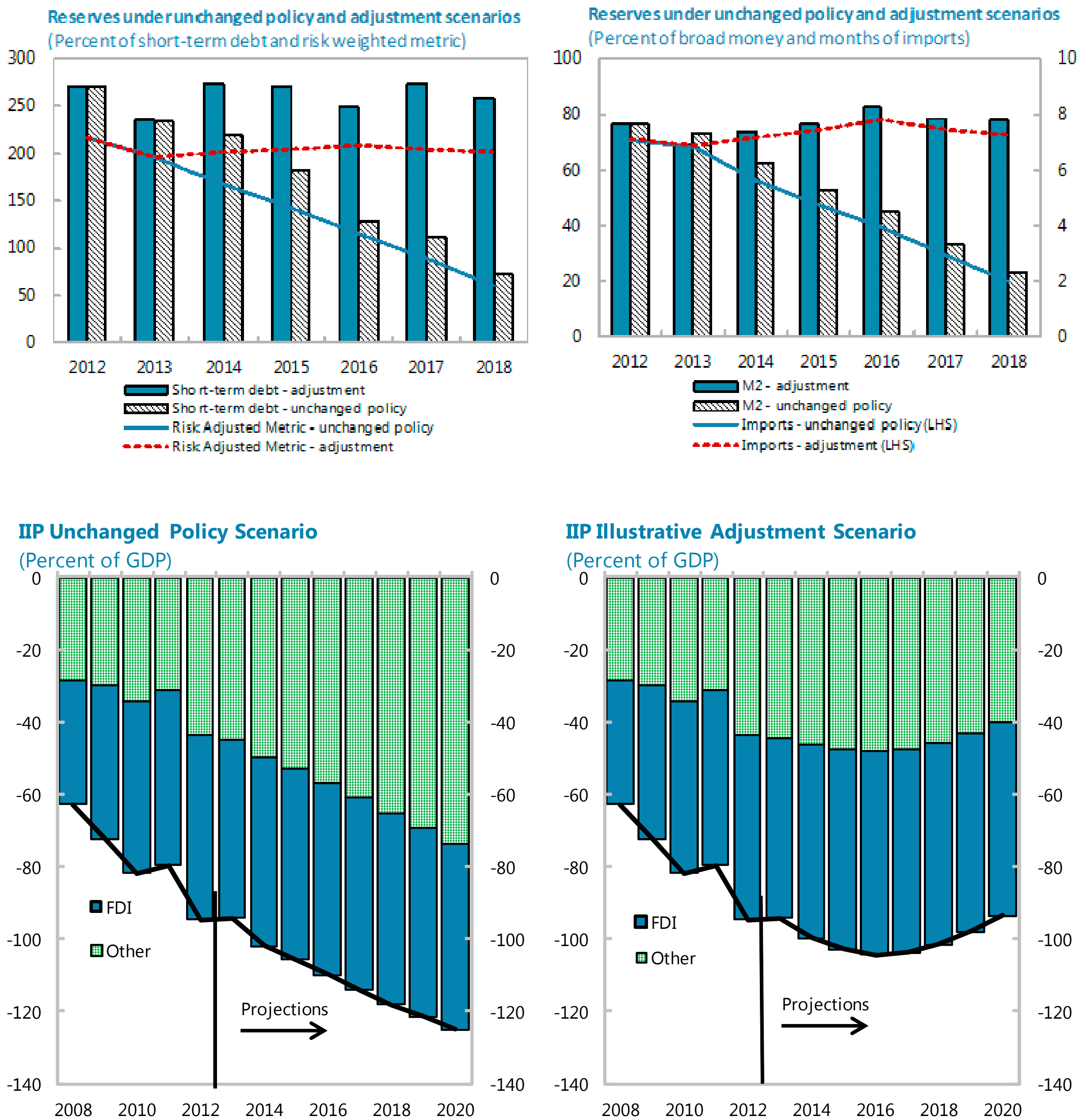
9. Sustained policy efforts would correct external imbalances. Durable fiscal consolidation and structural reforms targeted at improving the business environment, as in the illustrative adjustment scenario, would help ensure external sustainability, mitigate dinar overvaluation, preserve adequate reserve buffers, and reduce Serbia's net indebtedness to the rest of the world.

Serbia: Exchange Rate Assessment 1/

Scenario	Approach	REER misalignment (percent)
Unchanged policy	MB	20.3
	ES	17.6
Adjustment	MB	-3.4
	ES	-0.4

1/ Based on IMF CGER methodology extension in Vitek, 2013 (Vitek, Francis, "Exchange Rate Assessment Tools for Advanced, Emerging, and Developing Countries", mimeo, 2013).

Figure 2. External Sustainability Illustrative Simulations



Sources: Serbian Authorities; IFS; WEO; and IMF staff projections.

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Catão, Luis and Gian Maria Milesi-Ferretti, 2013, "External Liabilities and Crises," IMF WP No. 13/113.

Vitek, Francis, 2013, "Exchange Rate Assessment Tools for Advanced, Emerging, and Developing Economies," mimeo, IMF.

EXPLORING OPTIONS FOR ENHANCING FISCAL CONSOLIDATION[1]

Fiscal slippages in 2012 have led to the breaching of the fiscal rules, and increased the fiscal deficit and general government debt. Recognizing the associated risks, the authorities have implemented a range of tax increases, lowered the indexation of wages and pensions, and adopted a medium-term fiscal strategy. In order to put the public finances on a sustainable footing, additional measures should be considered. These could include reducing discretionary spending, tackling high wage and pension bills, and accelerating the implementation of structural reforms, notably on pensions, SOEs, tax administration and PFM.

A. Background

1. Fiscal slippages occurred in 2012. The fiscal deficit reached 7.6 percent of GDP in 2012, well above the original budget and the maximum deficit allowed under the fiscal deficit rule.[2] This was mainly driven by election-related spending, recapitalization of nonviable state-owned banks, and changes in the fiscal decentralization law which worsened vertical imbalances. High fiscal deficit combined with large issuance of guarantees propelled public debt to about 62 percent of GDP in 2012, up from about 50 percent of GDP in 2011 and well above the legal ceiling of 45 percent of GDP.[3]

2. To tackle rising fiscal deficit, the authorities announced in late 2012 a fiscal consolidation package which included tax increases and expenditure rationalization. Among the revenue measures: (i) the standard VAT rate was increased from 18 percent to 20 percent, while the reduced rate of 8 percent remained unchanged;[4] (ii) the CIT rate was raised from 10 to 15 percent, and some tax incentives are eliminated; (iii) the personal income tax rate on dividends and interest incomes increased from 10 to 15 percent; and (iv) excise duties on cigarettes and petroleum products also increased. On the expenditure side, the measures focused on capping the indexation of wages and pension indexation, and setting tight ceilings on discretionary spending. Moreover, efforts to integrate own sources accounts into central government budget are expected

[1] Prepared by Roland Kpodar (FAD).

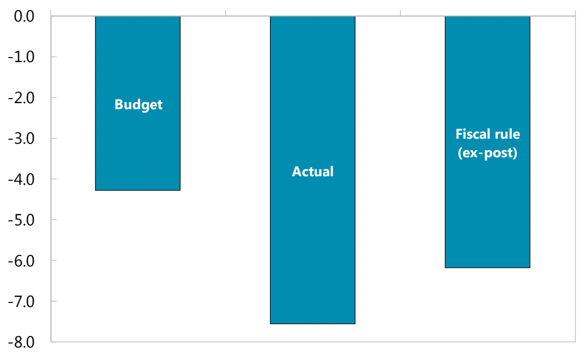
[2] According to the fiscal responsibility law enacted in 2010, the fiscal deficit should not be higher than the fiscal deficit of the previous year, corrected for 40 percent of the output gap (potential real GDP growth rate is set at 4 percent) and 30 percent of the deviation from the medium target of 1 percent of GDP.

[3] The public debt rule was breached ex post in 2011 following a downward revision in GDP, and higher issuance of guarantees in late 2011. Appendix 1 summarizes issues with the definition of public debt in Serbia.

[4] The change in the VAT law entails revenue loss of about 0.2 percent of GDP (of which about half is one-off revenue loss) due to the shift to VAT payment upon collection for small and medium enterprises, higher VAT refund for farmers, and the increase in the VAT threshold.

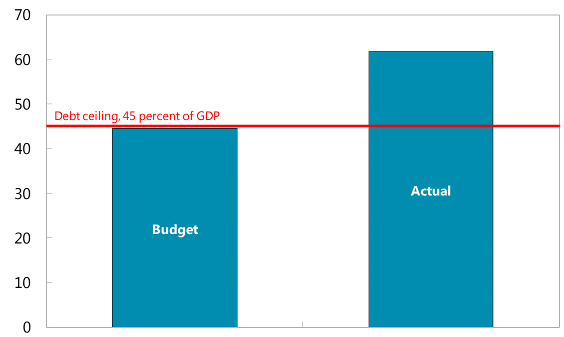
to yield some savings. Overall, the net budgetary impact of the measures is estimated at 2 percent of GDP in 2013.

Fiscal Deficit Estimates, 2012
(Percent of GDP)



Sources: National authorities and IMF staff estimates.

Public Debt Estimates, 2012
(Percent of GDP)



Sources: National authorities and IMF staff estimates.

B. Achieving a Credible and Durable Fiscal Consolidation

Serbia's general government finances in a cross-country setting

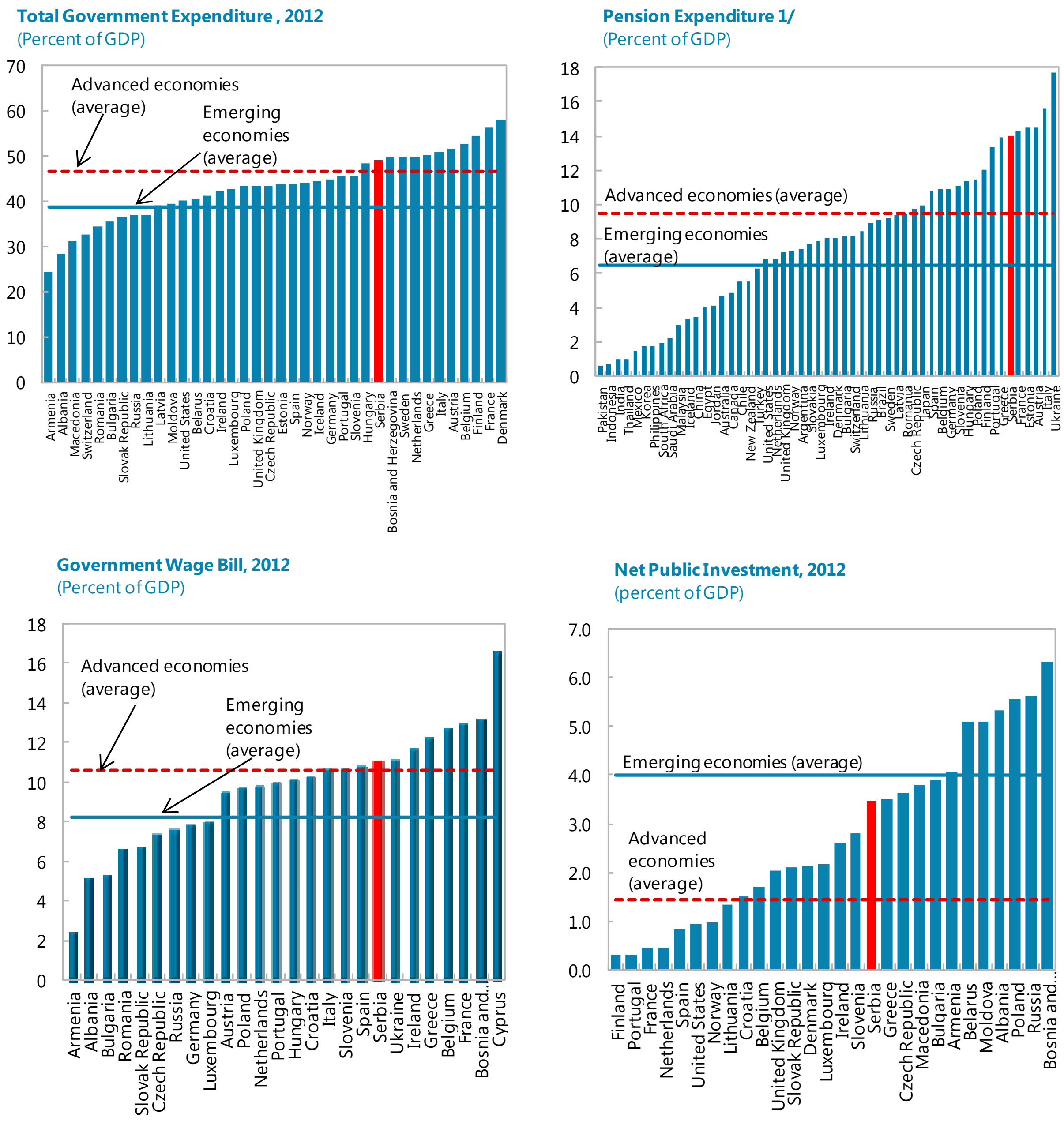
Expenditure

3. The level of general government spending in Serbia is high relative to other countries, reflecting mainly large wage and pension bills (Figure 1). Spending as a share of GDP rose from 42 percent of GDP in 2005 to 49 percent of GDP in 2012 (of which 0.8 percent of GDP accounted for bank recapitalization). While investment spending is relatively low, current spending accounts for the bulk of expenditures, with the biggest contributors being the wage and pension bills. Pension spending has been particularly high as a share of GDP—double the average for emerging countries, and about 50 percent more than the average of advanced economies.[5] Similarly, Serbia's wage bill also stands out in a cross-country comparison. The wage indexation rule was designed in a way that, if strictly applied, the wage bill ratio to GDP will trend down gradually over the time.[6] But, in practice the wage bill growth has exceeded the percentage increase implied by the indexation rule due to one-off increases (wage bonuses) and a persistent wage drift.

[5] See Selected Issues Paper, "Pension Reform in Serbia."

[6] Wages and pensions are indexed on inflation and real GDP twice a year in April and November. Wages increase in April by the past six month CPI inflation plus half of the previous year real GDP growth, and in November wages are adjusted upward by the past six month CPI inflation, provided that inflation and real GDP growth are positive. With regard to pensions, the April indexation is based on the past six month CPI inflation plus any percentage points of the previous year's real GDP growth above 4 percent (the authorities' potential GDP growth), whereas the November indexation allows an increase in pensions by the past six month CPI inflation.

Figure 1. General Government Expenditure in Serbia and Selected Economies



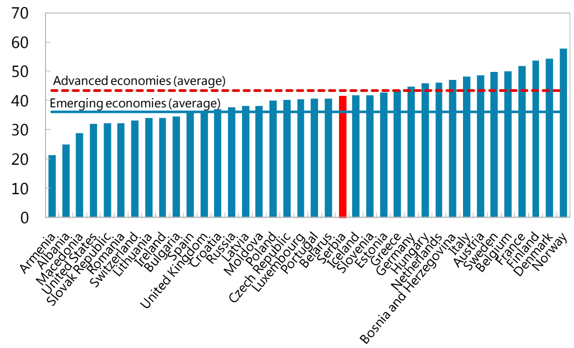
1/Latest data available.

Sources: National authorities, World Economic Outlook and IMF Staff estimates.

Revenue

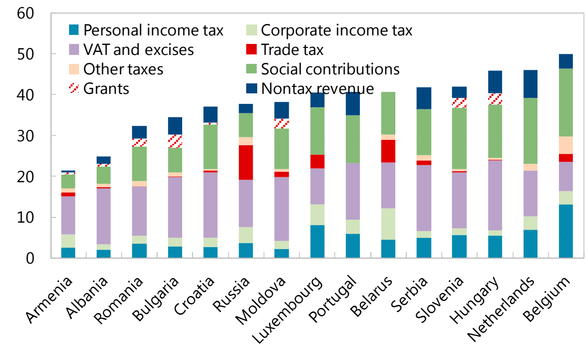
4. Serbia has a relatively strong revenue collection. Serbia's revenue to GDP ratio compares favorably to the average of emerging economies, and is close to that of advanced economies. Looking at the structure of revenue offers more insights. In contrast to many other countries, social contributions make up a large share of government revenues in Serbia. Furthermore, while Serbia performs better than its peers in VAT and excise collection, it lags behind in corporate income tax revenue. Finally, it relies to a larger extent on nontax revenues, which tend to be more volatile.

General Government Revenue in Selected Economies, 2012 (Percent of GDP)



Sources: National authorities and World Economic Outlook.

Structure of Government Revenue, 2012 (Percent of GDP)



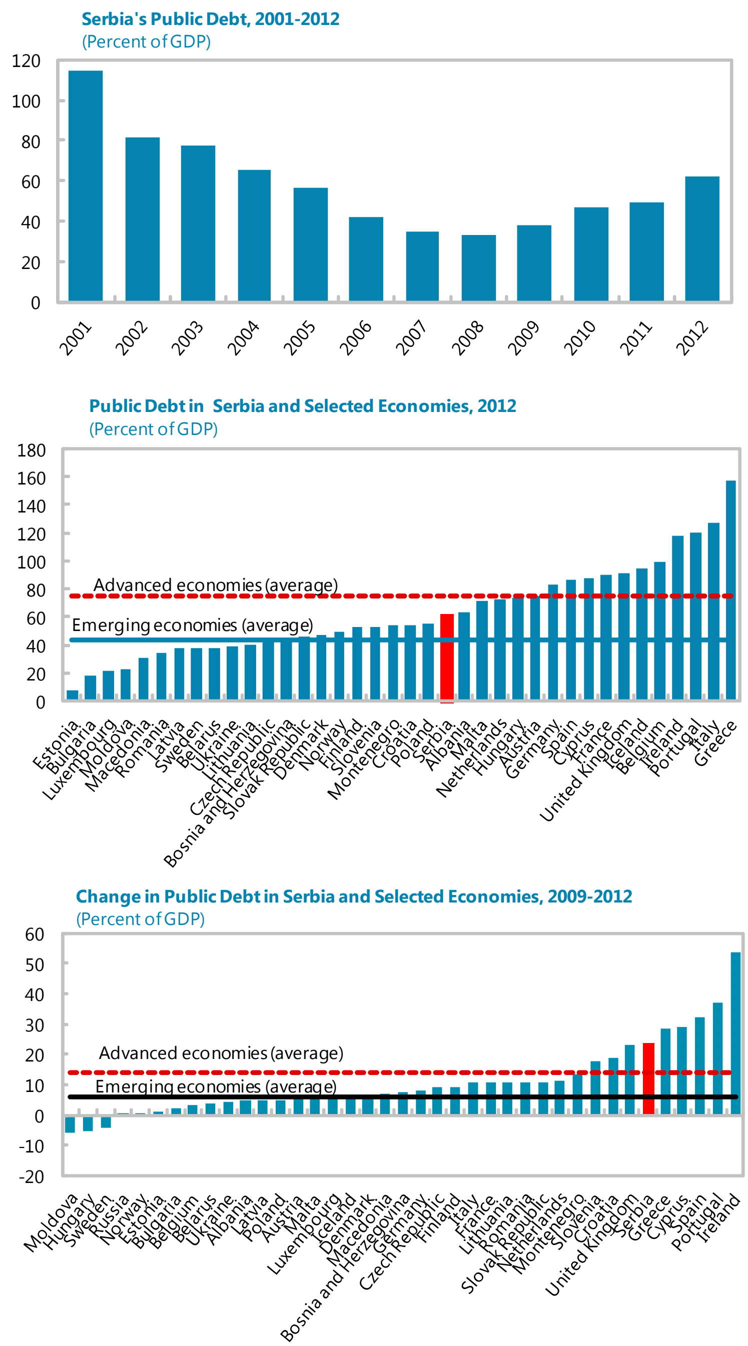
Sources: National authorities and World Economic Outlook.

Public debt

5. Serbia's general government debt has considerably increased in the recent years. This has reversed the gains from the earlier debt relief (Figure 2).[7] Although the recent increase in debt was partly due to the global financial crisis and the associated output weakness, fiscal policy was also played a role as the deficit rule was breached. Issuance of debt guarantees and more recently bank recapitalizations, have also contributed. As a result, Serbia's public debt is relatively high compared to the average of the European emerging economies.

[7] Serbia inherited a large share of the former Yugoslavia's external debt. The Paris Club agreed in 2001 to cancel 66 percent of US$4.6 billion of Serbia's debt, (23.4 percent of total external debt in 2000—US$2.4 billion upon signing a Stand-By arrangement with the IMF (2002) and USD$ 0.6 billion upon successful completion of the arrangement (2006). The remaining US$1.6 billion was rescheduled. This was followed by the London Club which in 2004 wrote off 62 percent of the US$2.7 billion external debt Serbia owed to commercial creditors.

Figure 2. Public Debt in Serbia and Selected Economies



Sources: National authorities and World Economic Outlook.

Possible options to strengthen fiscal consolidation

Expenditure measures

6. **A sustainable reduction in spending would have to rely, in large part, on mandatory spending.** Mandatory spending (wages, pensions and transfers, interest payments) accounts for about 2/3 of total government expenditure. Therefore, any credible and durable expenditure-based consolidation would have to reduce significantly the share of mandatory spending, particularly wages and pensions. This would also be key to creating fiscal space for investment to support growth. Maintaining the level of transfers to households but improving their targeting could create savings, while the vulnerable segments of the population would remain protected. However, there is a room to make savings on transfers to sub-national governments in order to enforce fiscal discipline.[8] Discretionary spending can also be contained, notably by controlling goods and services and rationalizing state subsidies.

7. **Freezing public wages and pensions would help contain public spending.** Options to reduce the wage bill ratio to GDP include cutting public workforce, reducing wage levels or its growth rate. Given the currently high unemployment rate (over 22 percent), shedding public sector jobs at a time when the private sector has limited room to absorb them would further increase the unemployment rate in the short-term. A wage and pension freeze during 2009–2010 has helped contain the growth of mandatory spending, and could be considered again.[9] This could be complemented by a control of the public sector employment, but this requires a comprehensive registry of public employees which has yet to be completed.

8. **A credible consolidation strategy should also tackle discretionary spending.** Spending on goods and services and subsidies could be reduced to their historical levels,[10] but this should be backed by an effective reduction of functions and programs performed by the line ministries. In the case of subsidies, not only there is a need to reduce their overall size, but it would also be critical to refocus them towards those that incentivize productive investments. Efforts to contain spending on goods and services and subsidies should be complemented with a comprehensive system to track accumulation of arrears in order to prevent their accumulation.

Revenue measures

9. **Consideration should be given to broadening the tax base, given the recent increase in tax rates in 2012.** This would help improve revenue collection without further increasing tax rates, minimize economic distortions from numerous tax exemptions, and reduce compliance costs.

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[8] Selected Issues Paper "Has Sub-National Spending Added to Fiscal Pressures?"

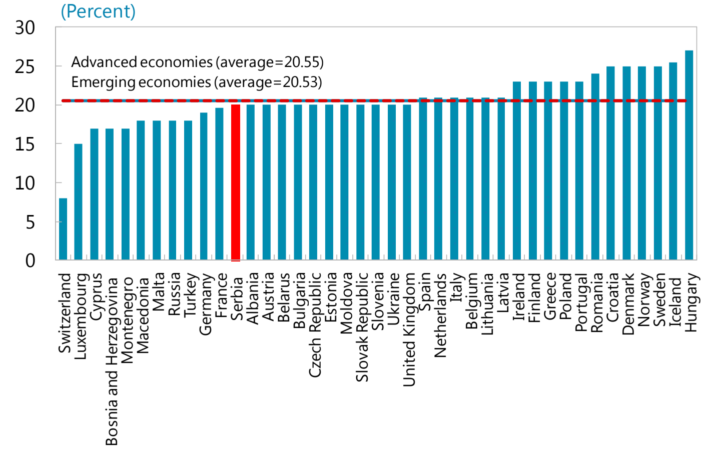
[9] The Selected Issues Paper "Pension Reform in Serbia" provides additional reform options which focus on fixing the structural imbalance in the pension system.

[10] The average levels over 2007–11 are reasonable benchmarks.

10. Serbia's new VAT rate of 20 percent is in line with the average of emerging and advanced economies, but the tax base could be expanded. In particular, the following measures could be considered: reducing the list of items subject to the reduced VAT (8 percent)—this in line with EU requirements—and eliminating VAT refunds on the first purchase of residential property. Additionally, the reduced rate could also be increased from 8 to 10 percent following the recent increase in the main rate, although this may have social implications given that food prices will be affected.[11] Moreover, recent initiatives to increase VAT refunds (for example for farmers) and expand the list of items subject to the reduced rate (such as some foods, and equipment) undermine fiscal consolidation, and should be reversed.

Standard VAT Rates, 2012

(Percent)

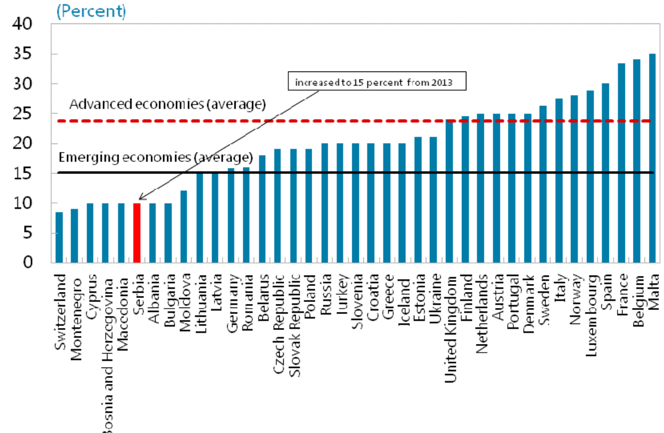


Sources: National authorities

11. The CIT rate was increased from 10 percent in 2012 to 15 percent in 2013, but exemptions remain. That CIT incentives cost about 90 percent of total CIT collection in 2008 (IMF, 2010b), suggesting that there is room to reduce the numerous deductions that erode the tax base. Streamlining current accelerated capital allowances, tax credits and tax holidays would improve revenue collection significantly while maintaining the current low CIT rate.[12]

Standard CIT Rates, 2012

(Percent)



Sources: National authorities

Strengthening structural reforms

12. Successful fiscal consolidations are often supported by structural reforms. While the authorities' fiscal strategy adopted in November 2012 lays out a number of critical structural reforms, details about the key policy actions, the implementation schedule, and the prioritization of the reforms need to

[11] However, the use of reduced VAT rates is an inefficient way to provide relief for low-income families; expenditure policies, in areas such as education and health, may be more effective tools for pursuing equity objectives than the use of differential VAT rates (IMF, 2010c).

[12] Selected Issues Paper "Corporate Income Tax and Other Corporate Taxes" and IMF (2010b).

be fleshed out. Also, the reforms need to be well prepared, and their implementation should take into account capacity constraints. Their implementation often takes time and their benefits are not always immediate. The most critical structural reforms to support fiscal consolidation include health care and pension reforms, reforms of SOEs, and PFM reforms.[13] Priorities include:

- *Implementation of parametric pension reforms*, including introduction of actuarial penalties for early retirement, equalization of the retirement age of women and men, and raising both to 67 years;[14]
- *Contain health spending by improving* the procurement system of the Health Fund, phasing in a capitation based payment system in primary care and an output-based system in hospital care, imposing a cap on the duration of sick leave benefits, increasing the level of co payments, and rationalizing the number of nonmedical staff in primary health care facilities. These measures can substantially reduce health spending without compromising quality of health care services;
- *Speed up reforms of public enterprises and accelerate the privatization process* to contain subsidies and contingent liabilities (in particular government guarantees);[15]
- Step up efforts to implement key PFM reforms, such as setting binding medium-term expenditure ceilings, putting in place an effective inter-governmental fiscal coordination, and moving to program and performance budgeting;[16]
- *Accelerate the modernization of tax administration* to improve tax compliance;
- *Rationalize public employment, and spending on goods and services* through outsourcing in non-core functions, such as transport, security, mail, cleaning catering, and maintenance.

[13] These measures are discussed in depth in IMF (2010c), and the 2009 Public Expenditure Review conducted by the World Bank.

[14] Selected Issues Paper "Pension Reform in Serbia."

[15] See Selected Issues Paper "In Search of an Effective Growth Model."

[16] Structural reforms are discussed in depth in the Selected Issues Paper "Diagnosing and Addressing Serbia's Structural Fiscal Challenges."

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HAS SUB-NATIONAL SPENDING ADDED TO FISCAL PRESSURES?[1]

Expenditure decentralization has progressed among European economies, including in Serbia, motivated in part by the possibility of fiscal savings and the improved delivery of public services. However, these gains are not assured. Factors such as weak fiscal discipline at the subnational level, inadequate expenditure controls, and poorly designed intergovernmental transfer frameworks can result in heightened expenditure pressures and a bloated public sector. A recent empirical study of European economies (EU15) finds that expenditure decentralization financed through transfers and/or borrowing is associated with weaker fiscal outcomes. In Serbia's case, vertical fiscal imbalances (VFIs) were exacerbated following the 2011 amendments to the decentralization law that increased the share of the central-government (CG) devolved revenues to local governments (LGs) without matching expenditure responsibilities that would have, in principle, neutralized the impact of the reform on the consolidated deficit. Rather, the resource transfer was matched by an increase in new discretionary spending at the local level that, alongside election related fiscal slippages at the CG level, led to a deterioration in the consolidated deficit. Rolling-back the 2011 modifications—which have an estimated cost of around 1 percent of GDP—would help fiscal consolidation. This should to be complemented by revenue and expenditure measures to strengthen fiscal outcomes at the local level.

A. Expenditure Decentralization in a Regional Context—Stylized Facts

1. **Deepening expenditure decentralization has been a common trend across most European economies, including emerging economies such as Serbia.** Over the past several decades, many European economies have progressively implemented expenditure decentralization[2] programs, largely motivated by the potential for cost effectiveness through savings and the improved delivery of public services. This process is fairly well advanced among more developed economies. The percent of public expenditure programs carried out on average at the subnational level in the EU15 peaked at almost 25 percent prior to the European crisis and currently hovers at around 24 percent. Among new member states (EU10)[3] progress has been more pronounced with the ratio of subnational expenditures as a share of consolidated government spending increasing from 25½ percent in the early 2000s to almost 28 percent as of 2010.

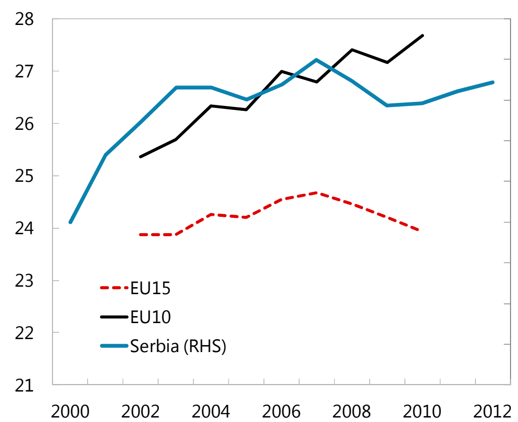
[1] Prepared by Christopher Faircloth (EUR).

[2] For the purposes of this analysis, expenditure decentralization is defined the ratio of subnational to consolidated general government spending. Data limitations preclude the analysis of more refined decentralization indicators.

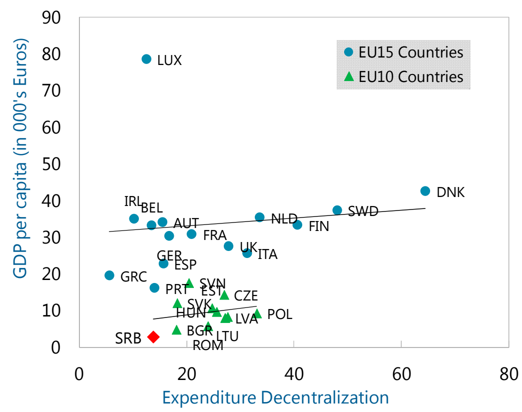
[3] The EU10 includes: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia, and Slovakia.

2. Serbia's decentralization framework has undergone important legislative changes over the past decade. This has contributed to an almost doubling in the expenditure decentralization ratio to an estimated 16 percent in 2012. And, while this degree of expenditure decentralization remains below European comparators, the level does not appear out of line given Serbia's stage of development. There is a correlation between income level of economies and the degree of decentralization—possibly driven by increased incentives and capacity for larger economies to devolve expenditure responsibilities to the subnational level—and on that basis Serbia does not appear to be an outlier. Nevertheless, it is important to bear in mind that decentralization is heterogeneous across countries as the process is driven by political, historical and cultural as well as economic factors. As such, it is not possible to definitively identify an "optimal" level of expenditure decentralization for the purposes of cross-country comparisons.

Average Expenditure Decentralization Ratio
(in percent of general government expenditures)

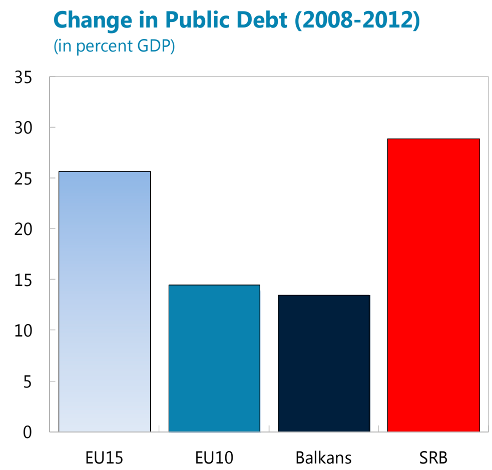


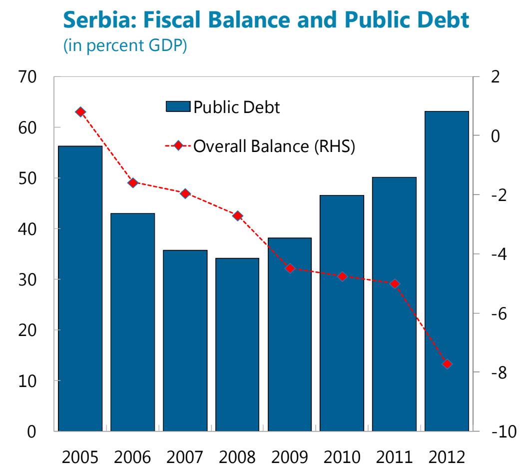
Expenditure Decentralization and GDP per capita (values for 2010)



Sources: Eurostat, National authorities, and Fund staff estimates.

3. The European financial crisis exacerbated fiscal pressures in many countries and understanding the role played by subnational spending in this process is critical. The deterioration in public finances was particularly pronounced in Serbia. The fiscal deficit worsened from an average of 1¼ percent of GDP in the pre-crisis period (2005-08) to a post crisis average of almost 5 percent of GDP (2009–11). In 2012, the combination of an economic contraction election-related spending, and one-off costs related to bank resolution, arrears clearance, and payments for called guarantees amounting to 1 percent of GDP) fueled a further deterioration in the deficit to 7½ percent of GDP. This resulted in a sharp rise in the stock of public debt relative to pre-crisis levels of almost 30 percent of GDP—more than double the average debt increase observed in Balkan economies and the EU10 over the same period. Public debt currently stands at 62 percent of GDP—well above the legislated debt ceiling of 45 percent of GDP and notwithstanding some fiscal consolidation measures undertaken in late 2012.





Sources: WEO and Fund staff estimates.

4. **On the surface, the contribution of subnational spending to the deterioration in the overall fiscal position appears limited in Serbia.**[4] The erosion of overall balances at the subnational level has been modest, moving from a roughly balanced position pre-crisis to a deficit of around ½ a percent of GDP in the subsequent period.[5] At the same time:

- Growth in LG revenues (including central government transfers) and expenditures has increasingly outpaced growth at other government levels without being accompanied by any significant devolution of expenditure responsibilities;[6]

- Subnational spending growth has also outpaced growth in GDP (and potential GDP) in recent years (2010–2012); and,

- While growing from a relatively low base, LG revenues and expenditures now exceed the 2006–2008 pre-crisis average— which is commonly viewed as a reasonable benchmark established by the 2006 law instituting a municipal system of finance.[7]

[4] For this analysis, subnational spending is defined as the spending of cities and municipalities. The spending of Vojvodina is not included. The term subnational is used interchangeably with local governments and municipalities throughout the analysis.

[5] This excludes arrears accumulation which is a problem in Serbia affecting all levels of government. Comprehensive data on the stock of local government arrears is not currently available. A 2010 survey of municipalities reported a total stock of arrears at RSD16.9 billion (0.6 percent of GDP) but this likely underestimates the problem as several large cities and municipalities (including Belgrade and Kragujevac) did not submit data.

[6] There has not been any significant devolution of expenditure responsibilities to local governments since 2006.

These developments suggest that decentralization may have played a deeper role in exacerbating Serbia's fiscal vulnerabilities than is currently understood (Figure 1).

B. Fiscal Decentralization in Principle and in Practice

Theoretical considerations

5. The conventional theory of public finance predicts that fiscal decentralization should reduce the size of the public sector.[8] Productive efficiency gains are generated by enhanced competition between jurisdictions and an increased availability of information on government operations. This competition helps align incentives to limit the local tax burden and deliver cost efficient public services, as any dissatisfaction with the tax-benefit mix will result in the emigration of taxpayers to competing jurisdictions. This effect is expected to be stronger the greater the number of jurisdictions. Regarding improved information dissemination, fiscal decentralization increases the transparency of government activities, public good provisioning, and government financing, thus facilitating the ability of taxpayers to hold decision makers accountable. This effect is likely to be stronger if spending is financed through local taxation, as a tighter tax-benefit link enhances the likelihood of accountability.

6. Several factors challenge these predictions and link fiscal decentralization with upward spending pressures, thereby inflating the size of government. Key among these are:

- *Lack of overall hard budget constraint*: The risk of overspending at the subnational government level increases in the absence of hard budget constraints. Bailout transfers from the center, access to subsidized loans from public banks or state-owned enterprises; and the ability to run arrears to suppliers or creditors are problematic in this context. In addition, local policymakers are unlikely to fully internalize the cost of spending when expenditure is financed with *intergovernmental transfers or sha*red tax revenue (i.e., the common pool problem).[9] Limited capacity within local bureaucracies, poor governance, and weak oversight from the center (on

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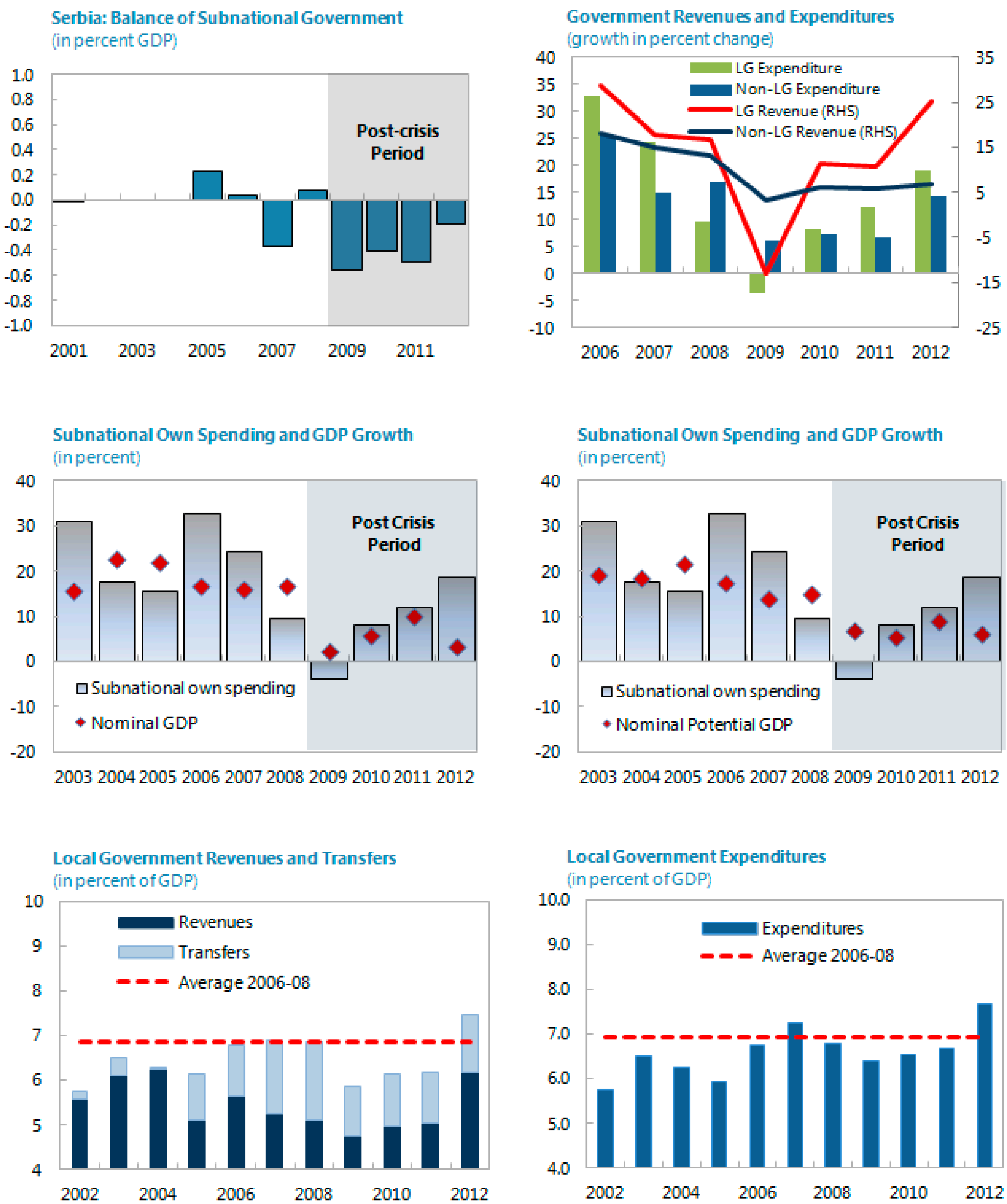
[7] The underlying subnational government deficit was broadly stable over 2006–10. Serbia's Fiscal Council has previously linked its policy advice to restoring this degree of deficit shifting between the central and local governments but has recently advocated the 2008 level of revenues as an appropriate benchmark. The World Bank also identified the 2008-10 period as comprising potential benchmark years against which to evaluate policy. Levitas (2005) concluded that the 2003 intergovernmental finance system was vertically balanced.

[8] See IMF (2009), Letelier (2005), Norregaard (1997), Oates (1999, 2006), Panizza (1999), and Tanzi (1996).

[9] Key PFM weaknesses could include the lack of proper audit and control mechanisms, relatively loose accounting standards (particularly for the recording of arrears), and ill-designed fiscal rules that complicate local budgeting processes and create incentives for riskier behaviors.

Figure 1. Serbia: Subnational Revenue and Expenditures



Source: National authorities and Fund staff estimates.

the use of shared resources/transfers and execution of devolved expenditure responsibilities) can also contribute to weak fiscal discipline.

- *Expenditure control failures*: Difficulties managing LG budgets can reflect structural hindrances at the subnational level. Narrow and volatile subnational "own" revenue alongside pro-cyclical central government transfers can give rise to cyclical local spending patterns. Blurred functional spending responsibilities between different levels of government can weaken accountability and discipline. Finally, weak public financial management (PFM) systems at the local level are widely seen a major challenge for expenditure control.[10]

- *Flaws in the financing framework and incentives*: Fiscal underperformance at the subnational level could also result from the institutional framework itself. In addition to the PFM system, the transfer system is particularly important in this respect. For example, grant characteristics can encourage overspending. Failing to adequately address the heterogeneity of subnational jurisdictions in transfer design can result in unfunded/overfunded mandates across jurisdictions. Finally, the allocation of transfers based on actual spending costs (rather than "expenditure needs") independent of the quality of service provided, discourage the adoption of cost-saving measures at the local level.

C. Empirical Findings

7. There is a rich empirical literature examining the determinants of subnational spending and the impact of decentralization on public spending. A comprehensive survey of the literature can be found in a recently published IMF working paper and is summarized as follows:[11]

- *Determinants of subnational spending*: the own tax-transfer mix is identified as particularly relevant, where quantitative studies show that the propensity of LGs to spend "external revenues" (i.e., intergovernmental transfers) is significantly larger than the propensity to spend "own revenues" (i.e., revenues generated from the tax base of the jurisdiction itself).

- *Impact of decentralization on general government expenditures*: In general, cross-country analyses do not yield a strong consensus that decentralization, in and of itself, increases the size of the public sector. However, a consensus has emerged on problems relating to the vertical fiscal imbalance (VFI), which exists when there is a gap between subnational spending and subnational "own" revenues (i.e., excluding transfers and shared revenues received from other

[10] Eyraud and Moreno Badia (2013), "Too Small to Fail? Subnational Spending Pressures in Europe" IMF Working Paper WP/13/46.

[11] In the United States, quantitative studies found an extra dollar of own income to increase government spending by $0.2 to $0.5, but an equivalent dollar of grants increases spending by $0.3 to $1.00.

levels of government). Specifically, findings suggest that spending decentralization raises general government spending when it is financed from transfers or borrowing, meaning when it is associated with large VFIs.

8. The importance of the above-mentioned decentralization risk factors have been identified for some European countries. In their study which assessed the role of expenditure decentralization in the weakening fiscal performance in Europe, Eyraud and Moreno Badia (2013) concluded that a significant part of the deterioration in public balance sheets in EU15 economies during the European debt crisis occurred at the subnational level. Specifically empirical results indicated that:

- *Decentralizing specific spending functions may create an overlap and waste of resources;*
- *Expenditure decentralization financed through transfers and/or borrowing is associated with weaker fiscal outcomes; and,*
- *Subnational governments do not fully adjust expenditure to negative revenue shocks, implying that they do not behave as if facing a hard budget constraint, at least in the most recent period.*

D. Are Known Decentralization Risk-Factors Relevant in a Serbia Context?

9. Serbia's decentralization framework is governed by a combination of fiscal rules alongside legislation on the financing of LGs. Serbia is comprised of 165 municipalities. The primary responsibilities of these LGs are confined to infrastructure services and a limited set of social services. Execution of these responsibilities is generally performed by a myriad of LG-owned public entities whose operations are partially financed by fees. As noted, the fiscal operations of these subnational governments are constrained by:

i. A set of fiscal rules—including fiscal deficit limit, borrowing constraints, and debt/debt service rules—that are relatively onerous compared to those of other European emerging economies (Table 1);
ii. A system of municipal finance defined by the law on LG finance introduced in 2007; and,
iii. Laws at the CG level defining transfers and revenue sharing arrangement to subnational governments.

Table 1: Subnational Fiscal Rules in Selected Transition Economies 1/

Country	Type of rule	Description
Armenia	Borrowing constraint	All borrowings are prohibited unless approved by the Ministry of Finance and Ministry of Territorial Administration.
Bulgaria	BBR (golden rule) Debt service rule	Borrowing allowed only for investment and rollover of debt. Debt service cannot exceed 15 percent of own revenues and the equalization subsidy
Croatia	Debt service rule	Annual amortization repayment cannot exceed 20 percent of their own revenues.
Hungary	BBR (golden rule)	The current balance cannot be in deficit; investment projects need central government approval.
Macedonia	BBR BBR (golden rule) Borrowing constraint Debt service rule	Obligation to run a balanced budget (except short-term borrowing). Borrowing allowed only for project financing upon Ministry of Finance approval. Short-term borrowing below 30 percent of overall revenues of the operational budget. Debt service from long-term borrowing below 30 percent of the revenues in the current operational budget.
Moldova	BBR BBR (golden rule)	Borrowing to finance current expenditures should not exceed 5 percent of the local government budget expected revenues. Borrowing to finance capital expenditures should not exceed 20 percent of the local government budget expected revenues.
Romania	BBR (golden rule) Debt service rule	Borrowing allowed only for investment and rollover of debt. Debt service cannot exceed 30 percent of own revenue.
Slovenia	Debt service rule Borrowing constraint	Debt service cannot exceed 8 percent of revenue in the previous year (several items excluded). All borrowings are subject for ex-ante permission from the Ministry of Finance.
Serbia	BBR Borrowing constraint Debt rule Debt service rule	Fiscal deficit should not exceed 10 percent of its current year revenues, unless it is a result of capital investments and approved by Ministry of Finance. Long-term borrowing is allowed only for financing of capital projects; Short-term borrowing is capped at 15 percent of the previous year revenues, and has to be repaid within the current Long-term debt outstanding is capped at 50 percent of the previous year revenues. Amendments to the law (2009) state that 50 percent limit does not apply to long-term borrowing with a maturity above five years as long as debt service is not larger than two thirds of current surplus and if current surplus exceeds [15] percent of revenues collected. Debt service cannot exceed 15 percent of the previous year revenues.

1/ BBR = Budget Balance Rule.

Source: National authorities; IMF staff assessment; and European Commission.

10. Under the current system, municipalities derive their revenues from four principal sources:

i. Shared taxes (centrally-administered taxes imposed at centrally-determined rates and shared with the municipalities where they are collected);

ii. Central government transfers (mainly for equalization purposes);

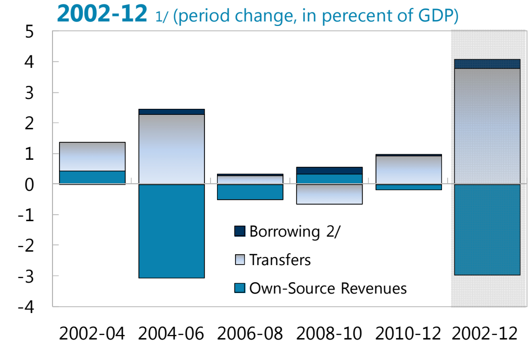
iii. Local taxes (impose at locally-determined rates); and,

iv. Fees and charges.

11. The largest single source of municipal revenue is a shared tax—the municipal share of the payroll or wage tax. Under the 2006 law on the financing of LGs, this was principally a central tax with LGs receiving 40 percent of the payroll tax. Shared taxes and transfers represented an average of 56 percent of total LG resources (31 percent and 25 percent respectively) in the pre-crisis period (2007–2008). The importance of central government-sponsored revenues relative to own revenue is indicative of a VFI.

12. Serbia's fiscal decentralization framework is vulnerable to identified pitfalls that risk undermining the consolidated public balance sheet. The last decade has seen a shift in the composition of subnational financing sources. Self-financed expenditure has gradually been replaced by funding from central government resources (transfers and increases in shared taxes) and to a lesser degree increase in subnational borrowing. This implies that Serbia's VFI has increased over this period on average. This shift in financing sources was exacerbated by the 2011 amendments to the law on the financing of LGs (see below).

Financing of Subnational Expenditures, 2002-12 1/ (period change, in perecent of GDP)

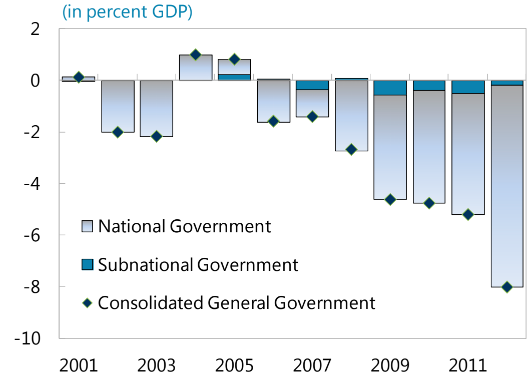


1/ A two period average is used to determine period points (e.g. 2004 is the average of 2003-04) to minimize sensitivities related to initial/final starting points.

2/ Borrowing data was not available prior to 2005. For this category, the change between 2004-06 corresponds to the 2005-06 difference. The initial point for the reported cummulative change is the 2005-06 period average.

13. The share of the LG deficit in the overall deficit is a misleading metric when assessing sources of fiscal pressures. The LG deficit in Serbia is small relative to the overall deficit—suggesting that subnational operations have had only a modest impact on public finances—but this metric can be misleading. The overall balance indicator does not properly reflect subnational government's fiscal performance as any balance target can be achieved through higher gap-filling transfers from the center.[12] Rather "own balances" of the subnational and national government better depict underlying fiscal positions and, in Serbia's case, paint a very different picture. In particular, the underlying subnational government deficit accounts for the bulk of the overall fiscal deficit in both the pre- and post crisis period and has largely contributed to a deterioration in the deficit except during the 2009–10 period when a reduction in transfers prompted LGs to consolidate spending. In the period immediately following the 2006 reform that established the LG financing framework, the prevailing underlying subnational government deficit averaged 5¾ percent (2007–08).[13]

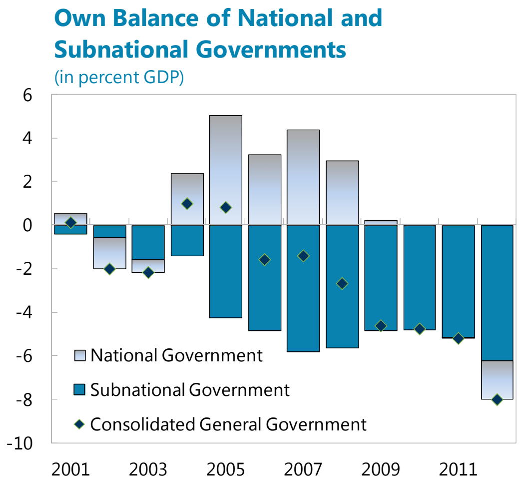
Overall Balance of National and Subnational Governments
(in percent GDP)

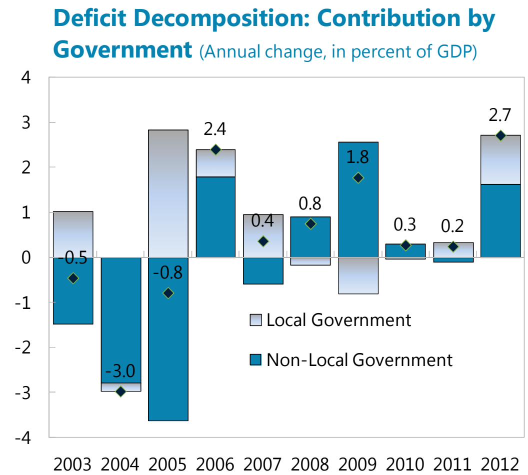


Sources: National authorities and Fund staff estimates

[12] In addition, the absence of reliable data on local government arrears clouds the true situation with fiscal deficits at the local level.

[13] The own-source local government deficit amounted to 5¼ percent of GDP on average over 2007–10.





Sources: National authorities and Fund staff estimates.

14. Amendments to the law on LG financing came into effect at end-2011 and exacerbated existing weaknesses in the financing framework. The main change was to increase the LG's share in the payroll tax from 40 percent to 80 percent and was motivated by a perceived need to compensate for a fall in subnational government resources during 2009–10 (declined by 1 percent of GDP relative to pre-crisis levels) largely reflecting a reduction in transfers from the center.[14] As a result, LGs received additional revenues estimated at 1½ percent of GDP in 2012 relative to the 2009–10 crisis period without any additional devolution of expenditure responsibilities.[15]

15. These amendments did not conform to best practices. CG-sponsored changes in subnational financing mechanisms can be appropriate in response to cyclical developments. As such, these changes should be temporary in nature relying primarily on transfers schemes that are either time-bound or easily unwound. In contrast, Serbia adjusted the shared tax formula—a more permanent measure that is difficult to repeal when cyclical developments reverse. Absent matching expenditure responsibilities that, in principle, assures a deficit-neutral impact on the consolidated public balance sheet, this results in "deficit shifting" from LGs to the center with potentially long-lasting consequences, particularly given the independence of Serbia's subnational governments and the absence of direct CG mechanisms to control LG spending.

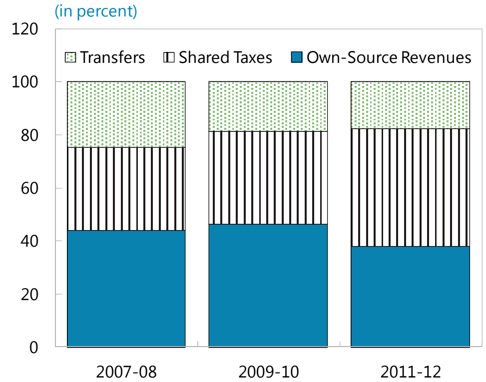
16. Consequently, Serbia's vertical fiscal imbalance has increased. The amount of shared tax revenues in percent of total resources increased on average by 13 percent in 2011–12 relative to

[14] Under the original legislation adopted in 2006, block transfers to subnational governments were fixed at 1.7 percent of GDP. The central government fully funded this transfer in 2007 and 2008, but temporarily suspended the law in 2009 in response to the financial crisis. In that period, the amount of transfers to municipalities was reduced on a case-by-case basis.

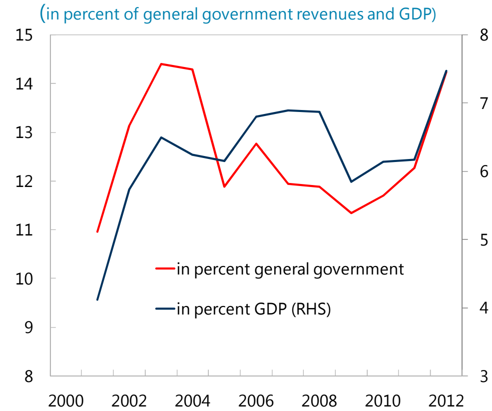
[15] Subsequently, local governments took over local road maintenance and assumed additional expenditure commitments that together amounted to 0.3 percent of GDP but the central government has subsequently offered to subsidize local road maintenance up to RSD 4bn or 0.1 percent of GDP.

pre-crisis (2007–08) while the share of own-source revenues fell by 6 percent. Also, the increase in LGs' revenue as a share of consolidated government revenues (and GDP) in 2012 has been considerably higher than the reduction in revenue during the crisis period. In 2012, shared taxes and transfers represented 63½ percent of total LG resources—a 7½ percent increase relative to pre-crisis norms.

Distribution of Subnational Government Resources
(in percent)

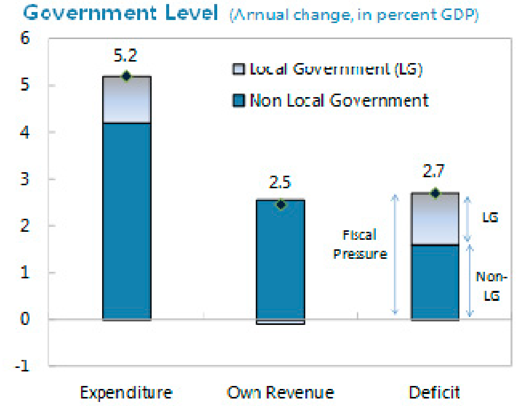


Local Government Revenues
(in percent of general government revenues and GDP)



Sources: National authorities and Fund staff estimates.

Decomposition of Deficit Increase (2012) by Government Level (Annual change, in percent GDP)



Sources: National authorities and Fund staff estimates

17. The deterioration in the underlying subnational balance owing to the 2011 amendments constitutes a burden on the overall public finances. The underlying or own deficit of LGs increased by 1.4 percent of GDP in 2012 relative to the prevailing average in 2009–10, as compared to an overall worsening of the fiscal deficit by 3.3 percent of GDP, suggesting that the 2011 amendment reforms could explain up to 42 percent of the recent deterioration (or deficit shifting) of public finances. The underlying LG deficit now exceeds the standards established under the 2006 financing law by between 0.5–1 percent of GDP. Consequently, the VFI related to the 2011 amendment is estimated at around RSD30–40 billion or 0.9–1.2 percent of GDP[16] which, ceteris paribus, directly translates into a structural fiscal deficit of the same magnitude.

18. It is difficult to justify the 2011 amendment to Serbia's decentralization framework, particularly in light of its fiscal implications (Figure 2). First, the reform was not well conceived as

[16] Fiscal Council and Fund staff estimates.

it responded to cyclical developments with a relatively permanent policy measure which, when combined with the lack of any meaningful devolution of expenditure responsibilities, has resulted in a significant structural shift in deficit to the center. Second, the reform has “overcompensated” in terms of its main policy objective as revenues and expenditures are now above pre-crisis benchmark levels. Third, the reform has not delivered efficiency gains. Rather, the increase in resource devolution has been matched by an increased in discretionary spending (including on wages). Absent any meaningful devolution of expenditure responsibilities since 2006, it is difficult to justify the upward trend in expenditures beyond pre-crisis norms. In light of the above, a credible fiscal consolidation strategy should include burden-sharing at the LG level.

E. Strengthening Fiscal Decentralization Policies in Serbia: Policy Options

19. A coordinated reform approach is needed to strengthen fiscal decentralization outcomes in Serbia. In the context of the ongoing fiscal crisis, the primary short-term objective is to eliminate recent pressures on the VFI and improve the underlying financial position of the consolidated government. In principle, two policy approaches can be pursued to achieve this objective: i) offset the recent increase in subnational revenues by credibly devolving expenditure functions from the CG level; and, ii) roll-back (at least partially) the 2011 legislative amendments in the payroll tax-sharing formula thus requiring LGs to prioritize expenditures within previous budget envelopes.

Immediate reform priorities

20. The authorities have partially clawed-back revenue transfers associated with the 2011 amendments but have not yet indentified a shift in expenditure responsibilities. In May 2013, the authorities reduced payroll tax rates by 2 percent to incentivize LGs to reduce expenditures.[17] However, the estimated savings from this measure (½ percent of GDP) is less than those associated with a full repeal of the 2011 amendments and is subject to implementation risks. The government is also exploring indirect measures to align incentives for greater expenditure discipline. This could involve setting explicit expenditure targets for sub-national governments that, if missed, would result in a reduction in transfers for non-compliers the following fiscal year. A number of challenges would need to be overcome, however, for this approach to be effective.

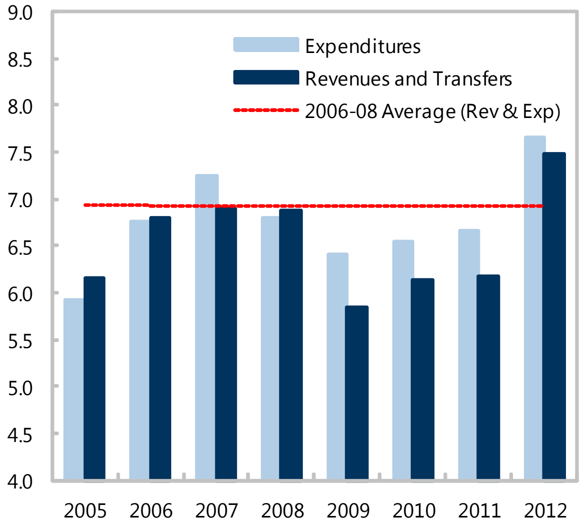
- First, to credibly implement transfer penalties for expenditure-target breaches, conditions for reduced transfers should be legislated.

[17] The reform was made revenue neutral by adjusting social contribution rates accordingly.

Figure 2. Serbia: 2011 Amendments to Subnatinonal Financing Framework

The ammendment boosted subnational revenues above prevailing pre-crisis norms...

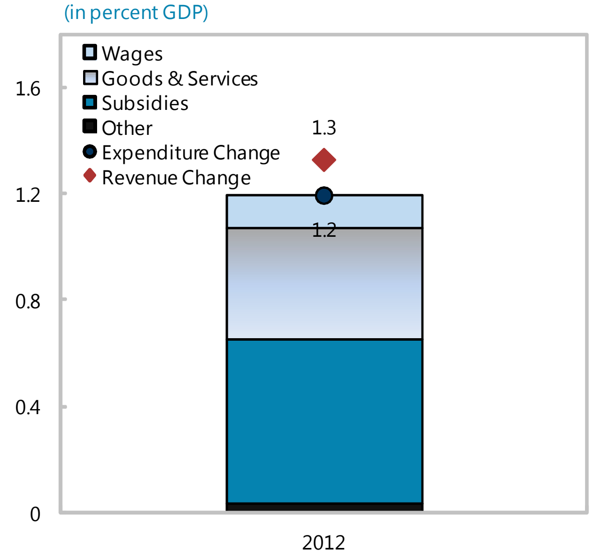
Serbia: Local Government Expenditures
(in percent of GDP)



Source: Ministry of Finance and Fund staff estimates.

and was matched by an increase in discretionary expenditures despite no new spending responsibiltiies.

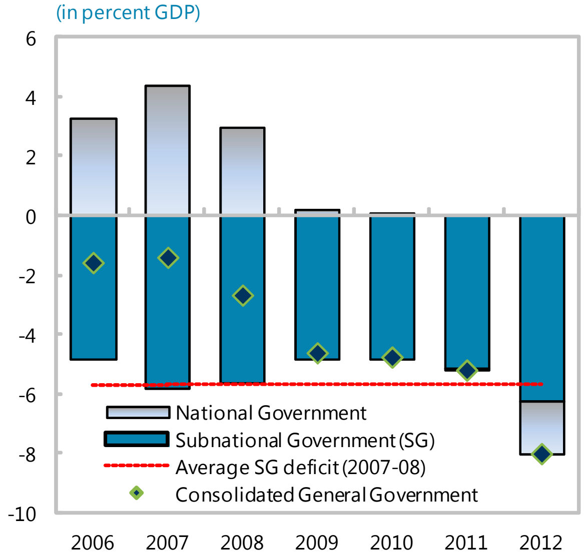
Expenditure Decomposition (Change vs 2009-10)
(in percent GDP)



Sources: National authorities and Fund staff estimates.

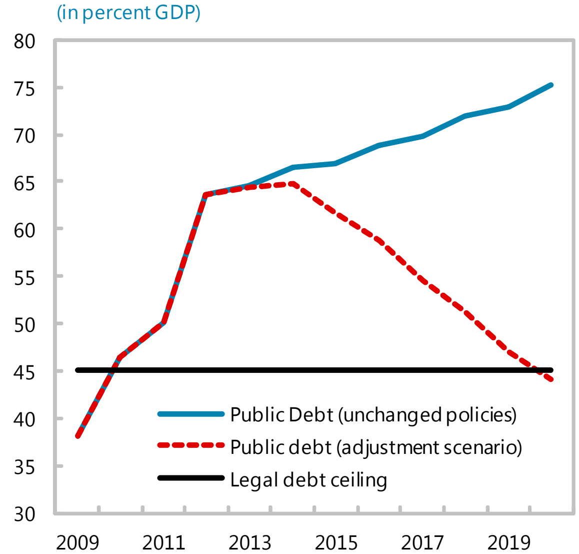
This came at the expense of a structural increase in the deficit to be borne by the central government...

Own Balance of National and Subnational Governments
(in percent GDP)



which is unsustainable given deteriorating public debt dynamics in the absence of significant fiscal consolidation.

Debt Sustainability
(in percent GDP)



Source: National authorities and Fund staff estimates.

- Second, the notion of devolving further expenditure responsibilities to the local level is appealing in principle, but given weak expenditure oversight, limited implementation capacity, and weaknesses in local public financial management systems, moves to shift significant new expenditure mandates in the near-term could merely exacerbate the suspected problem of mounting LG arrears.[18]

21. A more direct approach would be appropriate. The centerpiece of which would be to fully dismantle the 2011 amendments and restore the payroll tax as a predominantly central tax by returning its share to 60 percent.[19] This would help reduce the consolidated fiscal deficit by an estimated 0.9–1.2 percent of GDP and therefore constitutes an important step in alleviating pronounced fiscal pressures during the current fiscal crisis.

22. To align incentives for fiscal discipline, the above reform approach should be complemented by a bankruptcy law for LGs. A receivership regime for LGs should involve credible sanctions, such as: submitting to a financial plan to the CG that address the fiscal issues in distressed municipalities, or the possibility that the CG takes over temporarily the management of the LG budget. Subnational government arrears clearance programs financed by the CG such as that recently implemented in Serbia should also be avoided given moral hazard risks and absent a credible framework to guard against new LG arrears accumulation (Box 1).

[18] This does not rule out the possibility of off-loading greater expenditure responsibilities to the local level on a selected basis. In addition to managing arrears risk, care must also be taken to avoid degrading the quality of currently provided state services. Requiring local governments to cover a portion of the cost of social welfare and/or wages for employees in elementary and high schools, as well as shifting a share of primary and secondary health care costs to local governments would not require extensive preparations and do not seriously risk decreasing the efficiency and quality of current state-provided services. These types of expenditure devolutions should be pursued quickly if the current payroll tax sharing model is maintained.

[19] This view is shared by other independent economic commentators. In its May 2012 report, the Fiscal Council (FC) advocated annulling the 2011 amendments and reinstating the transfer level back to the legislated 1.7 percent of GDP. In addition to addressing immediate fiscal sustainability concerns, the FC argued that restoring the payroll tax to a primarily central government tax provides a more favorable basis for making future reforms, such as increasing its progressivity rate. The World Bank also favors rolling back the 2011 amendments but has expressed support for an intermediate reform where the local government's share of the payroll tax is reduced to 60 percent (from the current 80 percent) alongside a reduction in transfers.

Box 1. Local Government Arrears Clearance Strategy

The authorities recently implemented an arrears clearance initiative that risks further distorting incentives within the existing LG financing framework and thus risks exacerbating overall fiscal pressures in the near and medium-term. The government announced a plan to refinance LG arrears to private enterprises that resulted from capital investments carried out prior to October 2012. Under the proposal, the government will take over liabilities to the companies and issue inflation indexed bonds with 2 percent coupon and three-year maturity (including 1 year grace period) to be repaid by LGs through reduced shared revenues (CIT and PIT) and transfers. This initiative is problematic from a fiscal perspective for a number of reasons:

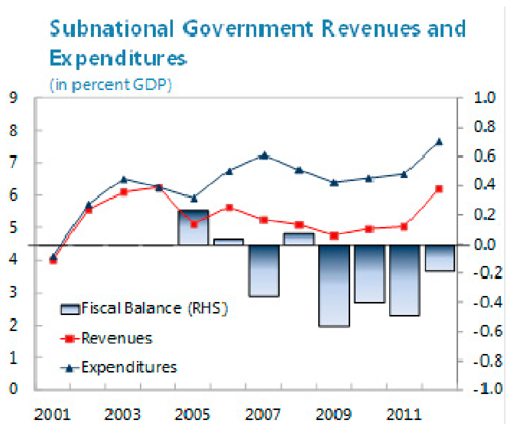
First, it is not clear that the republican government can credibly withhold CIT/PIT payments and transfers going forward thus ensuring debt repayment.

Second, although the prevailing stock of arrears is unknown, they are likely to constitute a significant short-term liability for the CG that could conceivably be inflated through illegitimate claims; and,

Third, the initiative creates a moral hazard risk by setting expectations of future bailouts that could impose a long run drag on public finances, unless mechanisms are also introduced to prevent the accumulation of new arrears.

The government is proceeding with its arrears clearance plan, but has specified qualification criterions that have tempered the take up of the program. To qualify for the program: i) arrears must be related to capital investments prior to October 31, 2012; ii) the total amount of arrears to be settled cannot be higher than the difference of 50 percent of previous year current revenues and the stock of the debt, or 50 percent of the general transfer; and, iii) the creditor must agree to accept the bond.

23. **The above policy approaches are not mutually exclusive and a combined strategy can be pursued.** In fact, annulling the 2011 modification to the law on the financing of LGs would not be a panacea and needs to be complemented by policy measures to bolster own revenues and reduce expenditures at the municipal level. Simply rolling back 2011 amendments will not, by itself, necessarily enhance decentralization outcomes and improve the overall fiscal position. Indeed, LG expenditures have outpaced revenues notwithstanding the recent increase in resources from the center. Absent complimentary reforms to bring municipal finances into balance, the clawing back of centrally-sponsored transfers (or increased devolution of expenditure



Sources: Ministry of Finance and Fund staff estimates.

responsibilities) risks exacerbating fiscal pressures through the accumulation of local arrears.

Complementary short and medium-term reform measures

Revenues

24. There is scope to boost subnational revenues. Municipalities raise "own" revenues from a variety of sources, the most important being the annual property tax, where municipalities have the right to set the rate of the property tax (subject to ceilings). Municipalities also have the authority to charge recurrent land use fees (payable monthly by all owners of houses commercial buildings and apartments), business license fees (or signage tax), and land development fees to generate own revenues. Priority revenue-raising reform options include:

- *Property taxes*: The urban property tax and the companion land use fee comprise about 11 percent of the total resource envelope available to LGs. However, the property tax system currently suffers from a number of distortions that undermine potential revenue yields. Valuations of property owned by legal entities are understated and tax rates are extremely low by European standards with economically unjustified differences in the taxation across different types of properties. Valuing industrial and commercial property at market prices and increasing property tax rates should be explored to significantly raise "own" revenues, but will need to overcome the following obstacles: i) current legislation containing the maximum annual property tax rate increase; ii) incomplete land registries (where a large share of properties are unregistered);[20] and, (iii) a record of poor collection enforcement, particularly from "legal" persons.

- *Land development fees*: The current application of land use fees—a charge to cover the provision of infrastructure at the municipal expense—is distortionary. The highest fees are applied to zones where the cost of extending infrastructure is cheapest and the lowest fee applied to zones where infrastructure costs are highest. As a result, it is not obvious whether municipalities are generating profits or losses off land development as a whole. Increasing land development fees in outlying areas would help reduce this distortion and raise own revenues.

- *Utility fees*: The price of services (particularly for heating in a large number of governments) is set below cost recovery levels, necessitating costly expenditures in the form of subsidies. Increasing the price of services to cost recovery levels would have the dual benefit of improving own revenues while at the same time reducing expenditures the need for subsidies.

- *Transportation fees and revenues*: Similarly, the price of public transportation in Belgrade (the largest and costliest urban transportation system in Serbia) is set well below cost recovery and

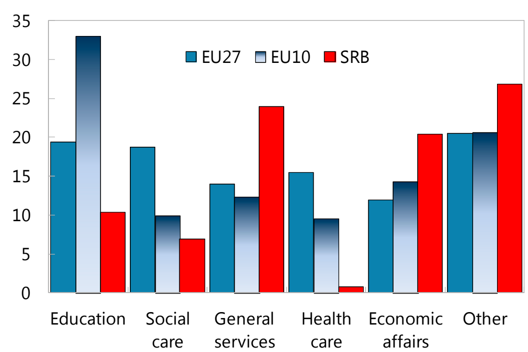
[20] This could be remedied by cross-referencing data from other sources, such as electricity bills, to identify property tax payers.

tariff enforcement has traditionally been poor. The high degree of unfunded expenditures in Belgrade's transportation sector reflects several factors: i) low tariff levels by European standards; ii) substantial (non-means tested) exemptions; and iii) a high degree of evasion.[21] Improving tariff revenues through a combination of increased fares, reduced categorical exemptions, and strengthened enforcement are clear reform priorities. Of course, these revenue efforts should be complemented by measures to address cost inefficiencies, particularly excessive transportation sector labor costs, to alleviate overall fiscal pressures.

Expenditure

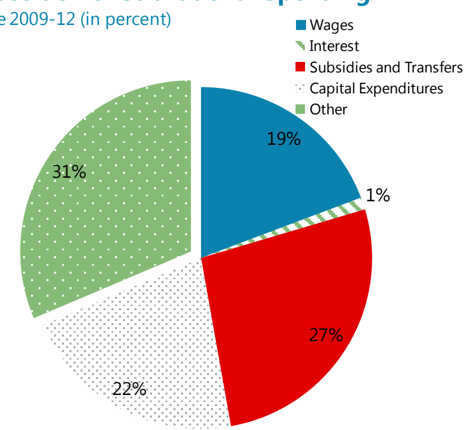
25. There is ample scope to achieve cost savings, including through efficiency gains. In comparison to other European countries, Serbia's expenditures appear unbalanced, with most tilted towards general resources (typically administrative functions) and economic functions (subsidies, etc.) and under-spending on traditional municipal expenditure categories such as health and education. This provides guidance on areas to seek improved expenditure efficacy as well as priorities for expenditure devolution over the medium term. In particular, subsidies (and transfers) constitute the largest single component of overall LG expenditures at almost 30 percent[22] while wages and subsidies account for about 20 percent of LG budgets. Expenditure reform should therefore emphasize scaling back subsidies and containing the wage bill—priorities that are also being pursued at the CG level. Priority reform options include:

Structure of Subnational Expenditures
(2009, in percent)



Sources: Fiscal Council of Serbia

Composition of Subnational Spending
Average 2009-12 (in percent)



Sources: Ministry of Finance and Fund staff estimates.

[21] Until recently, passengers were allowed to enter buses without presenting tickets or passes.

[22] Direct subsidies from the local budgets to utility companies in Serbia in 2012 were RSD25 bn or about 0.8 percent of GDP. Moreover, subsidies are highly concentrated: Belgrade approved RSD 15.5 billion in subsidies to utility companies (62 percent of local subsidies) while Novi Sad approved RSD 2.2 bn (9 percent of local subsidies).

- *Subsidies*: The Fiscal Council recommends cutting subsidy expenditures in half between 2013–16. Raising tariff's as noted above is critical to finance this decline, but pursuing this strategy alone merely allows enterprises to pass operational inefficiencies onto consumers. A coordinated reform strategy to contain relatively high operating costs at municipal SOEs is therefore needed. This includes reducing redundant employees, aligning employee wages with private sector comparators, and improving public procurement policy.

- *Wage bill*: In 2012, the LG wage bill is estimated at RSD46 billion or about 1.4 percent of GDP and grew by 17 percent—almost double the pace observed at the general government level. In addition, government wages at the local level are slightly higher than at the CG level and much higher than private sector comparators. In the short run, measures to contain wage inflation and employment growth should be considered. Over the medium-term, however, a concerted effort to address over-staffing at the municipal level is needed and could generate meaningful savings. While reliable LG employment data is limited, the Fiscal Council estimates that surplus employment amounts to between 6 to 8 thousand employees and generate unnecessary costs of RSD 6 billion (or 0.2 percent of GDP).

- *Efficiency measures*: Numerous studies highlight the low quality of services at the LG level as well as a high degree of expenditure inefficiencies. One area with the potential to yield immediate efficiency savings is by improving the targeting of municipal programs that are presently not means-tested, thus implying potentially large implicit subsidies. By exploiting municipal Social Assistance Centers—which create and maintain registries of the beneficiaries of social assistance programs—it should in principle be straightforward to establish and implement means-tested eligibility for programs (both at the municipal and CG level).[23]

Additional reform priorities

26. Enhancing the rules-based fiscal framework: Serbia's rules-based framework to safeguard subnational government finances is fairly rigorous (see Table 1). It includes budget balance rules to impose expenditure discipline above the line complemented by municipal borrowing controls to limit excessive financing below the line that appear adequate in many respects.[24] However, the waiving of the debt limit for borrowing with a maturity above five years as long as debt service is not larger than two thirds of current surplus and if current surplus exceeds 15 percent of revenues

[23] Some municipalities are exploring this mechanism for greater expenditure efficiency. For example, the price of kindergartens in Belgrade directly depends on parents' income so that the highest price is 4 or 5 times larger than the lowest, in contrast to other municipalities where the price is universally low. In principle, this type of means-testing could be extended to provide targeted subsidies for a wide range of services, including water, heating, and transportation.

[24] For example, the short-term debt constraints are relatively restrictive and, by international standards, the 50 percent debt ceiling on the debt-revenue ration is conservative.

is a risk. It may allow municipalities to evade prudential debt ceilings owing to a temporary bulge in revenue. Closing this loophole in favor of an alternative framework that allows for the financing of long-term capital investment may be warranted. One option, is to require an independent third party (such as the Fiscal Council) to publically assess the financing of long-term infrastructure projects following a rigorous cost-benefit analysis of both the merits of the project and the sustainability implications on LG public finances.

27. A deeper analysis of fiscal rules at the subnational level and subnational PFM frameworks is needed to identify other reform priorities. Outstanding issues that require further consideration as input to a the subnational fiscal reform include the potential need for a stricter budget balance rule, the adequacy of sanctions for a breach in rules, and risks related to borrowing exemptions. Similarly, assessing and identifying mechanisms to improve public financial management frameworks at a subnational level and establishing an effective framework to prevent the occurrences of municipal payment arrears are critical.

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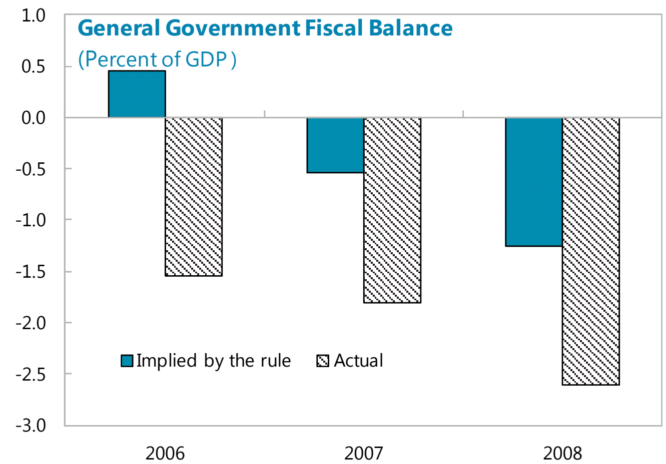
DIAGNOSING AND ADDRESSING SERBIA'S STRUCTURAL FISCAL CHALLENGES[1]

Serbia's fiscal policies and outcomes have been undermined by the political cycle and relatively weak fiscal institutions. Fund arrangements have helped improve policy implementation but progress has been undone between programs, especially during political transitions. Comprehensive public financial management (PFM) reforms are necessary to strengthen fiscal outcomes.

A. Evolution of Serbia's Fiscal Challenges

1. **Serbia has had a difficult fiscal legacy.** The 1990's were marked by severe macroeconomic imbalances, including a serious output contraction and hyperinflation. High fiscal and quasi-fiscal deficits reflecting chronic government arrears, repressive taxation, and populist public spending initiatives undermined the fiscal position and the economy more broadly. IMF arrangements that started in the early 2000's were instrumental in bolstering fiscal discipline by scaling back central bank credit to the public sector, advancing structural fiscal reforms to contain the pension and public wage bills, and reorienting resources from current to capital spending. But the fiscal position started to weaken in 2006 (at the height of the pre-crisis boom, when an IMF program expired), exhibiting pro-cyclical features. While the headline deficits did not appear high then, they were considerably higher than the fiscal balances implied by a countercyclical deficit rule that Serbia later adopted in 2010.

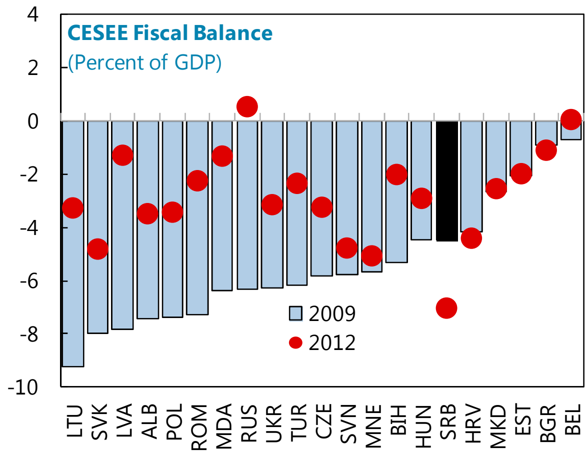


Sources: IMF staff estimates.

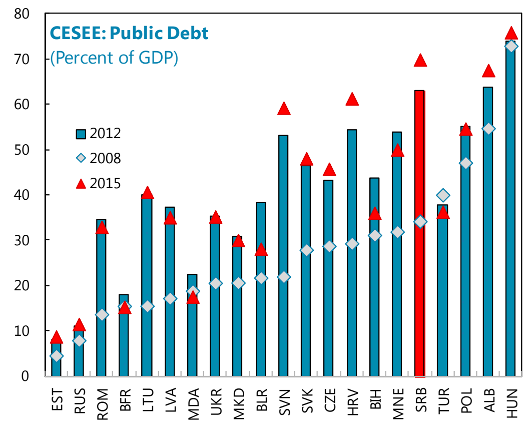
2. **Overall, Serbia's fiscal performance in the post-1990 period was uneven and relatively disappointing.** Periods of improvements in fiscal policies—such as shifting to more countercyclical more rules-based policies (including during the 27-month IMF standby arrangement ended in April 2011)—alternated with setbacks and slippages in fiscal reforms. As a result, Serbia was the only country in the CESEE region that saw a significant increase in the fiscal deficit since the 2008–09

[1] Prepared by Bogdan Lissovolik (EUR).

crisis started and the increase in the public debt ratio has correspondingly been among the highest in the region.



Sources: IMF, World Economic Outlook database.



Sources: IMF, World Economic Outlook database.

B. Diagnosing Serbia's Fiscal Challenges

Assessing political fundamentals of fiscal pressures

3. Both political and institutional factors may have contributed to the fiscal challenges faced during the past decade.

- **Political factors.** Since the late 1990s elections, Serbia's has had complex coalition governments. This has arguably been accompanied by political fragmentation (with key sectors split among parties and limited top-down control of economic policies); and reduced accountability for the overall fiscal implications of policy choices.

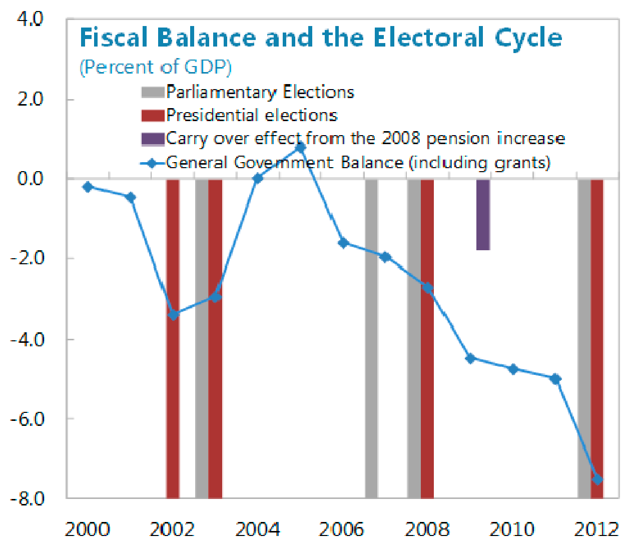
- **Ingrained preference for high public spending.** Like other Republics of former Yugoslavia, Serbia inherited a "cradle-to-grave" system of social assistance, as well as a practice of broad-based support to "production." Despite considerable reforms, targeting of social protection remains insufficient. Likewise, in the aftermath of some unsuccessful privatizations, there was pressure to return those enterprises to state ownership and provide subsidies to keep them operational.

- **Relatively weak fiscal institutions.** The system of fiscal rules, regulations, and data has been weak and improving very gradually. There have remained gaps and inconsistencies in the data and definitions, which complicate implementation.[2] Also, accountability, including in the context

[2] One case in point is the different definition of the public debt in the Law on Public Debt and in the Budget System Law.

of external and internal audit, has remained generally weak. The institutions that are tasked with enforcing accountability (such as the State Audit Institution) have yet to reach their full capacity.

4. **As a result, Serbia's fiscal developments appear to have been partly driven by electoral cycles.** Indeed, proximity of elections seems to have been associated with a run-up in fiscal deficits. In some cases, the deficit increases preceded the elections, while in others they were linked to post-election developments. As to the source of deficit increases, it most often reflected spending on public wages and pensions or transfers to local governments.



Sources: Serbian Ministry of Finance and Economy (MoFE) and IMF staff estimates.

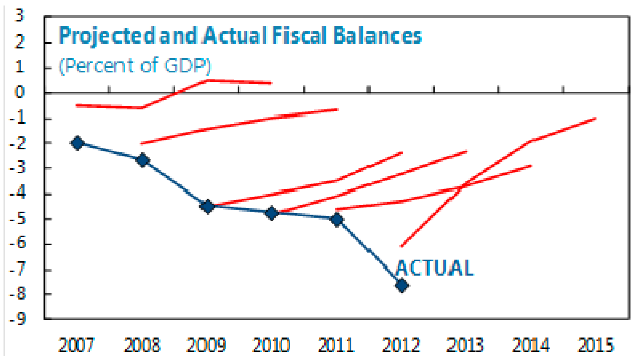
5. **Relatively abundant market financing in recent years has reduced incentives for fiscal adjustment.** Through 2008, Serbia had relatively low recourse to deficit financing in debt markets, partly because of the implications of the 2006 Paris and London Club restructuring and partly because of the relatively large inflows of privatization proceeds. The 2008 crisis initially tightened the financing constraint for Serbia—mainly because of the drying-up of the potential for privatization proceeds. But the situation changed around mid-2009, with increased market appetite for domestic T-bills. Moreover, Serbia was able to additionally borrow in international markets by issuing a Eurobond in late 2011, and again in late 2012 and early 2013.

Gauging Serbia's achievements of key fiscal outcomes

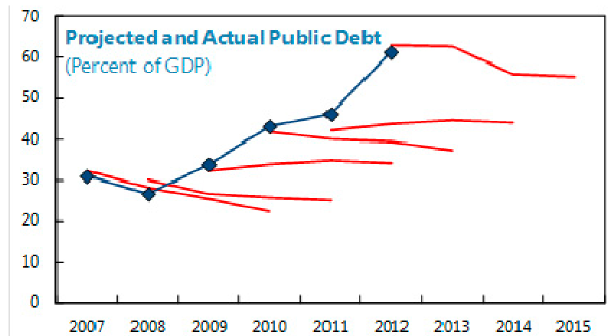
6. **An important characteristic of any fiscal system is the policymakers' success in delivering on the key targets.** This can be gauged by comparing plans with outcomes—in terms of deficits, revenues, and spending, as well as various sub-categories for different time periods.

7. **Over the past few years, fiscal deficits and debt have been significantly above their original targets set three years before.** Comparing Serbia's rolling three-year fiscal plans (adopted in 2007–12), for the general government with outcomes reveals large deviations from plans, which are steadily growing over time. While in the first year of implementation actual deficits exceeded

targets by around 2½ percent of GDP on average, in the second and third years this deviation widened to around 5 percent of GDP. The situation with the public debt is similar, and the larger deviations in the ratio (than could be explained by the deficits) reflect additional increases in public debt due to the provision of numerous government guarantees (which are included in the public debt definition in Serbia) to (largely) loss-making public enterprises. They also reflect the effects of periodic bouts of exchange rate depreciation on the stock of the public debt, which is more than 80 percent denominated in foreign currencies.

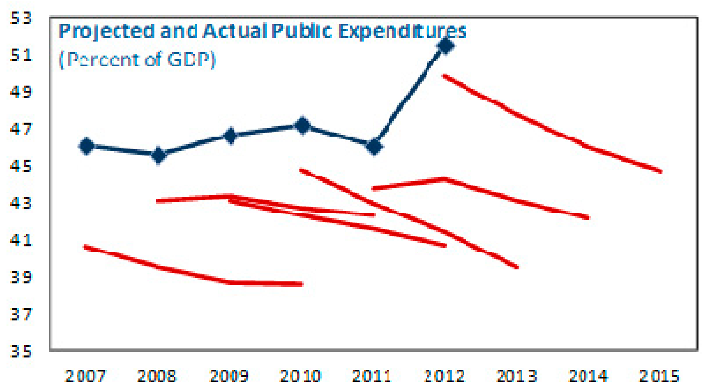


Sources: Serbian MoFE and IMF staff estimates.



Sources: Serbian MoFE and IMF staff estimates.

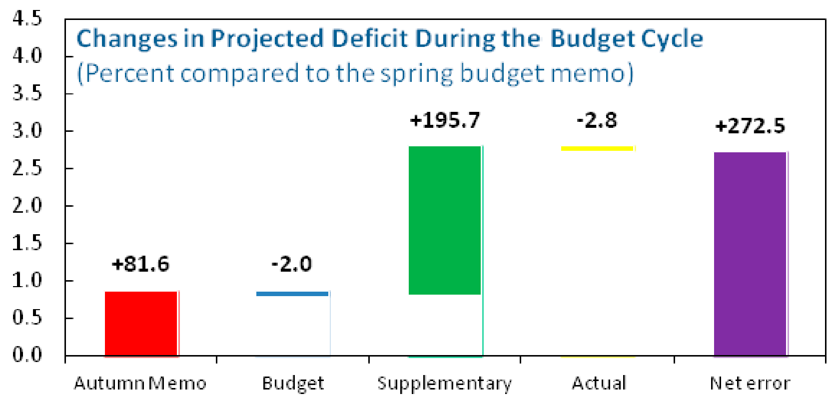
8. Above-planned increases in the spending ratio appear to be the main reason behind the observed deviations of deficits from plans. The three-year plans targeted a sustained reduction in the spending-to-GDP ratio, which however did not materialize. On the contrary, there was an upward drift in the spending/GDP ratio, resulting in a cumulative increase by more than 5 percentage points between 2007 and 2012. The pattern was not nearly as clear in the case of assessing the revenue/GDP ratio—periodic shortfalls in the ratio alternated with periods of higher-than-targeted revenue/GDP outcomes. While the unexpected increase in the spending ratio could reflect both spending overruns and output shortfalls relative to earlier projections, the role of spending overruns appears dominant, in part because the 2007–12 span covered not only the period of relative weakness, but also captured the end of the boom in 2007–08.



Sources: Serbian MoFE and IMF staff estimates.

9. The upward deficit drift is confirmed through a closer analysis of Serbia's annual Republican budget process. This exercise complements the above assessment of the medium-term plans, because it is focused on nominal targets (as opposed to percentages of GDP) and regards the more tightly controlled central government level. The budget process starts in the spring of the year preceding the budget year ("t-1"), with the so-called "spring memorandum," which formulates detailed budget objectives and parameters for the year "t "for the first time. The spring memorandum is followed by: (i) the autumn memorandum that updates the parameters just prior to the final round of budget bargaining; (ii) actual budget law approved by parliament;[3] (iii) a supplementary budget in the course of the budget year; and (iv) the outcome estimated after year "t" is over.[4] The data for these stages of the annual budget process were examined for 2007–12.

10. Overall, Serbia's deficits were substantially higher than those targeted at the start of the annual budget process. The increases in the deficits—relative to the spring memorandum—have affected only two of the four stages: (i) that between the spring and the autumn memoranda, which basically reflects the outcomes of initial bargaining between the Ministry of Finance and the spending beneficiaries, as well as updates to the macroeconomic outlook; and (ii) between actual and the supplementary budgets, which also reflects additional bargaining and updates to the macroeconomic outlook, but also—significantly—the pattern of budget execution and new fiscal initiatives. There is no increase in the deficit at two other main stages of the budget process (between the autumn memorandum and the budget law and between the supplementary budget and the actual execution), which essentially reflects the legal requirement not to allow increasing the deficit at those two stages.

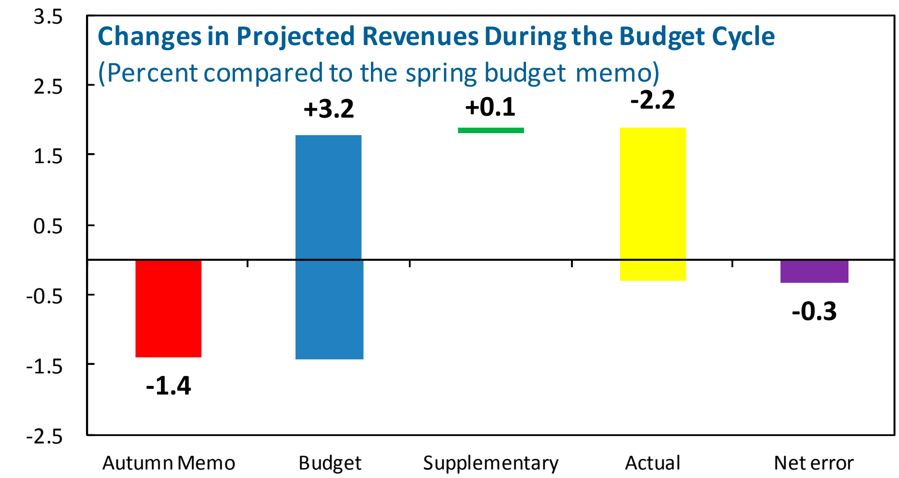


Sources: Serbian MoFE and IMF staff estimates.

[3] While there is technically another stage—that of the government adoption of the budget accompanying its submission to parliament—budgets at that stage are typically not different (in terms of the main budget parameters) from those of the budgets approved by parliament.

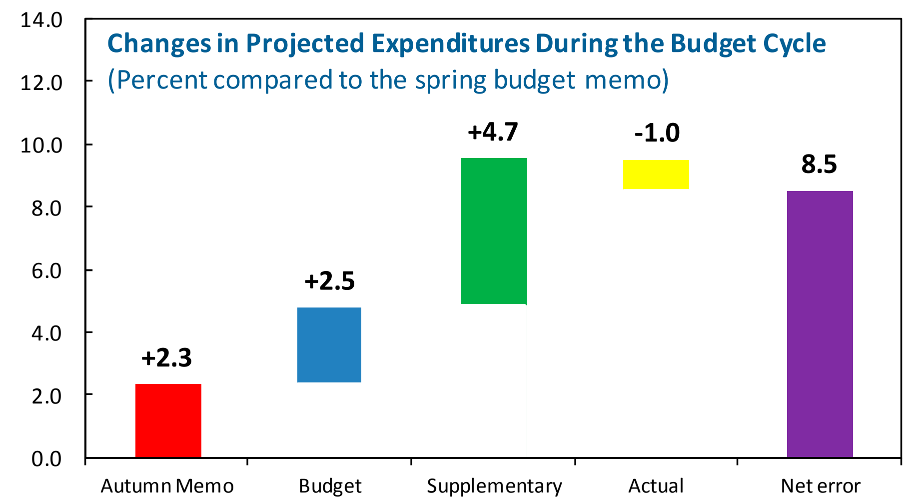
[4] For the purpose of this paper, the "final outcome" refers to the outturn as reported by the Ministry of Finance about a month after the budget year is over, as part of regular monthly reporting. This excludes reporting by indirect budget beneficiaries, which is (partly) included into the annual "final account" of the budget.

11. The analysis of the annual deficit drift reveals that it is largely driven by (nominal) expenditure overruns rather than revenue shortfalls. In particular, on the one hand, the revenue projections in the spring memorandum actually have been quite conservative (relative to ex-post outcomes) and tend to be even more conservative in the autumn memoranda. However, during the final rounds of budget negotiations there is a substantial increase in the revenue projections. This seems to be associated with the need to accommodate expenditure pressures under a no-change-in-deficit constraint. Such somewhat unrealistic level of revenues has been maintained in the supplementary budget, and was thus usually (i.e., on average) not achieved. As regards overall nominal spending, there is a strong upward drift at all stages of the budget process, until the final outturn, which is slightly lower than targeted in the supplementary budget. The latter result is a consequence of the legally-binding rule whereby the aggregate spending ceiling as approved in the last supplementary budget has to be met. Thus, the final spending outturn is on average 8½ percent (or almost 3 percent of GDP) higher than targeted at the outset of the budget process. To sum up, the large role of spending overruns in the deficit drift reflects structural rather than cyclical factors (given that the cyclical sensitivity of spending is relatively negligible).



Changes in Projected Revenues During the Budget Cycle
(Percent compared to the spring budget memo)

Sources: Serbian MoFE and IMF staff estimates.



Changes in Projected Expenditures During the Budget Cycle
(Percent compared to the spring budget memo)

Sources: Serbian MoFE and IMF staff estimates.

12. In-year overruns reflect many causes, but most often new discretionary spending initiatives, both from new legislation and government decisions. These often take the form of new spending legislation passed by parliament that has to be eventually accommodated in the budget law. Also, overruns may reflect a seeming tendency to under-budget certain types of mandatory spending in the bargaining process (for example, social spending). This spending is mandatory, and the under-budgeting has to be fully corrected in a supplementary budget.

13. Analysis of the structure of spending overruns points to a pattern of crowding out productive with unproductive spending during budget execution. Generally, investment spending has been under-executed in budget outturns, while many current spending items have been over-executed. These latter most often regard public wage increases (including bonuses), spending on goods and services, subsidies, social assistance, and net lending.

Identifying fiscal framework gaps

14. Several elements in Serbia's existing framework are effective and should be preserved. These include: (i) the Budget System Law (BSL), which in many respects reflects (at least on paper) best practices in public financial management, although its implementation is uneven ; (ii) a well-observed requirement that the legal deficit and spending limits (set in the last (typically, supplementary) budget law) be not exceeded; (iii) a requirement to not increase the deficits in the budget law relative to the target set in the autumn memorandum; (iv) several prudent elements related to the framework of public debt, such as including government guarantees in the debt upfront, borrowing rules for local governments, and a strict multi-step process of parliamentary approval of government guarantees.

Nevertheless, significant shortcomings remain in several areas as follows.

- **Measurement of the overall fiscal position.** The definition and measurement of the general government has a number of weaknesses in Serbia: (i) a complete list of institutions comprising the perimeter of the general government has yet to be precisely defined according to objective criteria (as in many countries, this task has been assigned to the statistics office but progress remains pending); (ii) indirect budget beneficiaries (IBBs), such as schools, universities, or kindergartens—are only partially captured in the government accounts; (iii) the information of government expenditure arrears is not complete and fully reliable at the central government level and limited at the local government level; (iv) there is as yet no system for recording "new" fiscal risks, such as those arising from the relatively recent PPP law and other contingent liabilities (for example, there has recently been an increase in borrowing by public enterprises without a government guarantee) ; (v) the measurement of the fiscal position is done on a cash basis, while a more economically meaningful measurement would be based on accrual methodology; (vi) some of the budget information is not timely (i.e., on IBBs).

- **Budget planning.** This regards: (i) gradual loss of realism in revenue projections in the course of the budget process; and (ii) overly optimistic expenditure projections at all stages of the budget process, including under-budgeting of some mandatory spending categories, such as social spending and weaknesses in budgeting of investment projects that are financed from project loans; (iii) insufficient capacity for developing fiscal projections for levels of government other than the central level (in particular by cities and municipalities).

- **Comprehensiveness of the budget process in other ("non-Republican") levels of government.** Serbia's budget process is mostly centered on the Republican level, only partially addressing other parts of the general government. While the financial plans of the social security funds are submitted to parliament concurrently with the Republican budget law, they can in principle be subsequently changed outside of the Republican budget process. Also, the financial plan of the Road of Serbia enterprise[5] is not prepared at the time of the annual budget law, but some two-three months later after the budget is submitted to parliament. Similarly, the budgets of cities and municipalities are negotiated, presented, and passed sometimes well after the central government budget is adopted by the government.

- **In-year budget implementation and controls.** Constraints on within-year fiscal drift are weak. On a day-to-day basis, the Treasury has been controlling the pace of expenditure, but mostly with respect to the compliance with the legal framework, which is however continuously changing. While the framework Budget System law formally requires a so-called "pay-as-you-go" rule for new legislative initiatives—whereby any new spending increases or revenue cuts have to be offset by a combination of spending cuts and revenue increases——this rule has not been enforced. While all Serbian laws submitted to parliament are required to include a section on the need for allocating budget funds, the requirement is often addressed in a pro-forma way. Related to that, the budget process effectively permits a drift in both deficit and spending targets.

- **Medium- and longer-term orientation of the fiscal framework.** The budget laws are annual documents, while the three-year plans do not have a binding nature. The BSL's pay-as-you go rule requires the assessment and offsetting effects of all initiatives over a three-year period—this latter aspect of the rule is largely neglected. There is no requirement to spell out longer-term implications of selected pieces of fiscal legislation. The absence of a binding medium-term focus in the fiscal framework has permitted large and widening deviations of the fiscal outcomes from the original plans with limited pressure for corrective measures. It has also hampered screening of new fiscal legislation from a longer-term perspective.

- **Anchoring of mandatory spending.** Mandatory spending accounts for a large share of the budget envelope. For example, spending on public wages and pensions alone amounts to more than 50 percent of general government spending. The lack of anchor for these crucial spending categories—and their high growth in 2006–08—was the main reason for adopting the expenditure indexation sub-rules in the 2010 changes to the BSL. However, these rules, while helping adjustment somewhat, have been undermined by ad-hoc initiatives including bonuses to public employees (and to a lesser extent pensioners), selective increases in public wages, and increases in public employment.

[5] According to local legislation, Roads of Serbia is a public enterprise, which has however been considered part of the general government in IMF programs.

- **Public debt reporting, projections, and control.** The issues include: (i) different definitions of the public debt in the public debt law and the BSL (the narrower definition of the public debt law is often used); (ii) incomplete coverage of the public debt in all official reports (for example, nonguaranteed debt of local governments, as well as some other items, is excluded); (iii) lack of explicit rules and procedures regarding the calling of government guarantees (the calling of guarantees is not formalized or made public in a systematic way); and (iv) limited reporting and control over contingent liabilities (arising from nonguaranteed debt of public enterprises that can contain an implicit guarantee, public private partnership (PPP) contracts, deposit insurance, arrears, disputed court cases, etc.)..

- **Fiscal transparency.** A number of issues relate to the presentation of the information to the public that is already available to the policymakers. These include: (i) limited time for public and parliamentary debate for many important pieces of new fiscal legislation (many laws are adopted based on the so-called "urgent procedures"), and (ii) insufficient reporting and information on several important fiscal items (including the final account of the budget and financial statements of some entities comprising the general government, and public enterprises).

- **Accountability for budget outcomes.** Problems include: (i) relatively vague legal identification of accountability (the BSL envisions that the "government" is collectively responsible for budget implementation); (ii) gaps in internal and external audit procedures (for example, the state audit institution (SAI) is currently building capacity, expanding the coverage of audits (so far incomplete), and building a track record of statements and opinions); (iii) the final account of the central government budget was not discussed, voted, or adopted by parliament for more than a decade; and (iv) lack of sanctions within the set-up of the fiscal federalism (while the budget laws have often included a clause envisioning a possibility of cutting transfers to local governments in case they do not comply with the rules set for those in annual budget laws, the sanction was never (meaningfully) implemented).

- **Legal and regulatory rigidities and inconsistencies.** Many existing laws, rules, and "government strategies" have not been adopted in a coordinated way, and de-facto may be in actual or potential conflict with each other. Some of these entitle local governments or sectors to a fixed percentage of GDP or of total spending, thus reducing budget flexibility.

C. A Roadmap for Reform

15. The challenges described in the previous section offer a guide to needed reforms. Steps in this direction would also be consistent with fully implementing good practices in fiscal management and transparency.[6] These reforms need to be implemented and tailored to Serbia's

[6] See, for example, IMF (2007) for the description of those principles.

conditions. As the challenges are often interrelated, there needs to be a critical mass of steps in the right direction.

16. Progress in selected fiscal framework areas has been made recently, and there is a need to build on it in a more systematic way. In late 2012, reform of the so-called own-source accounts integrated these positions of direct budget beneficiaries into the budget process, which was a significant positive step. Similar progress is being planned with respect to integrating indirect budget beneficiaries in the budget. Some headway has been made—and is further planned—with respect to streamlining the uncontrolled proliferation of para-fiscal fees and charges. The government has also moved to implement a tax administration modernization strategy. All these efforts should continue and preferably intensify.

17. Effectively enforcing the BSL's pay-as-you-go rule regarding fully offsetting new deficit-increasing initiatives is crucial for achieving fiscal responsibility.[7] First, enforcing the rule would send a signal that implementation of existing legal provisions (toward greater fiscal responsibility) is a priority, thereby emphasizing continuity of progress and showing tangible results. Second, striving to continuously enforce the rule will greatly reduce the observed pressures for fiscal deficit drift in the course of the annual budget process, especially at the supplementary budget stage. Third, the requirement to focus on a three-year period for offsetting measures would greatly increase the medium-term orientation of many fiscal decisions.

18. Several practical steps are needed for effectively implementing the pay-as-you-go rule. First, it would require building capacity for a competent and independent analysis of the key fiscal initiatives and the proposed offsetting measures. Such capacity could be created within the Ministry of Finance (whose staff would need to be protected from political influences), and/or could be built within the fiscal council.[8] Second, there should be an effectively enforced condition that—without a properly certified analysis of the full package (including offsetting measures), which demonstrate that it would be deficit-neutral—new initiatives cannot be submitted to the government or parliament for consideration. Third, the requirement for the three-year horizon for assessing the neutrality of the package should be strictly enforced, while for changes to the pension a longer-term assessment horizon (say, 10 years) should be considered. The recent experience of Italy suggests that the "pay-as-you-go" rule akin to article 48 of the BSL can be a useful tool in achieving prudent fiscal deficit objectives.

[7] The rule is contained in article 48 of the BSL, which requires the government to assess financial effects—for the current year and for the following two years—of all new budget initiatives and propose offsetting measures that would neutralize any deficit-increasing effects over this horizon.

[8] For practical purposes, a de-minimis threshold could be set to focus the scarce capacity and expertise on relatively large (macro-relevant) initiatives, while smaller initiatives would undergo a simpler procedure.

19. There is also a comprehensive agenda of specific structural reforms. These reforms should achieve the following objectives, and lie in the domain of responsibility of the following ministries and agencies.

Better measurement of the fiscal deficits and public debt:

- *the Statistics Office* would need to (a) produce the full list of entities comprising the general government and (b) start to compile fiscal accounts on an accrual basis;

- *Ministry of Finance and Economy (MoFE)* should (a) collect full and reliable information on public spending arrears, including at the local government level ; (b) compile a comprehensive database on PPP projects and other contingent liabilities; (c) fully integrate the information on indirect budget beneficiaries (IBBs) in final general government accounts;

- *the government* would need to propose reconciling the legal definition of the public debt, with a view to aligning it with that of the BSL;

Improved budget planning

- The MoFE should guard against overestimating revenue projections and underestimating spending (in particular mandatory spending);

- The MoFE/Treasury should improve the quality of monthly planning and projections so that problems in budget implementation are revealed at an early stage and proper corrective measures could be adopted quickly;

- Local governments should develop capacity to better project fiscal outcomes;

Greater comprehensiveness of the budget process

- *The MoFE* would need to (a) integrate the budgets of the social security funds, IBBs, and the Road company (and any other public enterprises that should comprise the general government according to well-specified criteria) into the presentation of the budget law and of targeted outcomes; (b) avoid significant changes in the financial plans of the social security funds and the Road company outside of the broader budget process; (c) make greater effort to assess and coordinate (in terms of exchange of information) the planning of local government budget at the time the budget law is presented to parliament;

- *The government* would need to (a) alter the rules regarding Social Security Funds (SSFs), in particular helping an efficient reallocation of any extra savings achieved to other levels of government; and (b) effectively integrate the stock of expenditure arrears into the fiscal envelope while adopting plans for resolving the arrears and preventing their future accumulation;

More effective rules regarding the budget's implementation

- The MoFE should consistently stick to fully observing the budget timetable, as in the preparation of the 2013 budget;

- The government may consider imposing additional rules regarding changing the deficit in the course of the annual budget process (ideally once the pay-as-you-go rule is effectively working), such as limiting the scope for increasing the deficit at the time of the supplementary budget;

Better medium-term budget orientation

- *The MoFE* could consider (a) introducing nominal binding medium-term spending limits; and (b) improving the realism and quality of rolling three-year medium-term strategies, including by seeking and incorporating feedback from the fiscal council;

Better anchoring and raising the quality of mandatory spending

- *The government* should consider introducing "claw-back provisions" with respect to the excessive growth in the public sector wage bill and consider automatic corrective measures;

- *The MoFE* should finalize the register of public employees and propose measures to better control their number;

- *The government* and the relevant SSFs should undertake specific reforms in the key sectors (particularly pensions, health, education, social assistance) that concern mandatory spending;

Improved quality of investment spending

- *The MoFE* (or another unit) should assume responsibility for coordinating investment projects and their cost-benefit analysis;

Stronger accountability for budget outcomes

- *The State Audit Institution* should further build capacity and continue expanding the scope of the audits;

- *All ministries and agencies* should improve the internal audit function and protect it from political influences;

- *The Parliamentary Finance Committee* should further build capacity and play a meaningful role in screening the budget and other fiscal initiatives;

- *The MoFE* should enforce a meaningful, evenhanded, and rule-based system of sanctions for local governments;

- *The government* should restore personal Minister's accountability for budget outcomes

Eliminate the scope for inconsistent fiscal legislation

- *The government,* in cooperation with the MoFE should review, revise, or more clearly interpret legislation and other regulations with a view to lessening the legal rigidities and possible inconsistencies in the spending structure;

Improved fiscal transparency

- *The MoFE* should (a) report and publish detailed information on spending arrears, including by each budget beneficiary; (b) communicate fiscal developments of predetermined regular intervals, (c) enhance their published reports on the fiscal position and public debt (including by incorporating the IBBs in the deficit position and non-guaranteed debt of local governments as part of general government debt).

- *The government* should allow full public discussion of the final account of the budget in parliament.

20. It is also desirable that, in due course, the original 2010 fiscal rules framework be credibly reestablished on the basis of healthier foundations. The fiscal deficit rule lays a good foundation for a balanced and countercyclical policy in normal times, while targeting the public debt ceiling of 45 percent of GDP seems to be appropriate for Serbia's circumstances. Further, the subrules on the key budget spending sub-items such as public wages and pensions would ensure an orderly anchoring once a robust economic recovery takes hold. Finally, the fiscal council has established a useful role in monitoring the fiscal rules, but also in proposing further improvements to the broader fiscal trends and developments, and there is a need to build on this progress continuously. Of course, reestablishment of the elements of the 2010 fiscal rules should recognize that it may take some time—for example, to bring debt back to 45 percent of GDP.

21. Focusing on these reform priorities would favor fiscal responsibility while minimizing adverse effects on growth. The specific reform steps are not cast in stone and would have to be adjusted to the circumstances. But steps in this direction would help achieve desired deficit outcomes while lessening the need for sharp and disruptive adjustment efforts. In particular, transparency-enhancing and other PFM reforms emphasized above would be especially beneficial, since they (i) require relatively small implementation capacity; (ii) do not represent a drag on growth; and (iii) would have positive spill-over effects on the political economy incentives for good fiscal outcomes and on the pace of other fiscal reforms.

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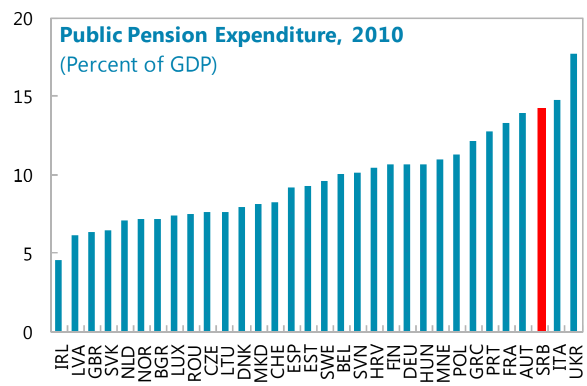
PENSION REFORM[1]

Serbia's public pensions account for about 1/3 of general government spending and 14 percent of GDP—among the highest shares in Europe. At the same time, Serbia has seen a significant weakening of social contributions collections over the past decades and will face additional pressures in the future from aging population. Despite recent reforms, the pension system is not sustainable. Without further adjustment, pension spending would remain well above 10 percent of GDP even with a significant projected drop in replacement rates. This would perpetuate the heavy burden on the economy arising from high contribution rates and the deficits of the pension fund (currently 7 percent of GDP). Additional reforms are thus needed to: 1) support medium-term fiscal consolidation, and 2) ensure long-term sustainability of the pension system, while keeping in mind the social acceptability. The key reform options include: (i) introducing actuarial penalties for early retirement; (ii) equalizing the retirement age of women and men; (iii) rationalizing early retirement privileges granted to various occupations.

A. Current Pension Framework

1. **Currently, Serbia's pensions system is built around a mandatory public earnings-related pension-point scheme.** The overall system comprises rules and institutions for providing old-age, disability, and survivor pensions. For the largest pillar—old-age pensions—benefits depend on earnings during a working life and the length of contributing, adjusted for a number of gender- and occupation-based privileges.[2] Currently, public pensions are the only pension income of the elderly. There are no mandatory private pension systems, and voluntary pension schemes have only been introduced in the 2000s with a modest take up.[3]



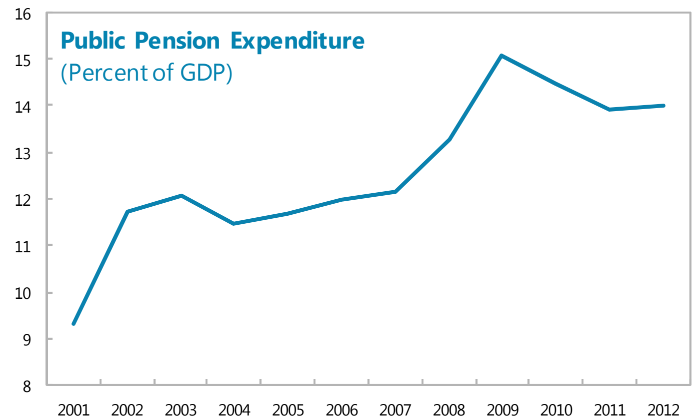
Sources: OECD, EC, ILO, state authorities and IMF staff estimates

[1] Prepared by Desanka Nestorovic (Belgrade Office).

[2] The contribution rate is currently 22 percent with maximum contribution base limited to five times nationwide average salary. The ratio of the individual's and economy-wide annual wage is applied to a point yielding an individual coefficient. At retirement, the number of accumulated points is multiplied with a nominal economy-wide average point value to calculate the individual's benefit. The personal coefficient is capped at 3.8, while at the lower end a minimum pension (27 percent of average net salary) is guaranteed to wage-earners with 15 years of contributions. The value of the "general point" is defined nationwide and is adjusted periodically, with such indexation equally applying to the rights of both current and future pensioners.

[3] Net assets of private pension schemes amounted to 0.4 percent of GDP at end-2011 and only 8 percent of employees used it.

2. Despite the many reforms over the past decade, Serbia's pension spending/GDP ratio steadily increased and is now among the highest in Europe, weighing on the budget and the economy. A number of factors, including adverse demographics, ad-hoc indexations, and inefficient design, caused a rapid rise in the pension spending. In 2012, the pension bill amounted to 14 percent of GDP, with budget transfers covering about one half. The pension support ratio fell to 1.2 (1.1 including farmers, most of whom do not pay contributions). The relatively high pension contribution rates have been a significant obstacle to employment creation, while the pension fund deficit has crowded out more productive public spending. Since the onset of the crisis, public pensions were frozen during 2009–2010, but could only partially roll back the pensions/GDP ratio.

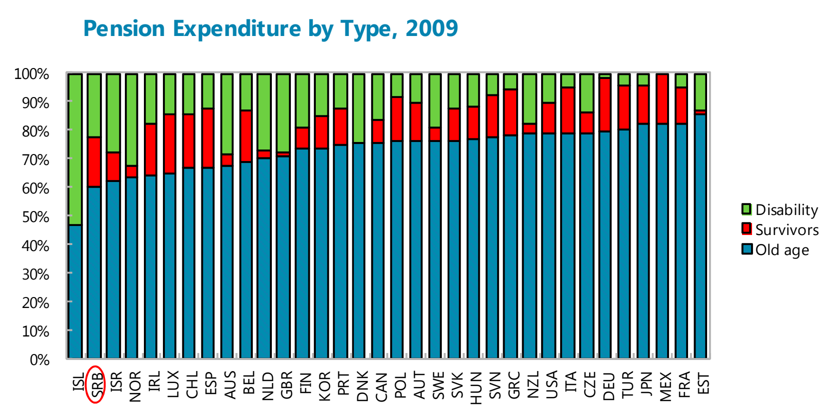


Sources: Serbian authorities and IMF staff estimates

Several design issues of the pension system explain both the relatively high pension levels and a large number of pension recipients:

- **Adverse demographics.** Serbia's old-age dependency ratio (25 percent in 2010), is higher than in many emerging economy peers and closer to the levels of advanced economies.

- **Larger disability pensions than in most countries.** Old age benefits account for about 60 percent of pension spending—significantly below the international average of 3/4, mostly due to higher spending on disability pensions (22 percent of pension spending as opposed to international average of 15 percent; these additional 7 percent of disabled pensioners cost Serbia about 0.3 percent of GDP per year). In the past, disability pensions had been reportedly widely misused. The situation has changed over the previous couple of years, when disabled comprised, on average, less than 15 percent of new pensioners. However, the average during 2008–2011 (16.9 percent) is somewhat higher than during 2005–2007 (12.4 percent) suggesting greater recourse to disability pensions during the difficult economic situation.

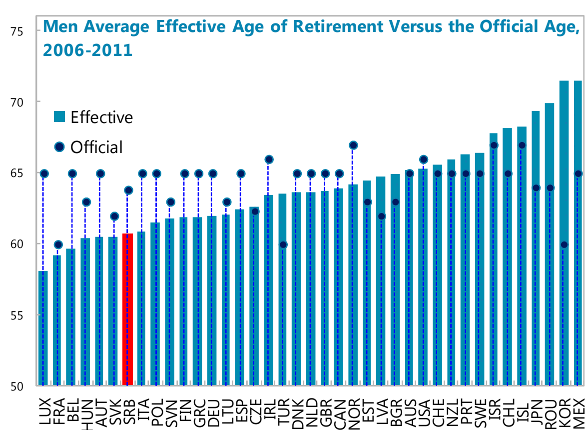


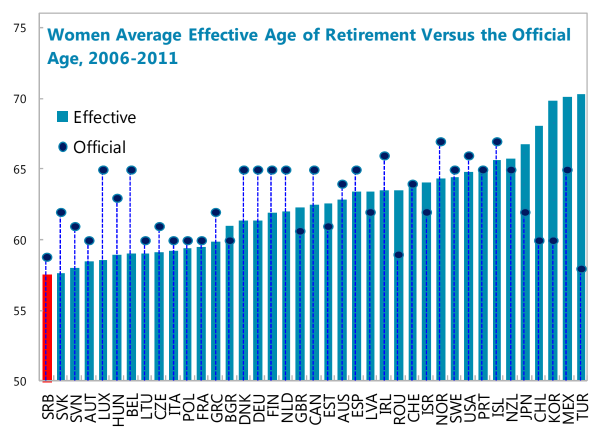
Source: OECD

- **Special retirement conditions.** The weight of pensioners who retired under previous (much more generous) retirement conditions—their comparable pension levels are 20–30 percent higher than those of the more recent retirees.

- **Low statutory retirement ages (and lower for women than for men).** Despite a gradual increase in the retirement age, it is somewhat lower than in other European countries, most of which have equated (or planning to equate) the ages for men and women. Men can retire at 65 years of age after 15 years of contributing with a possibility to retire at 54 years of age if credited with 40 years of contributions. Despite higher life expectancy, women can retire at 60 years of age provided that they have been contributing for at least 15 years, or at 53 years and 4 months after contributing for 35 years and 4 months.

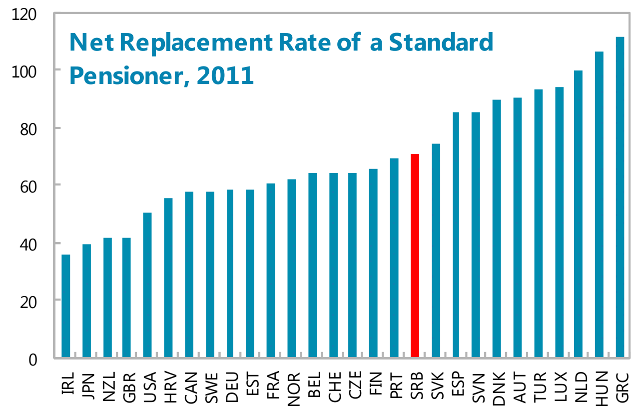
- **Extensive options for early retirement and the consequent low effective retirement age.** Many of Serbia's pensioners retire well before they reach the statutory retirement age: at around 58 for women and 61 for men for old-age pensioners (and 51 and 55 for disability pensioners respectively). About three quarters of new male pensioners and about a half of female pensioners retire prior to the statutory requirement age. This reflects: (i) various possibilities for early retirement without any penalties (based on the number of years of contributions, gender, or occupational privileges) and (ii) disincentives for working longer–every year of contributing after 40 years of service is credited as half a year until 45 years of service; while beyond 45 years it is not credited at all. These are the key reasons effective retirement age is among the lowest in the international comparison. Recent increases in statutory retirement ages have widened the gap between effective and statutory retirement ages further.





Source: OECD, Serbian Authorities and the IMF staff calculations

- **Comparatively high replacement rate.** According to the stylized calculations of the Ministry of Labor,[4] the net replacement rate of a hypothetical standard pensioner was above 70 percent in 2011, which is at the high end compared to other emerging economies.

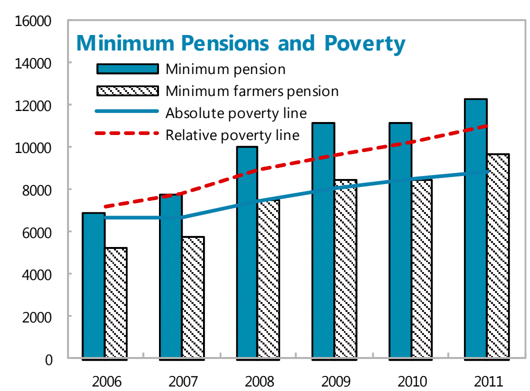


Source: OECD; state authorities

Reforms adopted in 2010 have addressed some of the above bottlenecks:

- **Arbitrary indexation adjustments are not permitted under the new fiscal rules.** Prudent pension indexation rules have been set in the Budget System Law (BSL) as part of the broader medium-term fiscal rules framework. Going forward, general point and pension benefits are indexed biannually with CPI plus real GDP growth above 4 percent. According to the BSL, such an indexation is to be applied until the pension bill falls to 10 percent of GDP.

- **The parametric reforms currently in train are expected to very gradually tighten eligibility criteria for early retirement and reduce some occupational and gender privileges.** The minimum retirement age will be increased from 53 to 58 for both men and women, combined with an increase in required years of service for women from 35 to 38 over the period 2013 to 2023. The reform will significantly reduce possibility for early retirement for women by narrowing the gap between early and statutory retirement age to only two years. The difference of the two retirement ages for men will remain seven years. The reforms also include reducing service credits for women from 15 to 6 percent



Source: The First National Report on Social Inclusion and Poverty Reduction in Serbia

[4] The replacement rate is calculated for a hypothetical standard pensioner—a pensioner that had 40 years of service and the nationwide average earnings during that entire period. The pension amount in the current year is adjusted by the previous year CPI and compared to the salary in the previous year (last year of service).

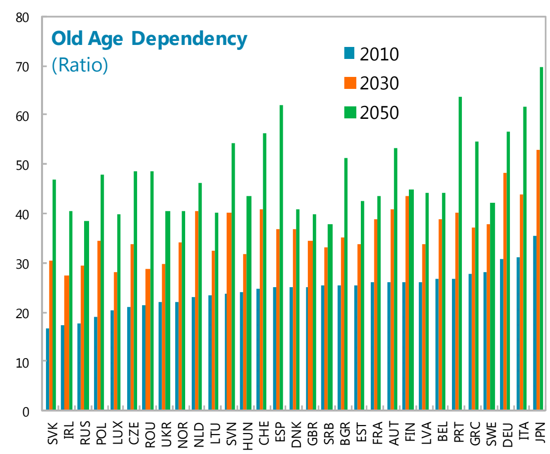
in the period until 2023. Finally, there was a tightening of retirement benefits for the military and the police.

- **The 2011 increases in minimum pensions seem to have alleviated distributional concerns, at a limited cost.** The minimum pension has been increased by more than 10 percent and set at 27 percent of the previous year nationwide net salary. Some 6 percent of regular old age pensioners and about 13 percent of disability pensioners get minimum pension.[5] Minimum farmers' pension is currently by some 20 percent lower than the regular minimum pension, and according to the recent changes to the law this pension has no protective clause that links it to wages. Almost all farmers (99 percent of them) get minimum pension.

- **The pension system has so far been reasonably effective in limiting poverty.** During 2008–2011, minimum pensions helped reduce poverty among regular pensioners—the poverty among pensioners (12.9 percent relative poverty and 5.3 percent absolute poverty in 2009) was somewhat lower than the nationwide poverty (17.7 percent relative poverty and 6.9 percent absolute poverty in 2009),[6] while those older than 65 that were not entitled to pension benefits proved to be much more vulnerable (with absolute poverty at 10.4 percent).[7]

B. Baseline Projections

3. The population dynamics will further strain the public pension system in the future. The population will age rapidly over the coming decades. Old age dependency ratio is already relatively high (24.9 percent in 2010) and is projected to grow by additional 13 percentage points by 2050. Shrinking population should not necessarily mean lower future contribution burden due to the low present employment rate.



Source: UN

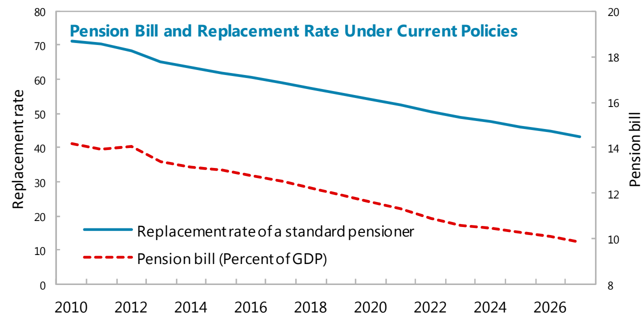
4. Simulations of the current pension system parameters indicate that it may be socially unsustainable. The model (specified in Appendix I) suggests that under current indexation rules the legally targeted 10 percent share of pension expenditure in GDP would be reached in 2027. At the same time, the replacement rate would be reduced to 43.3 percent, down by

5 The minimum pension does not apply to survivors that are mainly entitled only to a share of the deceased family member's pension. About 30 percent of survivors receives a pension lower than the minimum one.

6 Absolute poverty is the income level bellow a specified minimum of basic needs (RSD 8.022 in 2009). Relative poverty line is set at 60 percent of national median income.

7 The Report on Social Inclusion and Poverty Reduction (2011).

27.2 percentage points comparing to 2011. Such a sharp fall in the replacement rate would hardly be socially acceptable, and could trigger reform reversals.



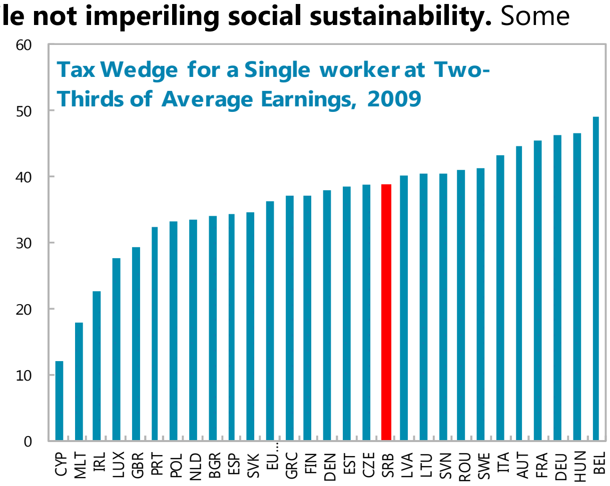
Source: IMF staff estimates.

5. Stabilizing replacement rates at a more socially acceptable level of 50 percent would help protect low-income pensioners, but overall pension spending would remain at very high levels. In order to prevent the net replacement rates from falling below 50 percent, the CPI indexation would have to be applied only until 2022 (in contrast to 2027 as in the simulation above), and from that point on it would be substituted by the wage indexation. Replacement rates would fall by about 20 percentage points, but the overall pension bill, would remain by 0.8 percentage points above the targeted 10 percent of GDP. By 2050 pension bill would however grow to 12 percent of GDP, reversing much of the savings.

6. The minimum pension should help protect low-income pensioners, but at an additional cost. Cross country analysis suggests that a 10 percentage point decrease in replacement rates increases those at risk of old-age poverty by 0.9 percentage points (IMF 2011). As replacement rate is reduced over time, more pensioners will receive minimum pensions. With a 50 percent replacement rate, the share of pensioners receiving minimum pensions will probably double to 10–12 percent. Protecting the elderly against poverty would also reduce the risks of pension reform reversal.

C. Reform Options

7. Various reforms of the pension system can be considered to reduce the overall public pension expenditure to sustainable levels while not imperiling social sustainability. Some pension reforms are considered more favorable than others from the standpoint of economic growth. For example increasing retirement ages and tightening access to early retirement could increase the size of the labor force. Other parametric reforms, such as reducing benefits or increasing contributions, improve fiscal balances, but their impact on economic activity is less pronounced and can even be negative. Lower benefits would reduce domestic demand, while raising contributions could reduce labor supply,



Source: EUROSTAT; IMF staff calculations potentially resulting in lower output.[8] Contribution rates are already high, with the tax wedge at 37.8 percent as of 2009, and increasing them further could have adverse labor market effects.

8. The ongoing Tax Administration reform should help increase the efficiency of contribution collections through unifying revenue administration for tax and social security collection. To enhance collection of farmers' contributions, the recent decision to de-link subsidies to farmers from the requirement of being current on contribution payments should be reversed.

9. Various reform options were considered by conducting simulations of the pension model, and their impact is summarized in Table 1 and Figure 1:

- **Raising statutory retirement age for women by 5 years to equate it with the retirement age of men (65).** In Serbia, life expectancy at age 60 is by 3 years higher for women than for men, yet Serbia remains one of few countries where statutory retirement age for women remains lower than for men.

  - The reform takes effect in 2013 and the statutory retirement age would be raised by half a year each year until 2022. The average yearly savings (including additional contributions) from 2013 to 2030 would amount to 0.1 percent of GDP, and would increase to 0.3 percent of GDP in the period from 2013 to 2050. The total savings by 2050 would amount to 7.2 percent of GDP. The calculations assume that, once the effects of the reform are fully materialized, 25 percent of women will continue to retire at the statutory retirement age, down from the current 50 percent. It is likely, that due to the lack of actuarial penalties for early retirement more women would retire early—similar to men.[9]

  - Postponing the reform to 2020 would reduce total saving to 5.1 percent of GDP.

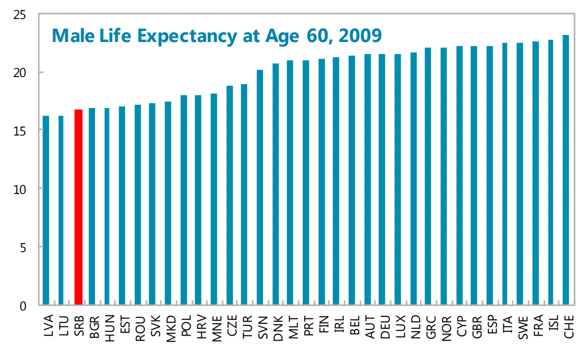
- **Raising minimum early retirement age for both men and women from 58 to 60** (in the period 2024–2027 by half a year each year). The measure would yield average yearly savings of 0.1 percent after 2030, and total savings of 2.3 percent of GDP assuming that actuarial penalties are not introduced.

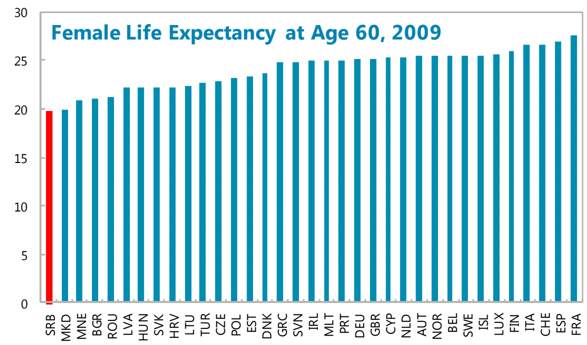
- **Raising statutory retirement age of both men and women to 67** (in the period 2023–2026 by half a year each year). This measure would yield average savings of 0.2 percent of GDP per year in the period 2031–2050, and total savings of 4.2 percent of GDP under the assumption that there are no actuarial penalties for early retirement and that 80 percent of both men and women would retire early. However, this option may be difficult to justify because life expectancy at age 60 is lower in Serbia than in EU countries (for women by 5.4 years and for men by 4.4 years

[8] The Challenge of Public Pension Reform in Advanced and Emerging Economies, 2011.

[9] Currently, about 75 percent of men retire early, and only 25 of them retire at the statutory retirement age (65).

below the EU average). In the future, retirement age should be linked to the changes in life expectancy.





Source: Eurostat; Serbian Statistical Office

- **Introducing penalties for early retirement of 6 percent per year.** On average, men in Serbia retire 3.5 years earlier than the statutory age, and women 1.5 years earlier. Measures aimed at limiting early retirement (via imposing penalties) could thus be introduced, with a favorable effect both on generating spending savings and enhancing labor supply. According to Queisser and Whitehouse (2006), estimated actuarially-neutral adjustments range between 6 and 9 percent for ages 60–70 in the OECD.[10] [11] If introduced in 2013, the reform would yield average savings of 0.4 percent of GDP per year in the period 2013–2050, under the assumption that penalties would not discourage early retirement and that 75 percent of men and 50 percent of women would still retire early. The cumulative savings for the period 2013–2030 would amount to 6.5 percent of GDP, and additional 9.3 percent of GDP would be saved in the period 2031–2050.[12]

- **Introducing incentives for working longer** in the amount 6 percent per year, assuming that this rate is actuarially neutral, would be expenditure neutral comparing to the option with only

[10] Due to the data insufficiency-hyperinflation from 1990s distorted the series of average wages; in addition data on contribution rates prior to 1994 are also not readily available, and thus calculations of the actuarially neutral adjustment cannot be made for Serbia.

[11] The Challenge of Public Pension Reform in Advanced and Emerging Economies, 2011.

[12] The minimum savings would be realized under alternative assumption where all pensioners prefer working until statutory age rather than be penalized for early retirement. Should every year of contributions after 40 years of service be credited as full year (instead of current half a year) savings would amount to 0.4 percent of GDP per year in the period 2013–2050. Opting for lower penalties, would lead to proportional loss in savings under assumption of unchanged preferences, and more than proportional loss under assumption that all pensioners retire at statutory age. Should the penalties be introduced at the level of 4 percent per year the average savings during the entire period, under assumption of unchanged preferences, would fall to 0.3 percent of GDP, and the total loss in savings comparing to the 6 percent penalty alternative would amount to 5.3 percent of GDP. The average savings under assumption that all the pensioners would retire at statutory age would be 0.2 percent of GDP, and total loss comparing to 6 percent penalty alternative would amount to 5.3 percent of GDP.

penalties and where all pensioners retire at statutory age. However, given the very high unemployment rate particularly among the young, this is not a preferred measure.

- **A combination of equating retirement ages and years of service,[13] as a retirement condition, and introducing actuarial penalties would be particularly powerful in generating sizable savings.** Such a combination would yield savings of between 0.8 percent of GDP per year (should all pensioners decide to retire at statutory age) and 0.9 percent of GDP per year (should the pensioners keep the current preferences unchanged) and total savings of between 30.6 and 35.0 percent of GDP over the entire period.

[13] Including elimination of 6 percent service credits for women.

Table 1. Savings from Different Reform Options, in percent of GDP

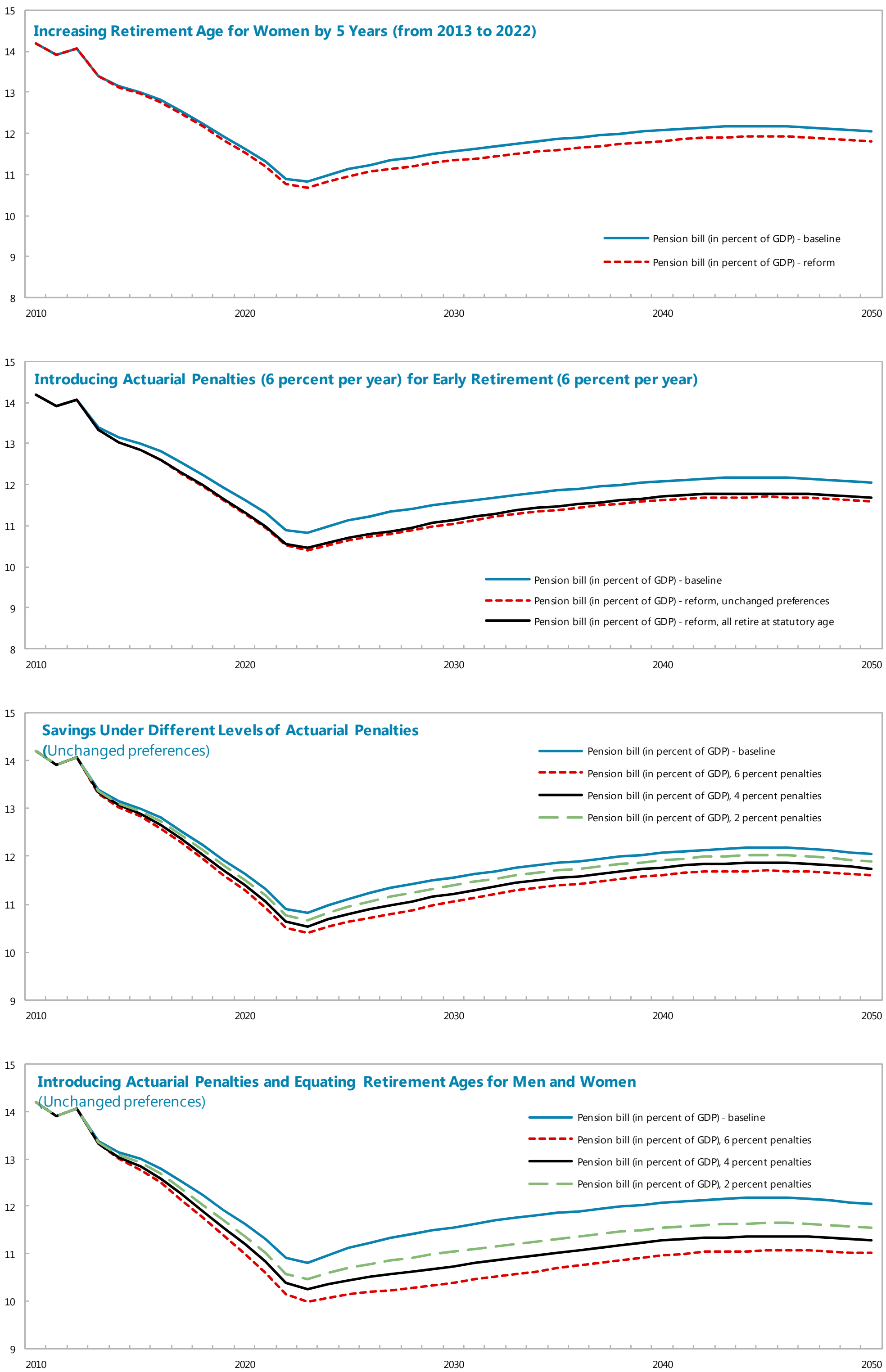
Reform option	Average savings per year			Present value (2013) of total savings /1		
	2013-2050	3013-2030	2031-2050	2013-2050	3013-2030	2031-2050
Increasing retirement age for women by 5 years, from 2013-2022	0.2	0.1	0.3	7.2	2.1	5.1
Increasing retirement age for women by 5 years, from 2020-2029	0.1	0.0	0.2	5.1	0.7	4.4
Increasing retirement age for both men and women to 67, from 2023-2026	0.1	0.0	0.2	4.2	0.4	3.8
Increasing early retirement age for both men and women from 58 to 60, from 2024-2027	0.1	0.0	0.1	2.3	0.2	2.1
Introducing actuarial penalties for early retirement, unchanged preferences						
6 percent per year	0.4	0.4	0.5	15.8	6.5	9.3
4 percent per year	0.3	0.2	0.3	10.5	4.3	6.2
2 percent per year	0.1	0.1	0.2	5.3	2.2	3.1
Introducing actuarial penalties for early retirement, all retire at statutory age						
6 percent per year	0.4	0.3	0.4	13.4	5.7	7.7
4 percent per year	0.2	0.2	0.2	8.1	3.5	4.6
2 percent per year	0.1	0.1	0.1	2.8	1.4	1.5
Equating retirement ages for men and women + introducing actuarial penalties, unchanged preferences						
6 percent per year	0.9	0.7	1.1	35.0	12.6	22.4
4 percent per year	0.7	0.5	0.8	25.7	9.1	16.7
2 percent per year	0.4	0.3	0.5	16.5	5.6	10.9
Equating retirement ages for men and women + introducing actuarial penalties, all retire at statutory age						
6 percent per year	0.8	0.6	1.0	30.6	11.2	19.4
4 percent per year	0.5	0.4	0.7	21.3	7.7	13.6
2 percent per year	0.3	0.2	0.4	12.1	4.3	7.8

/1 discounted with nominal GDP growth

Source: IMF staff calculations

REPUBLIC OF SERBIA

Figure 1. Pension Model Simulations, 2010–50



Sources: IMF staff estimates

Appendix I. Model Assumptions

The projections of pensions spending until 2050 were done the following way:

- **The number of pensioners** is projected by adjusting the previous year's figure by the projected number of current year's newcomers and exits.

- **The projected number of new beneficiaries** is based on the assumption that the shares of cohorts of new pensioners in the population cohorts will remain at the level during 2007–2011. The data is corrected for the fact that the number of contributors fell by about 30 percent in the period from 1989 to 2011.

- **The projection of exits** was done based on shares of exits in 2005–2011 in the population, by gender and cohorts. The projection is adjusted by the projected changes in life expectancy (assuming that changes in life expectancy of the elderly will follow those of the newborns—these were the only projections of life expectancy available). Further adjustments were made for two categories of pensioners— disabled and farmers. The number of contributing farmers has been significantly lower than two decades ago (at least one half; and much more according to some estimates), and the number of newcomers compared to the total number of farmer pensioners is half that of the regular pensioners. Similarly, the number of new disabled has also dropped over the last couple of years and their share in new pensioners was somewhat below 15 percent. The overall number of disabled is projected to fall to 15 percent of total pensioners and to remain stable at that level through 2050.

- **The indexation of pensions** follows the current CPI (plus real GDP growth above 4 percent) rule up to the point where the net replacement rate of a standard pensioner falls to the level of 50 percent; from that point pensions are indexed to nominal wage growth in order to preserve 50 percent replacement rate that is considered socially acceptable.

- **Corrections** were made to adjust for the effect of the enacted parametric reforms: changes in early retirement age for man and women (old age only, detailed data on survivors, or data for professions that retire early on special conditions were not available); as well as for the reduction of service credits for women.

- **The reliability of projections** is affected by the shortcomings of the data—data on formal employment by age cohorts is not available; demographic projections do not include migrations; projections of life expectancy at the age of 60 are not available; detailed data on survivors and the data on pensioners with accelerated years of service are not available.

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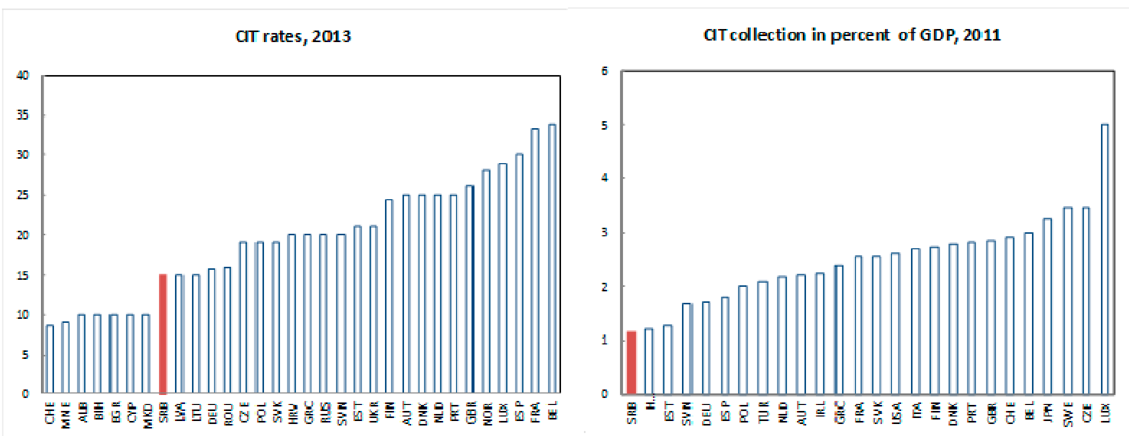
CORPORATE INCOME TAX AND OTHER CORPORATE TAXES[1]

Serbian corporate income tax collection of only 1.2 percent of GDP is far below the EU unweighted average of 2.7 percent of GDP (2010). Two main reasons behind the low collection are the low statutory rate and a vast range of costly tax expenditures—both have been seen as key to attracting foreign direct investments. As part of a tax reform introduced in late 2012, the CIT rate was increased, and a number of CIT-like charges that posed a significant and unpredictable burden to the business sector were eliminated or reduced. Tax incentives were also revisited; however their share in tax collection remains high. As part of further consolidation efforts, Serbia should consider eliminating all business tax incentives.



Sources: PriceWaterhouseCoopers; OECD

A. CIT Rate and Exceptions

1. **As a part of broader tax reform introduced in late 2012, the CIT rate was increased from 10 to 15 percent.** The rate is significantly lower than the EU average of 23.5 percent, but higher than the very low rates of regional peers (Macedonia, Bosnia and Herzegovina, Bulgaria, and Albania have 10 percent rate, while Montenegro has 9 percent rate). Capital gains are also taxed at 15 percent separately from company's operating results.

2. **A number of tax expenditures have eroded the revenue base.** A wide spectrum of incentives,[2] including accelerated capital allowances, tax credits and tax holidays, aims at supporting

[1] Prepared by Desanka Nestorovic (Belgrade Office).

[2] The key tax expenditures include: (1) a 10-year long CIT tax holidays for investments above EUR 9 million (RSD 1 bn; recently increased from RSD 0.8 bn) in fixed assets and employing at least 200 employees (instead of 100 employees before the changes to the law); (2) exempting corporate taxpayers from CIT for investing in training and employment of disabled people; (3) tax credit of 20 percent for investments in fixed assets up to 33 percent of the CIT liability

(continued)

a number of goals—creating employment; increasing investments in fixed assets, fostering small enterprises; stimulating growth in underdeveloped regions. The total fiscal cost of the incentives in 2011 amounted to 0.8 percent of GDP, or 68 percent of the total CIT collection. The total revenue loss related to incentives fell somewhat in 2010 (from 0.8 to 0.7 percent of GDP), following the abolishment of the incentive for employment of new permanent employees. However, the total cost of incentives rebounded to 0.8 percent of GDP in 2011 due to a sharp increase (37 percent) in the most costly incentive, for investments in fixed assets.

3. **As a part of the recent reform, tax incentives were also revisited.** Some were abolished (the least expensive ones), while some were made less generous. The changes will likely result in a reduction of CIT tax expenditure by about one third (0.2–0.3 percent of GDP). However, the full effect will take time to materialize as the credits for investments can be carried forward by 10 years. Despite these changes, the share of incentives in CIT tax collection will remain high, at about 45 percent. Eliminating all tax expenditures would bring additional revenue of about 0.5–0.6 percent of GDP to the budget.

4. **In addition to reducing the revenue base, incentives are also distortionary.** They tend to distort investment decisions and often represent a deadweight loss as investments may have been realized due to other favorable conditions. Lost revenues may have been used more productively elsewhere. In practice, tax incentives are often poorly implemented and monitored, cost-ineffective and can lead to abuse and corruption. Tax holidays are not well targeted and may be beneficial for short-term ventures generating quick profits.

B. Non-Tax Levies

5. **Non-tax levies undermined the predictability and stability Serbia's tax system.** The most important considerations for business investment decisions are not necessarily relative tax burdens, but stability and predictability of the tax system that should be less discretionary and more transparent. The corporate sector in Serbia had been under a heavy burden of continuously proliferating tax-like levies. An analysis by NALED[3] identified a list of 370 non tax levies paid by Serbian companies in 2012. Of that number at least 179 charges were paid without getting any rights, goods or services in return, or their value is by far less than the amount paid for them. The base for calculating 25 levies was operating revenue of companies. In addition to creating unstable and unpredictable business environment, non tax levies also undermine the corporate income tax base, as their payment is an allowable deduction in the production of income.

(down from 50 percent of CIT liability) with unused tax credit being carried forward up to 10 years; and (4) for small firms a tax credit of 40 percent for investment in fixed assets up to 70 percent of the CIT liability with unused tax credits being carried forward up to 10 years.

[3] A business association comprising companies, municipalities, and NGOs working to improve conditions for doing business in Serbia.

6. The legislative framework that was in place until 2012 created a favorable environment for uncontrolled use of various tax-like levies. These levies were outside of the Ministry of Finance control, and many of them were dedicated to special purposes and the entities that collected them had a full discretion over their spending (own resource revenue). A typical example of such a levy was fee for the Budget Fund for Woods paid by all Serbian companies in the amount of 0.025 percent of total operating revenue. About three quarters of the levies were imposed by the central government; the remaining quarter was in charge of the local governments.

7. A comprehensive reform of the system of the tax like levies was carried out in 2012 aimed at reinforcing and stimulating a favorable investment climate. Charges can now only be introduced through new legislation; their level must correspond to the cost of their providing, and unless specified in the law must be approved by the finance minister. Own resource revenue accounts were abolished, all revenues are now collected through the single treasury account, and decisions on their spending are made through the regular budget procedures. Overall, comprehensive legislative changes (28 laws) led to abolition of 138 charges (28 at the local level). The loss of revenues from eliminated levies was replaced with increased collection from a higher CIT rate, although reliable estimates of the net effect are not available.

Table 1. Revenue Losses Associated with Corporate Income Tax Incentives and Projected Savings from Enacted Reforms , 2009-11

Description of CIT incentive	2009	2010	2011	2009	2010	2011	Projected savings cutting tax incentives	
	In RSD bn			In percent of total tax expenditures			In the first year	In the tenth year
Tax allowance for a new concession company	0.0	0.0	0.0	0.0	0.0	0.0	0	0
Employment of persons with disability	0.0	0.0	0.0	0.0	0.0	0.0	no changes in tax policy	
Deduction on account of profits made in a newly established business unit in an underdeveloped region	0.0	0.0	0.0	0.0	0.0	0.0	no changes in tax policy	
Deduction on account of permanent employment of new workers (abolished in 2010)	2.6	0.0	0.0	12.5	0.0	0.0	no changes in tax policy	
Tax credit of 20% (40% for SMEs) for investment in fixed assets, up to 50% (70% for SMEs) of tax liability with 10-year carry forward of unused credits	13.7	15.2	20.8	65.7	76.8	81.5	0.5	5
Tax credit in the amount of 80% of investments in special sectors	2.9	3.1	3.1	14.1	15.6	11.9	0.2	2.5
Deduction on account of CIT paid on income earned on operations in another country	0.1	0.0	0.0	0.3	0.1	0.0	no changes in tax policy	
Deduction for accrued corporate income tax and withholding tax	0.9	0.6	0.6	4.5	2.8	2.2	no changes in tax policy	
Resident parent company's right to decrease its tax liability by taking a credit for calculated withholding income tax for intercompany dividends	0.0	0.0	0.0	0.0	0.1	0.2	no changes in tax policy	
Ten-year tax holiday for investing at least at least RSD 800 million and employing at least 100 workers, in proportion to that investment	0.6	0.9	1.1	2.7	4.5	4.2	0.1	1
For a newly established legal entity	0.0	0.0	0.0	0.0	0.0	0.0	no changes in tax policy	
For newly established legal entities with headquarters in underdeveloped areas and in free trade zones	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
For taxpayers with stakes owned by foreign entities	0.0	0.0	0.0	0.0	0.0	0.0	no changes in tax policy	
For new permanently employed workers	0.0	0.0	0.0	0.2	0.0	0.0	no changes in tax policy	
Total incentives	20.8	19.8	25.6	100.0	100.0	100.0	0.8	8.4
CIT collection	31.2	32.6	37.8					
Total incentives in percent of CIT collected	66.8	60.8	67.7					

Sources: Serbian authorities; and staff calculations

References

Naled, (2012), "System of Non-tax and Para-fiscal Forms in Serbia," USAID.

MACRO-FINANCIAL LINKAGES[1]

Credit growth is important for economic activity in Serbia. Yet, the current credit growth rate is lower than during the onset of the global financial crisis—this is likely to make durable economic recovery challenging. The slowdown of credit is indicative of the broader challenges faced by the economy, such as domestic and external vulnerabilities, elevated level of uncertainty and an underdeveloped export-oriented private sector. In turn, these challenges increase lending risk and suppress both demand for and supply of credit. The buffers accumulated by the banking sector before the beginning of the global crisis helped maintain stability of the banking system, but the system is facing a number of challenges such as significant level of nonperforming loans (NPLs) and exceptionally high euroization. Reducing macroeconomic vulnerabilities and addressing high level of NPLs would decrease the perceived level of risk and facilitate financial intermediation.

A. Low Credit Growth: a Consequence of Weak Demand or a Driving Force of Economic Slowdown?

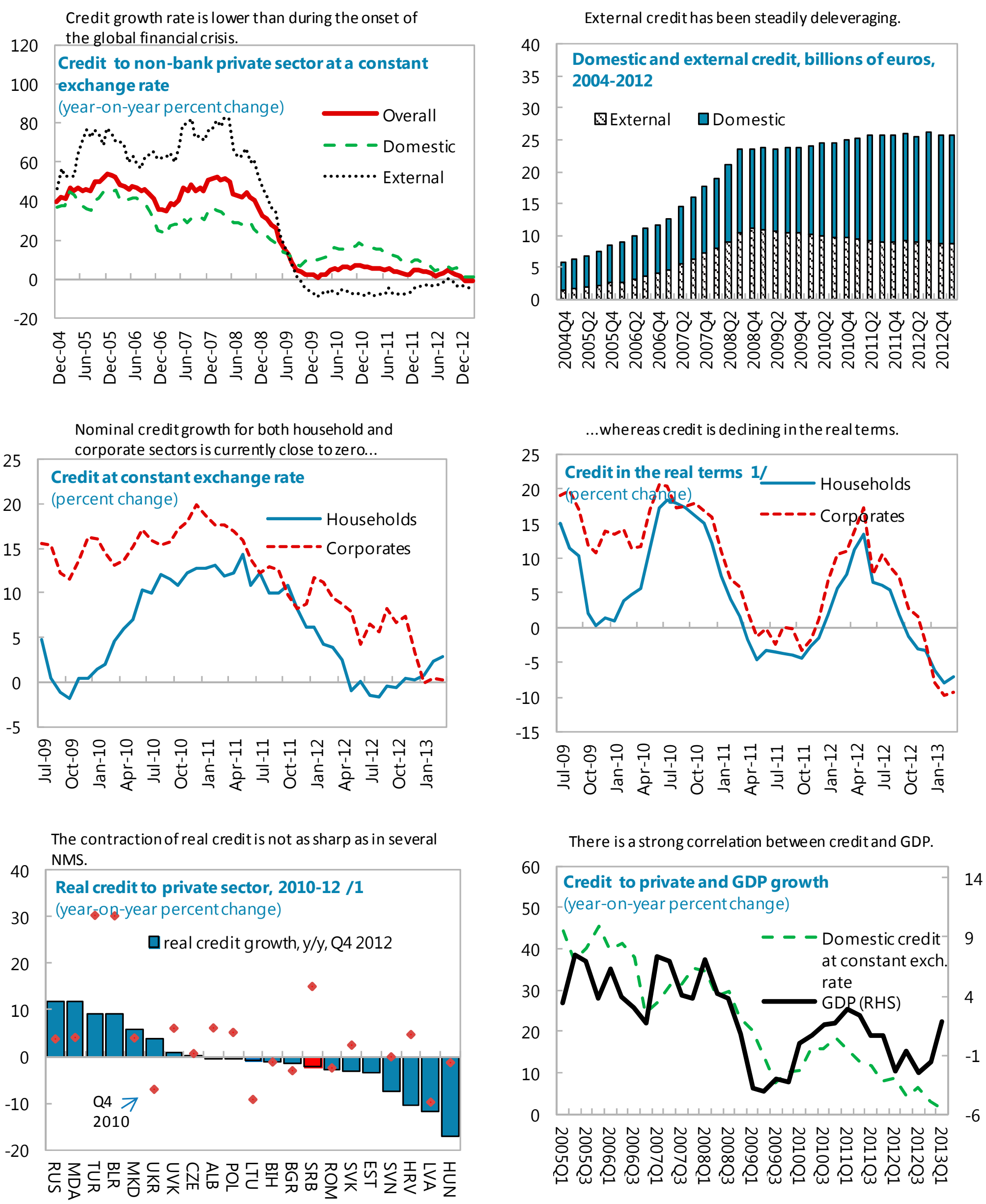
1. Credit to Serbia's private sector is weak, although its dynamics are still more favorable than in peer countries. Credit from both the domestic banking system and the external sources is no longer growing in the nominal terms and declining in the real terms. Cross-border credit is being unwound, implying that Serbia's enterprises need to find access to alternative sources of financing (Figure 1). After some recovery in 2009–10, domestic credit has been decelerating—its current growth rate is lower than during the onset of the global financial crisis.[2] In real terms (nominal credit in local currency at current exchange rates adjusted for CPI inflation) Serbia's domestic credit has been declining, although more slowly than in several New Member States of the EU (NMS). Credit growth continued to decelerate in late 2012 and 2013:Q1 despite the authorities' attempts to boost it via a subsidized credit program—a significant share of loans extended under this program went to refinancing of old loans rather than new financing.

2. Domestic credit is crucial for Serbia's economic activity. There is a positive correlation between credit—and particularly domestic credit—and GDP growth (Figure 1). Bank credit is important for financing investment as non-bank financing channels (capital and securities markets) are not well-developed in Serbia. Credit is also important for financing housing construction and

[1] Prepared by Dmitriy Kovtun and Eugen Tereanu (EUR)

[2] There is a structural break in the domestic credit time series in October 2012 due to the resolution of Nova Agrobanka (as assets in banks undergoing bankruptcy are removed from the monetary survey). The effect amounts to some 2½ percent of the total credit stock.

Figure 1. Serbia: Credit Growth Indicators, 2004-13



Sources: NBS, IFS and Fund staff calculations
1/ Measured as nominal credit at current exchange rates adjusted for headline CPI inflation.

consumption of durables. Thus, low private sector credit growth may pose a drag on investment and consumption and therefore on economic recovery.

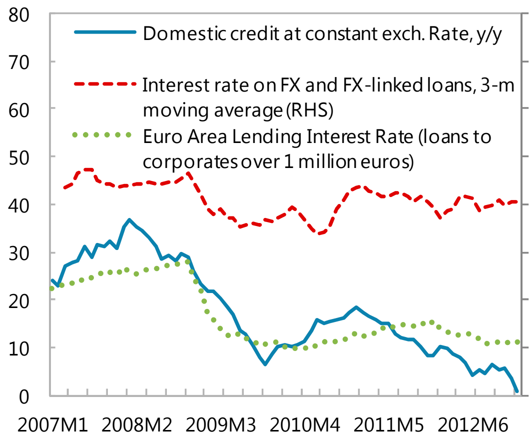
3. **An important question is to what extent the slowdown in domestic credit has been driven by supply-side restrictions as opposed to weak demand for credit**. Conceptually, the supply factors are those that determine the interest rate offered by a bank to a borrower for a given level of credit: they include availability and cost of funding (both domestic and external), lending standards as well as premia that compensate banks for lending risks. The demand for credit depends on the availability of projects in which the expected rate of return is higher than the interest rate—this, in turn, depends on (i) the cyclical position of the economy (as demand for credit is lower during recessions due to weaker economic activity), and (ii) fundamental characteristics of the economy (technology, intertemporal discount factor in the utility function, etc.). In a purely demand-driven credit slowdown, a reduction in credit growth is a consequence of low aggregate demand and therefore demand-stimulating policies should help restore it. On the contrary, a supply-driven credit shock can be contributing factor to—rather than a consequence of—a slowdown of the broader economy calling for policies addressing credit supply issues.

4. **In practice, however, disentangling demand and supply factors is challenging**. To overcome the difficulty, the literature resorted to the analysis of lending surveys that convey views of senior bank credit officers regarding lending conditions. One example is the Bank Lending Survey for the Euro Area (BLS) which poses questions regarding perceptions of changes in credit standards as well as terms and conditions of lending in the past three months (Berg et al., 2005).[3] The studies based on these surveys typically find that even after controlling for loan demand, supply-side constraints negatively affect credit (Hempell and Sorensen, 2010). In Serbia, however, a lending survey is not available and the analysis of relative importance of supply and demand factors needs to rely on the observed data.

5. **Serbia's credit market outcomes suggest that both supply and demand factors played an important role in credit slowdown since the beginning of the crisis in 2008.** Whereas annual credit growth changed significantly (from about 30 percent before the crisis to low single digits at end-2012), the lending interest rates fluctuated within a narrow band of 7–9 percent, showing considerably less variation than in the euro area. This is consistent with a hypothesis that both supply and demand schedules shifted simultaneously in the way that produced large changes of credit volumes without much change in the interest rates. Demand for credit was affected by a slowdown in economic activity. Supply of credit was restricted by availability and cost of funding as well as tightening of the lending standards associated with rising perception of risk as discussed in more detail below.

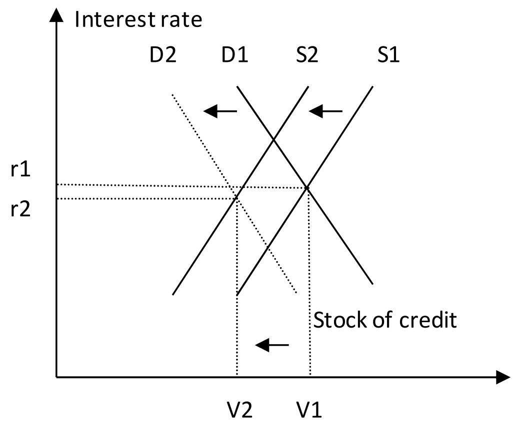
[3] BLS defined credit standards as internal guidelines or criteria—written or unwritten—which reflect a bank's loan policy. BLS posed questions how credit standards are affected by the following factors: (i) cost of funds and balance sheet constraints (costs related to bank's capital position, ability to access market financing, liquidity position), (ii) pressure from competition, and (iii) perception of risk.

The relative stability of the FX interest rates...



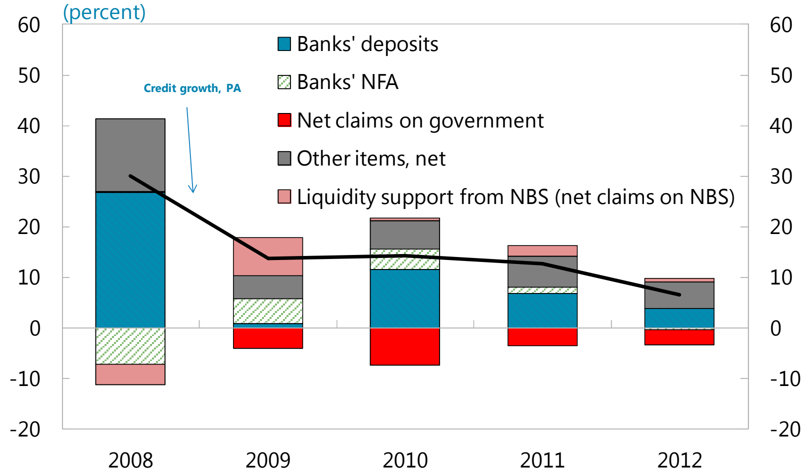
Sources: NBS and Fund staff calculations

...is consistent with shifts in both demand and supply of credit.



6. Availability of funding declined and its cost increased since 2008. Domestic deposits and foreign liabilities constitute the bulk Serbia's bank funding sources, and both of these slowed down significantly after the onset of the crisis. Deposits contracted in the beginning of 2009 and, after a period of recovery in late 2009–early 2010, began to slow down again (Figure 2). Foreign funding—measured as gross foreign liabilities in the monetary survey—picked up in 2009 but plateaued afterwards. Relative importance of various factors could be illustrated by a decomposition of the period average credit growth rate into contributions of major bank survey aggregates (i.e. deposits, net foreign assets, net claims on government, net claims on NBS, and net other items).[4] In 2008, credit was propelled mainly by deposit growth (blue bars). In later years, the contribution of domestic deposits has been reduced and, moreover, credit has been consistently crowded out by the increases in net claims on government (red bars). Relatively high price of funding contributed to the high lending interest rates. The price of funding, in turn, is correlated with the external risk premium.

Contributions to period average credit growth at constant exchange rate
(percent)

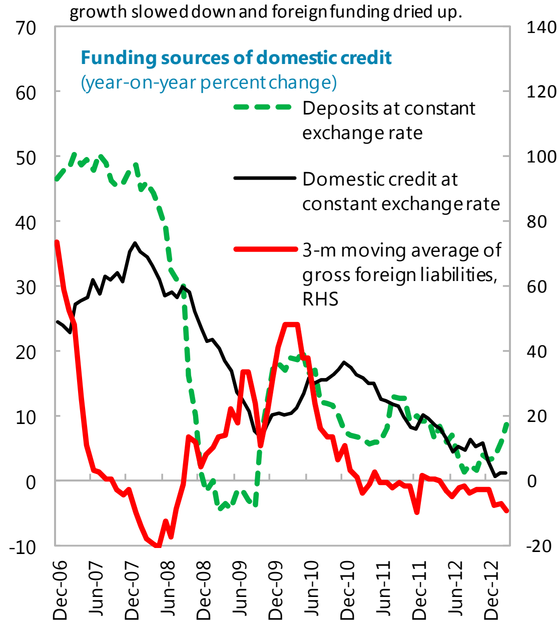


Sources: NBS and IMF staff calculations.

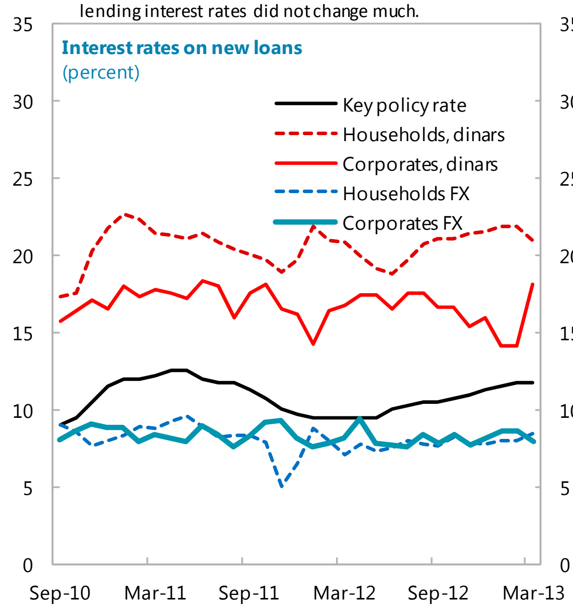
[4] Decomposing the growth rate of period averages—as opposed to end-of-period stocks—is better for this purpose as it helps reduce the base effects and the noise in the data.

Figure 2. Serbia: Supply-side Factors of Credit, 2006–13

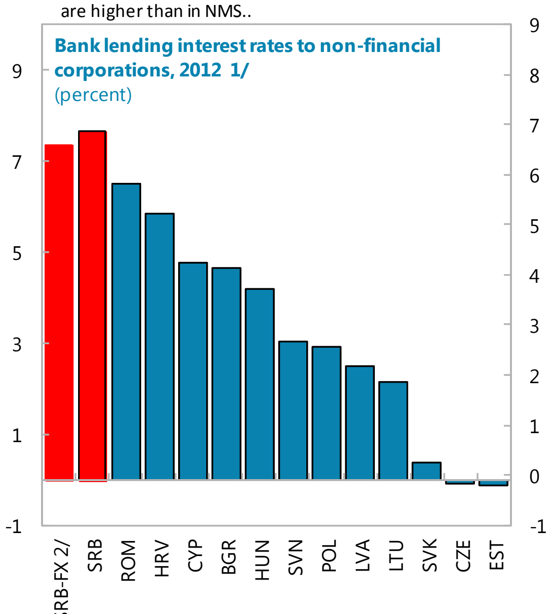
Funding of credit became less abundant: deposits growth slowed down and foreign funding dried up.



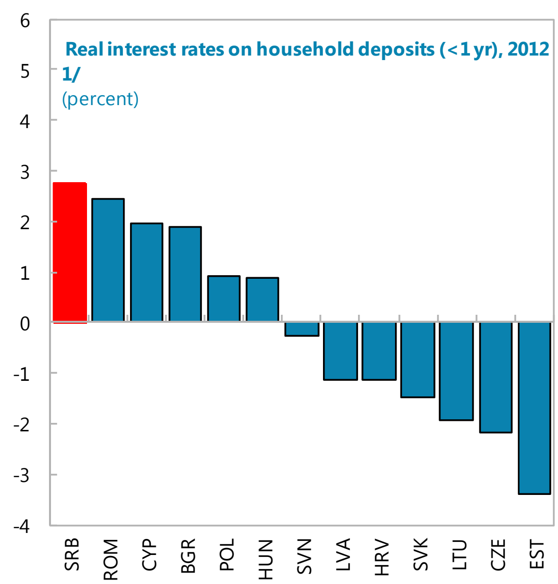
Despite significant changes in credit growth rates, bank lending interest rates did not change much.



At present, lending interest rates in the real terms are higher than in NMS..



...driven in part by the cost of funding.



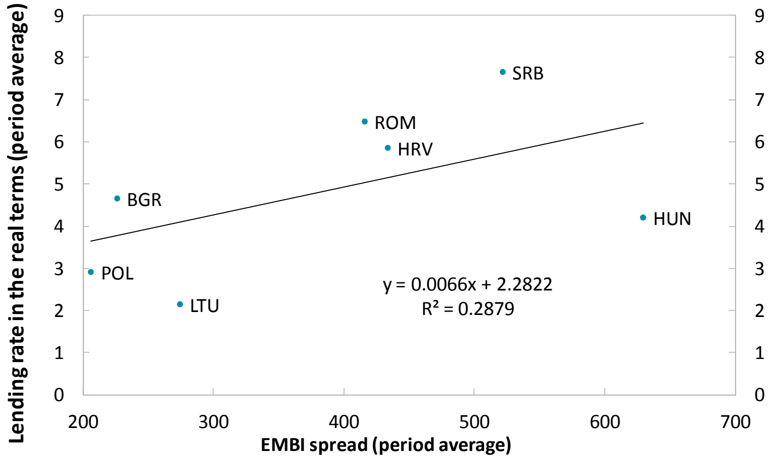
Source: NBS, IFS and IMF staff calculations.

1/ Nominal interest rates on loans in local currency adjusted for CPI inflation.

2/ Interest rate on FX loans to non-financial corporations.

3/ Nominal interest rates on household deposits in local currency adjusted for CPI inflation.

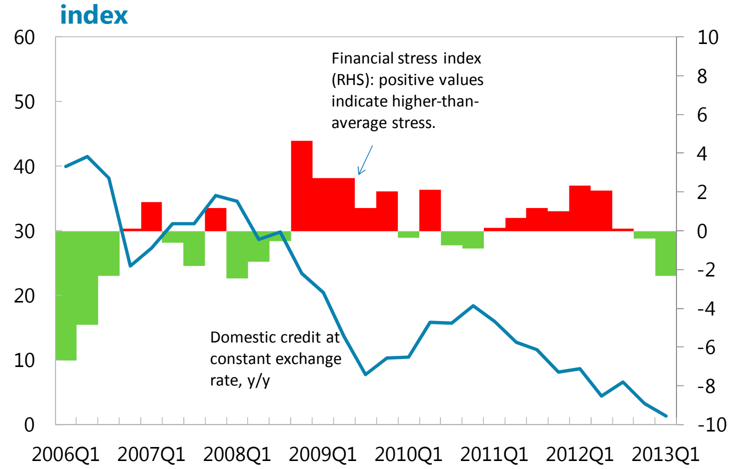
External risk premium and lending interest rates in the real terms, 2012



Sources: NBS, IFS and Bloomberg

7. Since the beginning of the crisis, perception of risks increased and the lending standards tightened. Difficult external financing environment as well as domestic macroeconomic vulnerabilities—such as volatile inflation, large twin deficits and the weak real sector—increased banks' lending risk, which led to tightening of credit standards. The large stock of nonperforming assets and the associated need for provisioning eroded profitability, raising lending margins. In the absence of a lending survey, overall perception of risk could be approximated by a financial stress index. The financial stress index (FSIX) aggregates information about exchange rate and stock market volatility, as well as spreads of the interbank rate and government bond over the NBS's policy rate (Box 1 elaborates on the construction of the FSIX). As expected, credit growth is correlated with the inverse of FSIX. Two periods of financial stress buildup (2009 and 2011) were associated with the slowdown of credit growth. Interestingly, the FSIX has been declining since 2012:Q3 (on account of lower volatility of the exchange rate and stock market index, declining yields on sovereign debt) but credit growth was still slowing down.

Domestic credit growth and the financial stress index

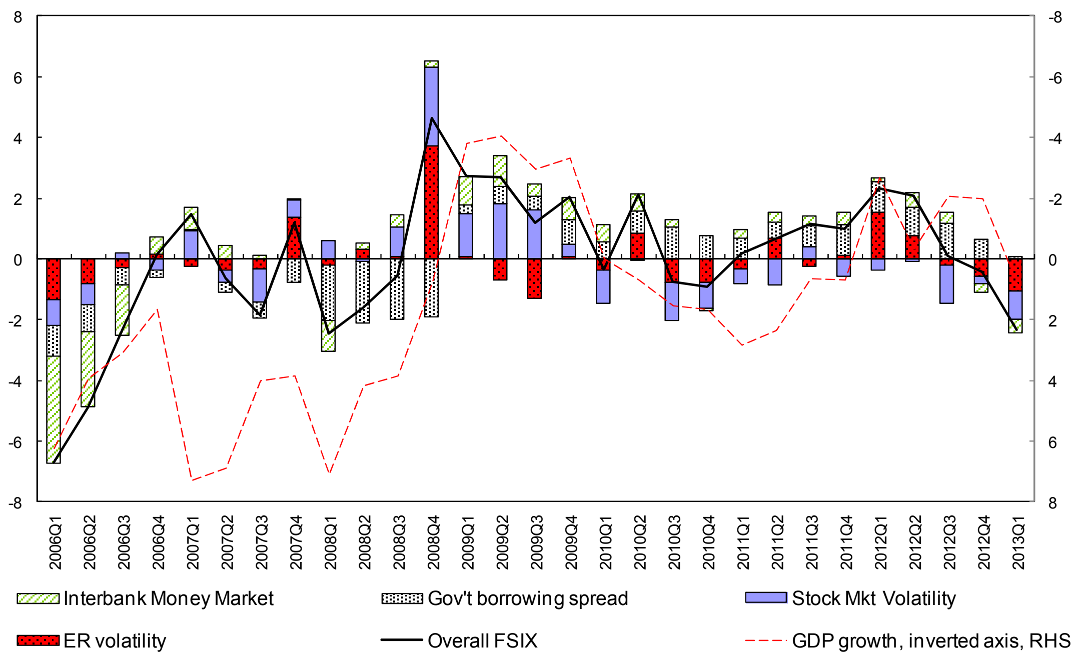


Sources: NBS and IMF staff estimations.

Box 1. Construction of a Financial Stress Index (FSIX)

The health of the financial sector can affect economic activity through various channels. As it is difficult to attribute the well-functioning of the financial sector to a single indicator, FSIX is constructed to capture the functioning of these channels. FSIX is a composite index including deviations of the four following components from their average values: (i) spread of the interbank money market rate (BEONIA) over the NBS policy rate, (ii) stock market volatility, (iii) exchange rate (ER) volatility, and (iv) government borrowing spread over the NBS policy rate. Positive values of this indicator imply higher-than-average levels of financial stress in the market and negative values indicate less-than-average stress levels.

Financial Stress Index and GDP Growth 1/



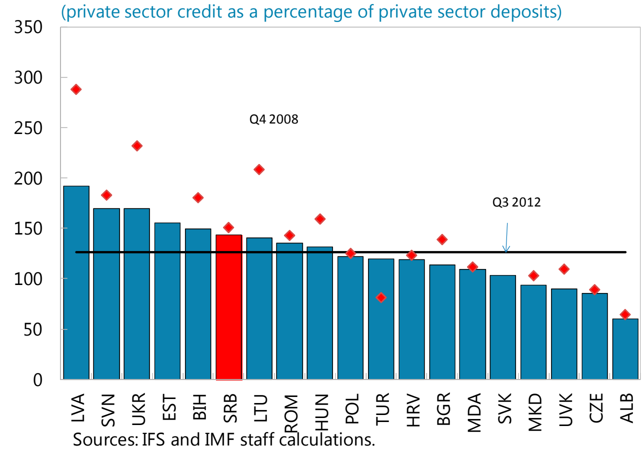
Sources: NBS and IMF staff calculations.
1/ Higher values of index indicate higher levels of stress.

8. There is anecdotal evidence that in the recent quarters low demand for credit plays more prominent role than supply-side factors. Banks generally report that there are no applications for credit—this is confirmed by the fact that the excess liquidity in the system does not translate into new loans. Given that lending interest rates do not appear to adjust downwards to account for the excess supply, this suggests either a disequilibrium condition in the credit market or implicit presence of supply-side restriction that does not allow a downward adjustment of the interest rates.

B. Changing Banks' Business Models and External Deleveraging: How Did It Affect Serbia's Economy?

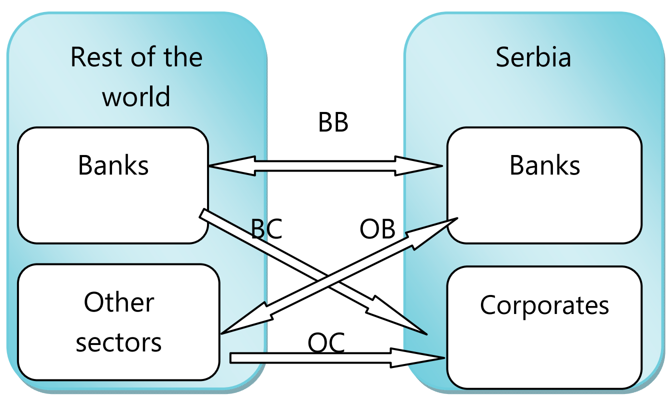
9. Business models of European banks are changing, which has implications for countries that host subsidiaries of these banks. Before the beginning of the global financial crisis, subsidiaries in host countries relied extensively on external source of funds, including parent banks' funding. This increased loans-to-deposit ratios in some countries to very high levels. Since the onset of the crisis, banks began to re-orient their funding sources towards local deposits, implying the need for external deleveraging and downsizing of assets.

Loan to deposit ratio, 2008-2012Q3
(private sector credit as a percentage of private sector deposits)



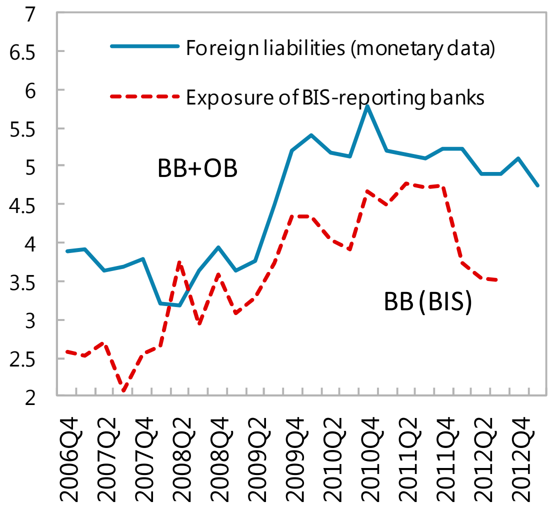
Sources: IFS and IMF staff calculations.

10. In order to examine the impact on Serbia, it is useful to delineate various financial linkages as outlined in the diagram below. Foreign parent banks provide financing to Serbia's subsidiaries (link "bank-bank" (BB)) as well as direct financing of Serbia's corporates (link "bank-corporate" (BC)). These links can be examined using BIS data (with a caveat that BIS dataset does not include a number of foreign banks (e.g., Russian banks) that could also provide financing to Serbia. Besides banks, other foreign sectors (i.e., multilaterals) are an important source of financing for the Serbia's non-government sector. They are represented by links "OB" (e.g., credit from multilaterals to Serbia's banks) and "OC" (e.g., intercompany credit). Whereas many links are essentially one-way (e.g., link OC), others are bi-directional (e.g., Serbia's banks are financed by parent banks but also hold claims against foreign parent banks) and it is useful to analyze them on both gross and net basis.

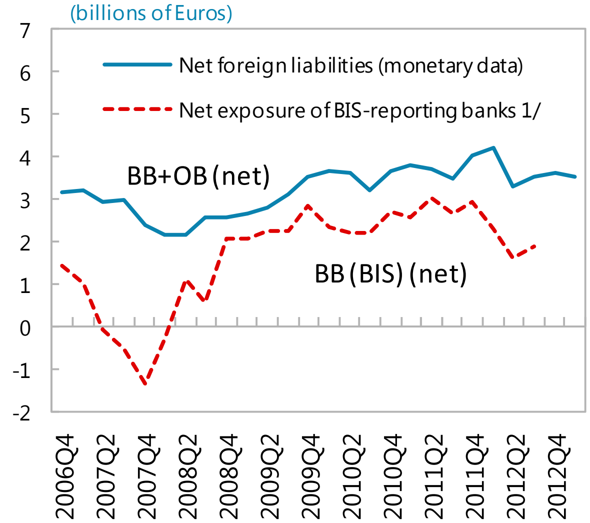


11. Monetary and external debt data suggest that while Serbia's enterprises were affected by deleveraging, foreign liabilities of Serbia's banks remained broadly stable. Banking survey data show that the total foreign liabilities of Serbia's banks (other than shares)—which are represented by a sum of links BB and OB in a diagram below—increased in 2009 and have been marginally unwinding since then. Viewed on a net basis (a negative of net foreign assets of commercial banks), foreign liabilities of Serbia's banks have been oscillating around a broadly stable level.

Gross foreign liabilities of Serbian banks
(billions of Euros)



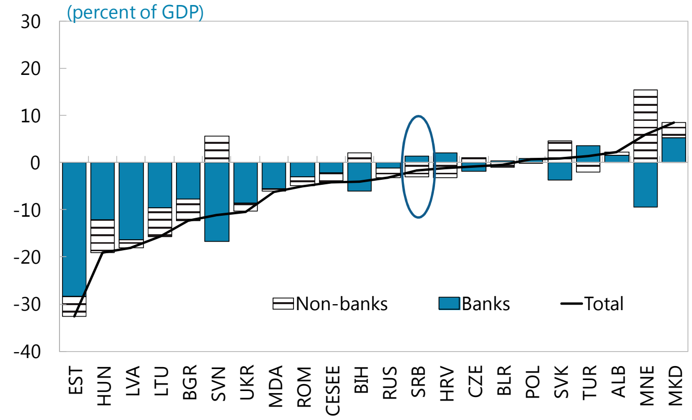
Net foreign liabilities of Serbian banks
(billions of Euros)



Sources: NBS and BIS.
1/ BIS data on net exposure includes FX reserves of the cetral bank into assets.

12. Taking end-2008 as a reference point, BIS locational banking statistics suggest that deleveraging in Serbia compares relatively favorably to that of Serbia's European peers. Whereas the reduction in gross external claims in many countries was substantial, overall claims on Serbia declined only marginally (they actually increased for Serbia's banks). This is consistent with better credit growth outcomes in Serbia relative to these in countries where deleveraging has been more pronounced. However, the BIS data suggest considerable reduction of claims on Serbia's banks—in both gross and net terms—in 2012 (Figure 3). This could be partly explained by claims of foreign banks or entities that do not report to BIS.

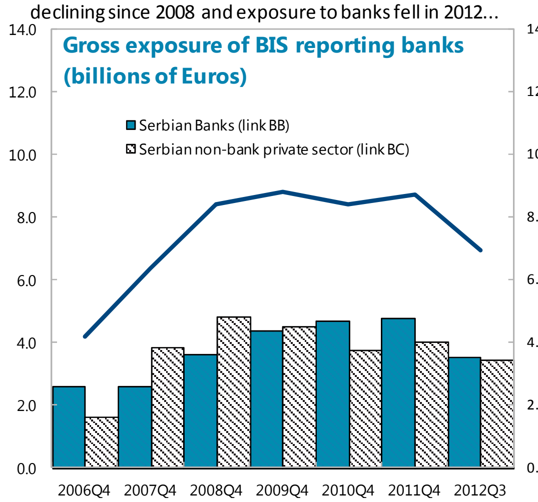
Change in exposure of BIS-reporting banks between Q4 2008 and Q3 2012
(percent of GDP)



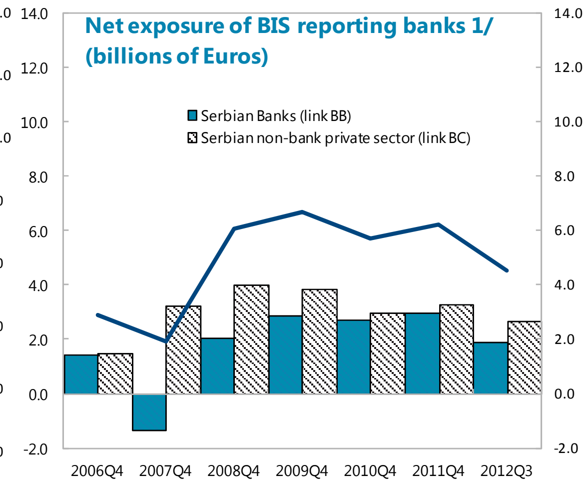
Source: BIS

Figure 3. Serbia: Exposure of BIS Reporting Banks to Serbia, 2006–2012Q3

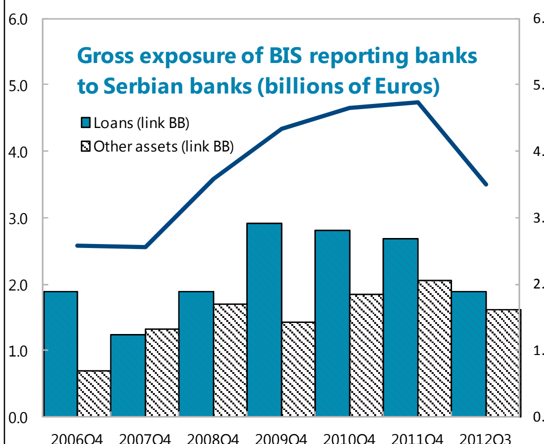
Cross-border credit to corporates has been steadily declining since 2008 and exposure to banks fell in 2012...



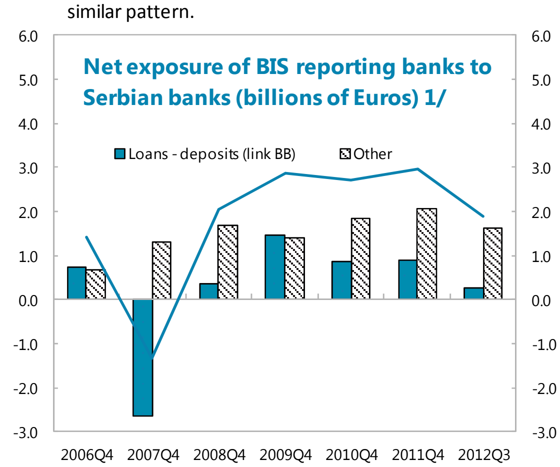
...and the net exposure data show a similar story. 1/



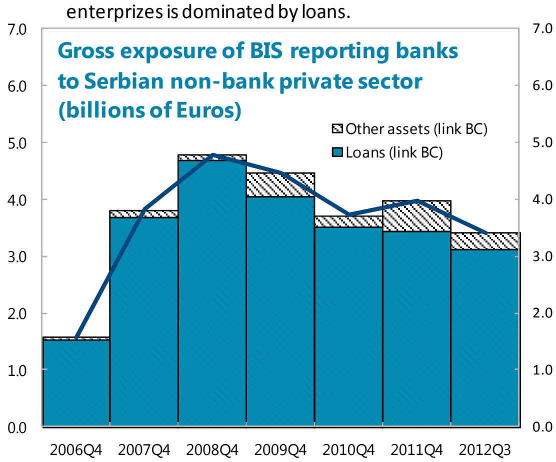
In 2012, deleveraging in the gross terms was driven mostly by the reduction in loans.



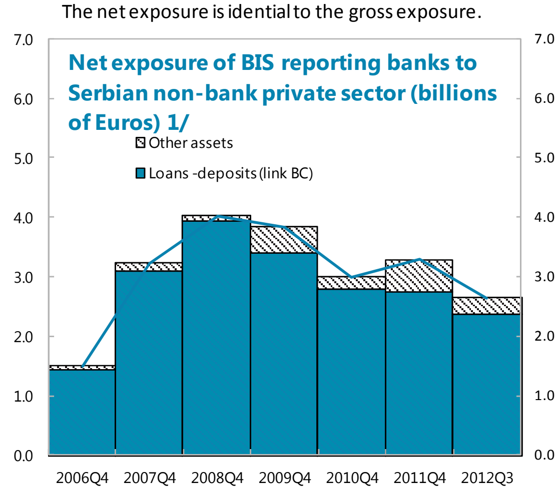
The deleveraging in the net terms showed a broadly similar pattern.



Gross exposure of BIS reportig banks to Serbian enterprizes is dominated by loans.



The net exposure is idential to the gross exposure.



Source: BIS Locational Banking Statistics Database.

1/ BIS data on net exposure includes FX reserves of the cetral bank into assets.

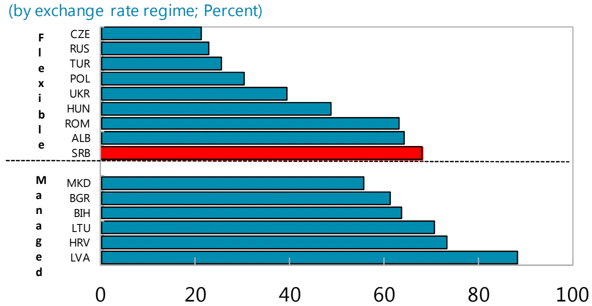
C. How is Serbia's Banking System Coping with the Macroeconomic Strains?

13. Buffers of Serbia's banking system helped to preserve its stability during the crisis. At the outset of the crisis, Serbia's banking system had one of the highest capitalization rates in among the peer countries and the very high level of provisioning (Figure 4). NPLs were substantial but also well-provisioned. Since 2008, the capitalization declined (also partly due to introduction of the Basel II supervisory standard at end-2011), but it remained substantially higher the regulatory minimum and still stronger than in many peers. The NPL ratio rose to nearly 20 percent, but the increase was smaller than in some of the peer group countries. The level of provisioning declined but remains one of the highest in Emerging Europe. The level of banking system liquidity is adequate, and the banking system—excluding a few exceptional cases that needed resolution—is still profitable.

14. Despite stability, the banking system is facing challenges. Current macroeconomic environment—including anemic economic activity in the environment of strained balance sheets—increases the risk of non-payments and further rise of NPLs. Exceptionally high euroization of the lending portfolio is the Achilles' heel of the banking system: many borrowers are unhedged and therefore are subject to a significant exchange rate risk, implying credit risk for the banks.

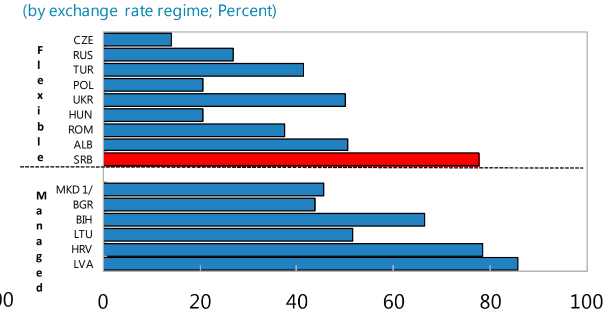
Loan Euroization, September 2012

(by exchange rate regime; Percent)



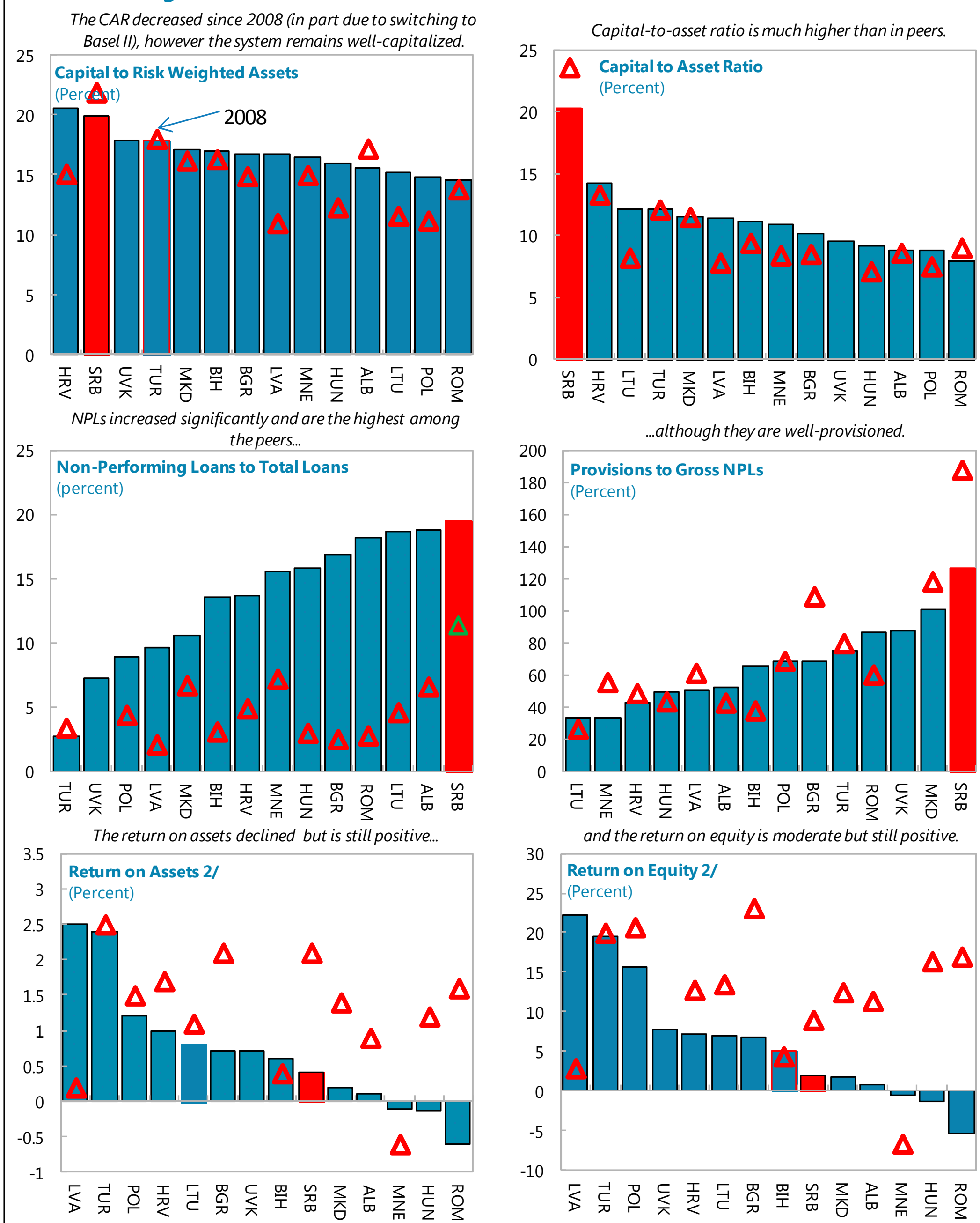
Deposit Euroization, September 2012

(by exchange rate regime; Percent)



Sources: IFS, FSI, National Bank of Serbia and NBRM.

Figure 4. Serbia: Selected Financial Soundness Indicators, 2012 1/



Sources: National Bank of Serbia, IMF

1/ Data for Albania and Montenegro are as of end-2011, and for Latvia as of March 2012.

2/ Profitability indicators for Serbia in 2012 are affected by the outliers (Agrobanka, New Agrobanka and RBV that have been resolved).

D. Policy Implications

15. As bank credit is the most important financing channel for Serbia's private sector, reviving credit growth to a healthy level would be instrumental for supporting the revival of the economy. Low credit growth could create a drag on economic activity and obstruct realizing Serbia's potential.

16. Reviving bank lending, however, may be difficult to achieve without addressing the broader challenges in Serbia's economy. The first challenge is to reduce macroeconomic vulnerabilities—maintaining macroeconomic stability would alleviate some of the most serious supply-side limitations: it would reduce banks' perceptions of lending risks, possibly improve banks' external financing terms and reduce crowding out of private investment. It could also improve trust in the financial system and therefore improve prospects for channeling their savings to banks as opposed to "mattress money." The second broad challenge is to finish the structural reforms that would support development of private sector and increase return on investment in Serbia—this would increase demand for credit. These are, however, policies that apply to all sectors in Serbia and must be considered in the "general equilibrium" sense.

17. In addition, addressing supply-side credit restrictions specific to Serbia's financial sector would help restore credit growth. The high level of bank lending interest rates in Serbia is indicative of the structural bottlenecks in the credit channels. The following measures could be considered:

- **Addressing the high stock of nonperforming loans would improve banks' balance sheets and reduce costs of dealing with NPLs.** This could reduce banks' margins and therefore increase supply of credit. Specific measures could include fostering of out-of-court debt workouts and clarifying creditor classes in bankruptcy procedures and creditor rights under the mortgage law.

- **Implementing the strategy of dinarization would reduce credit risk stemming from non-hedged borrowers.** This should include deepening local currency financial markets and fostering development of institutions that operate in these markets (pension funds, insurance companies, etc.).

- **Avoiding significant relaxation of tight prudential policies.** Whereas Serbia's tight regulatory policies probably added to the cost of credit (e.g., the required level of provisioning is one of the highest in Europe), safety cushions built as a result of these policies could be vital in the case of financial stress.

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INFLATION TARGETING IN A EUROIZED ECONOMY[1]

Serbia is one of the few countries with a high degree of euroization that has adopted an inflation targeting (IT) monetary regime. IT in a euroized economy has some distinct features.[2] In particular, (i) euroization does not preclude implementing IT; (ii) non-sterilized interventions in the foreign exchange (FX) market are not contradictory to an IT regime, in fact they may be optimal; (iii) FX interventions have to be symmetric (both sales and purchases), and should not target the level of exchange rate, but aim at reducing excess volatility of exchange rate; (iv) the effect of interventions on the exchange rate is non-linear; (v) given that interventions are at times necessary, maintaining sufficient FX reserves to conduct such operations is important.

A. How Does Euroization Affect Inflation Targeting?

1. **The monetary policy transmission mechanism is generally weaker in the presence of euroization.** In a euroized economy, if consumers and firms are net debtors, an interest rate increase would have two simultaneous, opposite effects: the substitution effect would imply a dampening of consumption and investment, however the income effect would imply the opposite, since an interest rate hike appreciates the domestic currency, reducing the value of foreign currency denominated debt and thus increasing the borrower's net wealth. The opposite direction of substitution and income effects makes policy interest rate changes less potent in a financially euroized economy.

2. **High euroization reduces the impact of changes in policy interest rates on banks' lending and deposit rates**, particularly long-term rates, since most of such activities are denominated in foreign currency.[3]

3. **Financial euroization poses balance sheet risks.** Often individuals and corporates have currency mismatches in their assets and liabilities. In such cases, depreciation increases the value of their FX liabilities in terms of their domestic-currency denominated assets or income. This often gives rise to a rapid rise in nonperforming loans (NPLs) in response to sharp exchange rate movements.

4. **The design and implementation of the IT framework in a euroized economy tend to have several special features**. Although the ultimate goal in an IT regime is always inflation, the

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[2] In this paper, the terms "euroization" and "dollarization" are used interchangeably. In particular, the term dollarization will be used when referring to Peru.

[3] These rates in turn depend on foreign interest rates and risk premia.

intermediate targets and the use of instruments might differ. Furthermore, use of non-monetary tools, such as financial or macro-prudential policies, may become necessary.

5. The exchange rate is often an additional operational target in a euroized economy. For the inflation target to be credible, it should be perceived as the central bank's ultimate target. However, as argued above, euroization implies that sharp exchange rate movements can pose significant risks to both inflation outlook and financial stability, thus the central bank may need to intervene in the FX market or react with the policy interest rate in order to smooth fluctuations in the exchange rate (for more detail see section B).[4]

6. The use of sterilized FX interventions to support the operation of monetary policy in an IT environment is common in emerging markets.[5] In fact, the scope for conducting sterilized interventions is greater in developing and emerging economies where the stock of local currency assets is relatively limited. By contrast, in the developed world the size of the domestic bond markets are so large that sterilized operations barely affect the relative supply of domestic and foreign currency assets.

7. To achieve the inflation target, the central bank might resort to less conventional policy tools. For instance, reserve requirements provide incentives for banks to internalize some of the currency risks which they take on their portfolios, directly or indirectly. Other macro-prudential tools such as hedging requirements and exposure limits, can reduce financial risks, and allow changes in policy rates to be only directed at achieving the inflation target. These tools, if used effectively, could also reduce the degree of euroization over time.

B. IT and Foreign Exchange Market Interventions

8. There is a large literature that studies FX interventions in countries which have adopted an IT regime.[6] The main conclusions are as follows:

- Some intervention even under an IT regime might be optimal due to balance sheet mismatches, or limited factor mobility between sectors.

- Interventions should be in both directions, involving purchases or sales of FX reserves.

[4] Intervention is not limited to euroized economies with an IT regime. In fact, many emerging market countries (Brazil, Turkey, Colombia, as well as others) with much lower levels of dollarization, use interventions to smooth volatility in their exchange rate markets.

[5] A sterilized intervention is a set of transactions that leaves the domestic interest rates unaffected. Sterilized interventions by the central bank require that any sale or purchase of domestic currency through interventions in the FX market is accompanied by an offsetting transaction in the markets for government bonds or central bank bills, such that the domestic monetary base and interest rates are unaffected.

[6] Ostry, Ghosh and Chamon (2012), de Gregorio (2008), and Garcia et al., (2011), among others.

- Sterilized interventions operate via portfolio reallocation as well as the expectations channel. The portfolio reallocation channel works through a change in the relative supply of domestic and foreign currency assets following the intervention. Given imperfect substitutability between different types of assets, the exchange rate adjusts as investors demand compensation to shift their portfolio holdings. The signaling or expectation channel affects the exchange rate through a change in market expectations about future fundamentals (including the stance of monetary policy). If the central bank has better information about fundamentals (which may be the case, at least regarding the future stance of monetary policy), then intervention can be perceived as a signal of future exchange rate movements. The portfolio reallocation is stronger in emerging market economies, whereas the strength of the expectations channel depends on the credibility of the central bank.

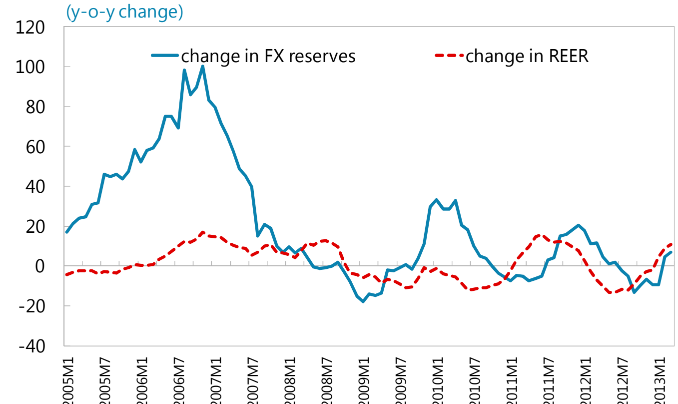
- The effect of interventions on the exchange rate seems to be highly non-linear. Neither of the two channels mentioned above have a linear effect on exchange rate movements. This makes it extremely difficult to prescribe the right level of interventions, the point at which they should be used, or when they stop being effective and other tools, such as policy rate movements, are needed. Central banks often rely on experience and their knowledge of local markets to fine tune their intervention strategy.

- Interventions have a small but (statistically) significant effect on exchange rates. The evidence that interventions can affect the level of exchange rate is weaker than the effect on exchange rate volatility.

C. What do other Emerging Economies do in Practice?

9. Emerging market IT economies may resort to use of FX interventions. There is an implicit exchange rate target in the policy reaction function of most emerging market economies with an IT regime. This is over and above the effect of exchange rate movements on inflation. Use of interventions can be illustrated by comparing the volatility of reserves relative to REER. This relative volatility is quite high in emerging markets that follow IT, indicating that they use reserves to smooth REER movements. The relative volatility is even higher for emerging markets without IT, implying that they directly target exchange rate movements (for instance, through a managed floating regime). Surveys show that reasons for conducting FX interventions include smoothing excess volatility, reserve management, and signaling.

Serbia: Volatility of FX Reserves and Real Effective Exchange Rate
(y-o-y change)



Sources: NBS, Staff calculations

10. Given the possible need to use interventions even in an IT regime, maintaining sufficient amounts of foreign exchange becomes important. The central bank must hold enough reserves to be able to credibly intervene in the market.

11. Higher levels of reserve requirements on foreign currency liabilities help share the cost of maintaining high levels of reserves between the central bank and commercial banks. Furthermore, this encourages commercial banks to internalize the risk associated with their borrowers' balance sheet mismatches.

12. Maintaining FX reserves is important for the central bank's role as a lender of last resort in foreign currency. In the presence of significant deposit euroization this enables the central bank to maintain confidence and minimize risk of deposit runs.

D. How to Move Towards More Widespread Use of Local Currency?

13. Excess interventions in the FX market due to fear of floating can encourage euroization. Thus the central bank should strike a fine balance between limiting excess short-term exchange rate volatility, and preventing long-term trend movements in the exchange rate (fear of floating). The close targeting of exchange rate discourages economic agents from hedging their portfolios. It also creates a moral hazard where all agents realize that in the face of large shocks the central bank would intervene. It is thus important to allow movements in exchange rate levels and only smooth out excess short–term volatility.

14. Greater stability of real returns on assets denominated in domestic currency promotes de-dollarization.[7] The choice of interest rates as the main monetary policy instrument helps reduce the volatility of the interbank overnight interest rate and strengthens the interest rate pass-through channel. This in turn implies that IT, aiming at lower volatilities in inflation and nominal interest rates, should help the de-euroization process.

E. IT in a Dollarized Economy: The Experience of Peru

15. The experience of Peru can be instructive for other countries with a highly dollarized financial system.[8] Peru is one of the first dollarized economies to adopt an IT framework in 2002. When Peru adopted IT its financial system was highly dollarized: credit dollarization was close to

[7] See Ize and LevyYeyati (1998).

[8] Another example of a highly dollarized economy with an IT framework is Uruguay. The switch to IT in Uruguay is more recent. Policy rates became the main monetary policy tool at the end of 2007.

80 percent in 2002. By the end of 2012, dollarization was much lower at just under 50 percent. Although this is still a significant share, the reduction is very encouraging.[9]

16. The Peruvian central bank opted for an inflation target that was the lowest in Latin America (2.5 percent, +/- 1 percentage point), close to the U.S. long-run inflation. This implied a relatively stable real exchange rate with an aim to promote domestic currency as a store of value comparable to the US dollar.

17. The issuance of long-term public debt instruments in domestic currency was an important step in developing a benchmark yield curve. In general, the development of a yield curve as well as the reduction in interest rate volatility were credited for encouraging the issuance of long-term financial instruments by the private sector and inducing financial de-dollarization.

18. The Parliament issued a law in mid-2004 ordering all prices to be listed in domestic currency. However, the option of listing prices also in foreign currency was left open. This is particularly important for pricing of durable goods.

19. The banking supervision authority has passed regulations directed at financial intermediaries. In 2006, the supervision authority established that banks have to carry out a routine evaluation of currency risks of their credit in foreign currency, or alternatively, set up a reserve ranging from 0.25 percent to 1 percent of the credit in foreign currency that has not been evaluated.

20. The Central Bank of Peru (BCRP) announces a target for the interbank market rate. The interbank market rate is within a corridor maintained by the central banks' deposit facility (floor) and standing facility (ceiling) rate. However, there is an escape clause which allows the target for the interest rate to increase temporarily outside the corridor in order to prevent a large depreciation. This escape clause was used only once before the financial crisis, in 2002.

21. The BCRP intervened heavily in the foreign exchange market during the financial crisis. Starting in September 2008, the BCRP raised interest rates and intervened heavily throughout early 2009, amid exchange rate pressures. Once these pressures abated, the priority of monetary policy was to counter the impact of the international financial crisis on aggregate demand, which had been substantially affected by the drop of exports and investment flows. In this scenario of lower economic growth, the BCRP implemented an aggressive policy of interest rate cuts that reached unprecedented historical levels, as well as nonconventional monetary policy actions oriented towards providing better credit conditions to the market and making the transmission of monetary policy to longer-term interest rates more effective. These measures included extending the term of swap operations, reducing the average term of placements with the central bank in

[9] In comparison, in the beginning of 2009, when Serbia embarked on full-fledged IT, credit euroization was 66 percent, slightly lower than that in Peru at the onset of their IT regime. Credit euroization has slightly increased since then in Serbia, standing at nearly 70 percent at the end of 2012, but the financial crisis and the ensuing depreciation arguably made it a very challenging environment for the IT regime.

order to maintain banks' availability of liquidity, widening the range of accepted collateral for repo operations, and exempting small liabilities from reserve requirements, as a result of which smaller financial entities in practice had a lower effective requirement of reserves and had access to a greater availability of liquidity. The monetary easing measures implemented—which represented an injection of liquidity equivalent to 9.6 percent of GDP—contributed not only to maintain the flow of credit, but also to the growth of GDP in 2009 and maintaining core inflation and inflation expectations within the target range.

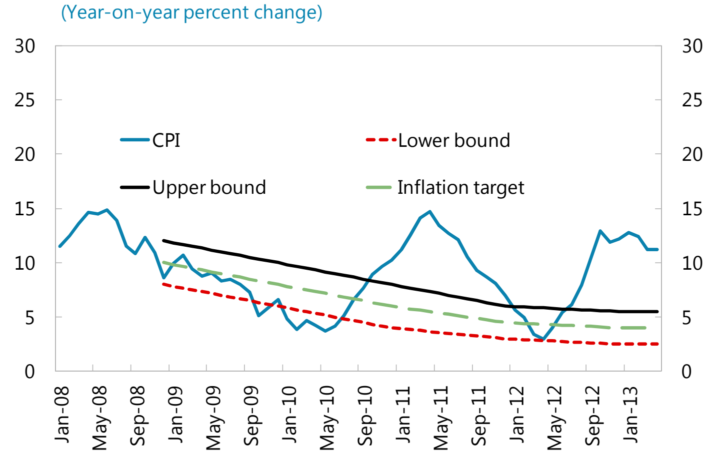
22. The first four years of inflation targeting implementation in Peru provide encouraging results. The experience of Peru shows that financial dollarization does not preclude an independent monetary policy aimed at achieving low and stable inflation rates. Peru's announced annual inflation target was achieved every year since inflation targeting was adopted and output variability has moderated significantly. Furthermore, financial dollarization in Peru has declined steadily, although it remains significant.

23. A gradual de-dollarization process has been observed in the financial system's assets and liabilities. This process has been encouraged by the explicit inflation targeting framework, with more predictable inflation and domestic currency interest rates, and by the development of the local government debt market in domestic currency, which is useful for setting a benchmark for the issuance of private sector nominal domestic currency securities.

F. What Does This Mean for Serbia?

24. The success of the IT has been mixed. The inflation targeting regime in Serbia has managed to bring interest rate volatility (in the interbank market) down considerably. However, progress in stabilizing inflation volatility has been modest: inflation has been within National Bank of Serbia's (NBS) band less than 40 percent of the time since the adoption of IT. Admittedly adoption of full- fledged IT in 2009 has been against a backdrop of a very difficult global economic environment, posing huge challenges to the conduct of monetary policy in all the countries in the region, regardless of their monetary and exchange rate regime.

Inflation
(Year-on-year percent change)



Sources: NBS

Volatility of Overnight Interbank Interest Rate and Inflation in Serbia

Year	Volatility of interbank rate	Inflation volatility
	(coefficient of variation)	
2006	16.6	26.8
2007	11.3	45.0
2008	18.1	15.2
2009	22.6	20.2
2010	9.6	38.6
2011	9.3	22.2
2012	8.7	50.7

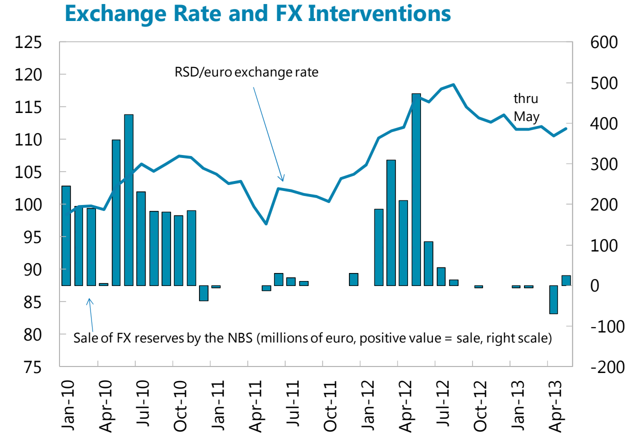
Source: NBS, Staff calculations

25. **Reducing inflation volatility is the major challenge facing the NBS in the conduct of monetary policy.** The large inflation volatility in Serbia (the highest in the region even if the hyper-inflation period is excluded) is a major discouraging factor for dinar-denominated saving and investment.

26. **To the extent that exchange rate movements affect inflation outlook, changing policy rate in order to prevent large exchange rate movements (and thus large changes to inflation expectations) may be optimal.** The NBS has been successful in managing inflation expectations through its communications and inflation report. Responding to large exchange rate movements with adjustments in policy rates are justified to keep inflation expectations in check.

27. **In order to establish credibility, foreign exchange interventions should be conducted in response to exchange rate appreciation as well as depreciation.** Interventions by definition are costly for the balance sheet of the central bank. However, one-way interventions encourage one way bets against the currency, and create moral hazard. The NBS showed in practice that it intervenes in the face of appreciation episodes as well (as it did in April-early May 2013) and should continue the two-way approach to intervention.

Exchange Rate and FX Interventions



Sources: NBS

28. **Instruments to hedge against currency risks should be developed.** There is a demand for forward contracts by agents that hold domestic currency assets and want to cover themselves against a possible depreciation in the future. Two natural suppliers of such contracts are pension funds, with long-term domestic currency liabilities and exporters. Development of such forward contracts would encourage the use of hedging instruments.

29. The system of deposit insurance could better internalize euroization risks. A higher cost of insurance for euro denominated deposits compared to dinar deposits, rather than basing the insurance premium solely on overall bank risk, would induce the banks to internalize deposit euroization risks.

30. Domestic bond markets should be deepened further. This includes measures to continue the process of lengthening the maturities of the public debt in dinars and to develop a yield curve for private paper and a secondary bond market.

31. Finally, cooperation between the NBS and the government in liquidity management is of paramount importance. The NBS has the ultimate responsibility for liquidity management; however, the government's actions as the largest single consumer in the economy can have a major impact on day-to-day fluctuations in liquidity. Thus, a close coordination between the two institutions is essential. Furthermore, the government can assist the NBS by strengthening and lengthening the domestic yield curve.

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