INTERNATIONAL MONETARY FUND

REPUBLIC OF SLOVENIA

SELECTED ISSUES

February 2015

This Selected Issues Paper on Republic of Slovenia report was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on January 29, 2015.

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Approved By	European Department

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SOCIAL SPENDING REFORM AND FISCAL SAVINGS IN SLOVENIA[1]

A. Introduction

1.   Slovenia's public finances have deteriorated significantly since the onset of the global crisis. Slovenia suffered one of the deepest recessions among euro area countries, with real GDP declining some 10 percent. In addition to global factors impacting economic activity, domestic vulnerabilities have been at work as well and culminated in a severe financial crisis in 2013. This required significant public support to six banks, at a fiscal cost of about 10 percent of GDP. As a result, Slovenia's fiscal position deteriorated significantly: fiscal deficits rose from near-zero in 2007-08 to almost 14 percent of GDP in 2013, and the debt ratio quadrupled, rising to close to 80 percent at end-June 2014.

2.   Addressing the high and rising public spending is key to restoring public-finance sustainability. Rising expenditure has been at the root of Slovenia's fiscal deterioration since the onset of the crisis. Even excluding one-off bank support costs, public spending is estimated to have increased by more than 5 percentage points of GDP during 2008–14, one of the largest deteriorations compared to Eastern European peers. Moreover, with an expenditure-to-GDP ratio now at some 46 percent (excluding bank support costs), Slovenia has switched from being broadly in line with similar-income countries, and below the OECD public spending average, prior to the crisis, to the high end among comparators, and even well above the OECD average. On the other hand, the revenue ratio has remained broadly stable, and is above both comparable country levels and the OECD average. In this context, focusing consolidation efforts on the expenditure side appears appropriate.

Selected Countries: General Government Expenditure (2007–13, percent of GDP)

Selected Countries: General Government Revenue (2007–13, percent of GDP)

Sources: Slovenia's Ministry of Finance, IMF staff calculations. Slovenia's government expenditure has beed adjsuted for banks' recapitalization.

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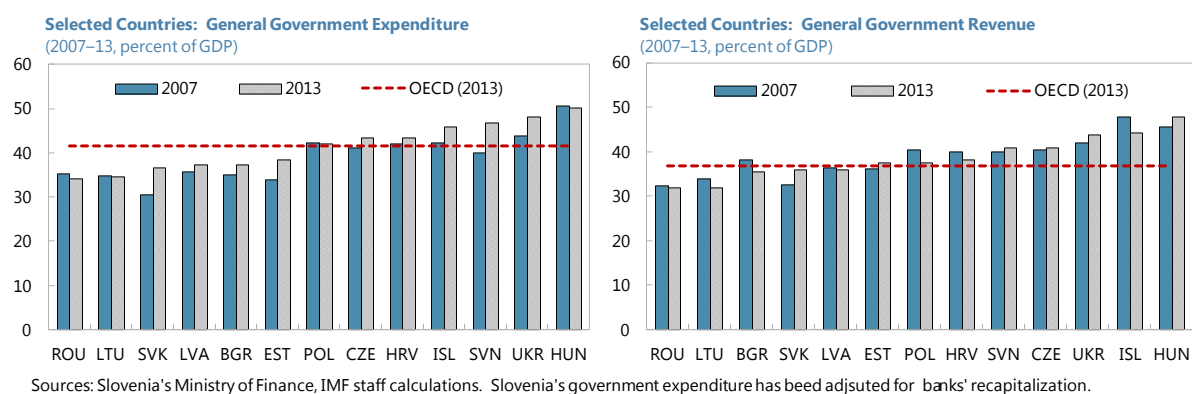
[1] Prepared by Csaba Feher, Ioannis Halikias, and Jules Tapsoba.

3.   Social spending has been the largest and fastest growing category, and as such, could deliver substantial fiscal savings. Spending on social benefits increased by more than 3

percentage points of GDP during 2007–13, to about 18 percent of GDP. This is currently the largest expenditure category, of which pension spending accounts for almost two-thirds (close to 12 percent of GDP). Publicly-funded spending on health and education, including entities outside the general government amounted to almost 12 percent of GDP in 2011. Curbing the fast-rising trend of pension expenditures, and reducing health and education spending, could thus help support fiscal consolidation over the medium term.

Slovenia: General Government Operations
(2007–13, percent of GDP)

Sources: Eurostat, and OECD.
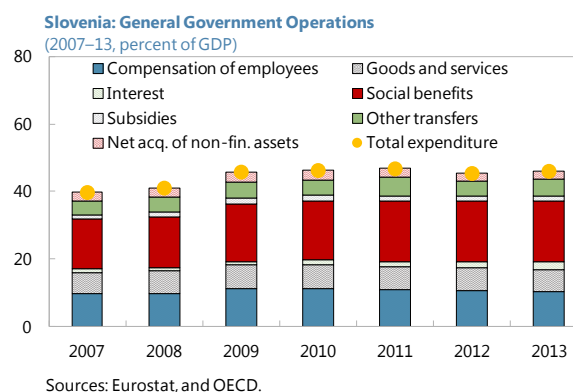
4.   This paper will explore reform options to reduce Slovenia's social spending over the medium and long term. Section II focuses on pensions: it discusses key features of the system, analyzes the evolution of pension spending in the absence of reforms, and discusses possible reform options to help reduce spending and achieve long-term sustainability of the system. Section III focuses on health and education spending: it provides a framework to assess their efficiency relative to other countries, and discusses reform options to help narrow the efficiency gap. Section IV concludes with a summary of policy recommendations.

B.   Pensions—Issues and Reform Options

Key issues

5.   Pension spending has been rising due to both demographics and the system's generosity. The increase in public pension spending (2¼ percent of GDP) over 2007–13 was partly due to population aging, as the share of the individuals 60 years and older in the total population rose from 21.5 to 23.8 percent. But this was also due to the system's generosity (Box 1), in particular the relatively low statutory retirement age, early retirement options, high coverage rates (the ratio of pensioners to the elderly), and benefit determination, including its indexation. These features facilitated an increase in the inflow of pensioners, whose share in the population of 65 and older rose from 107 percent in 2010 to 121 percent in 2013. They also led to one of the highest replacement ratios (ratio of pension to wage) among both advanced and emerging European countries.

Slovenia: Pension Expenditures
(Percent of GDP)

Slovenia: Pension Replacement Rates in Selected EU Countries
(Percent)
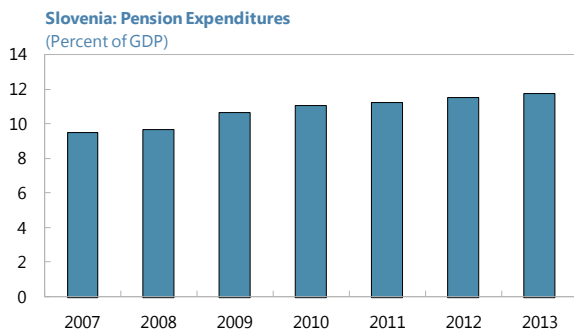
Sources: Eurostat and Ministry of Finance.
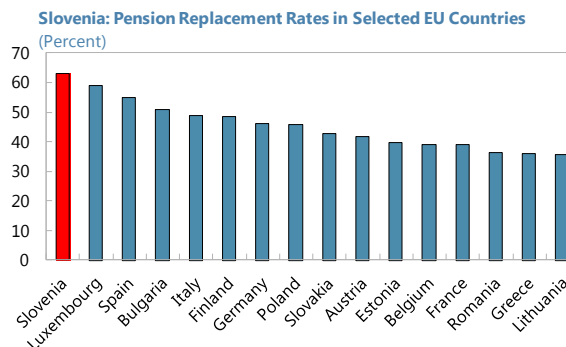
6. **At the same time, the pension system's contribution base has been shrinking.** The share of contributors in the population aged 15 to 59 has been declining: in 2013, coverage among working age population was only 88 percent of its 2008 level. While this trend has been in part due to employment losses resulting from the deep recession, it also reflects longer-term structural factors, including the increased uptake of tertiary education. Combined with the rise in the number of pensioners as a share of the elderly, the shrinking in the contribution base has already resulted in a "system dependency ratio" (ratio of pensioners to contributors) far in excess of the old-age dependency ratio (ratio of elderly to people of working age) – in 2013, these ratios were 0.67 versus 0.25, respectively.

7. **The combination of rising benefits and a shrinking contribution base has already led to deficits that had to be covered from general revenues.** While pension contribution rates are relatively high—Slovenia ranks in the upper third of OECD countries—they have been increasingly insufficient to finance benefits. For example, in 2013, only some 75 percent of benefit expenditures could be financed by contributions, down from 85 percent in 2008, with transfers from the budget needed to fill the gap correspondingly widening to some 3 percent of GDP in recent years.

Slovenia: Public Pension Contributions in OECD Countries
(Percent of gross wage)

Slovenia: Pension Contributions as Percent of Public Pension Expenditures
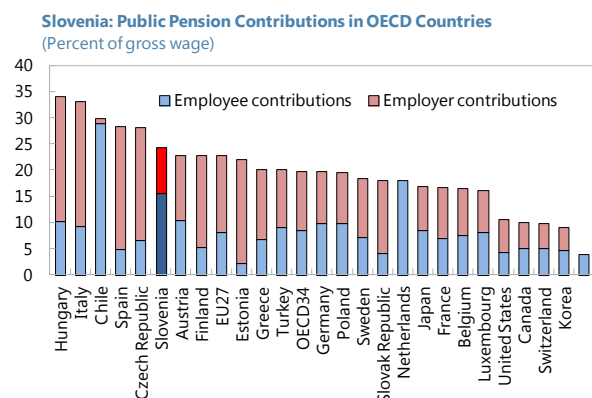
Source: OECD.
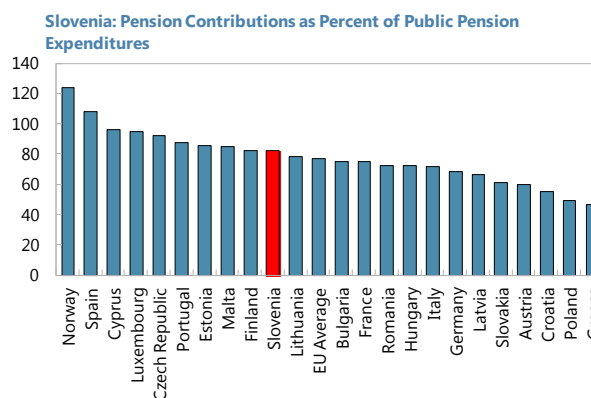
8. **In response to these pressures, a set of parametric reforms were adopted at end-2012.** The reforms aimed to decelerate the increase of pension expenditures through slowing

down the inflow of new retirees and lowering the benefits of both new retirees and existing pensioners. The main measures taken include the following:

 ➢ A gradual increase in the statutory retirement age to 65 for men and women;
 ➢ A tightening of the conditions of early retirement by increasing the earliest permissible retirement age by 1 year on average and revising slightly the list of occupations permitting early retirement;
 ➢ Introduction of early retirement penalties for the remaining occupational categories with access to early retirement and deferred retirement benefit increases;
 ➢ An increase from 19 to 24 years in the period over which pensionable earnings are averaged in the determination of entry pensions;
 ➢ Indexing of benefits to a composite index of wages and prices, with respective weights of 60 and 40 percent, and a freeze in indexation for 2014 -15 to facilitate short-term fiscal consolidation.

9.   The 2012 reform is expected to have a temporary short-term fiscal effect, and only a modest long-term impact. The main short-term impact relates to the temporary suspension of benefit indexation, estimated to contribute to a cumulative reduction in pension expenditure of 0.3 percent of GDP over 2014–15. However, this is expected to end in 2016. Moreover, the sharp deceleration of inflows into retirement in early 2014 is also temporary, as it is largely the result of the sharply higher inflows in the months immediately preceding the reform's implementation, as people close to the statutory retirement age rushed to retire early. Over the long run, the 2012 reform can be expected to moderate the increase in pension spending, as the gradual increase in the statutory retirement age curtails the inflow rate of old-age pensioners. These long run effects are difficult to quantify, as they are highly sensitive to behavioral responses to the reforms, with their effect estimated in the range of 1½ to 2 percent of GDP by 2050 (assuming a decline in old-age pension eligibility rates from 120 to 105 percent and allowing for some offsetting increase in the uptake of disability pensions).

10.   However, a number of important features were not addressed by the reform, and are expected to put pressure on the system's long-term viability. These include the following:

 • *Benefit indexation:* Slovenia's benefit indexation regime on the basis of both wage and prices remains among the more generous by international standards (Table 1).

Table 1. Pension Indexation Rules in OECD

Prices	Wages	Composite of wages and prices
Belgium, Canada, France, Hungary, Iceland, Italy, Japan, Korea, Luxembourg, Poland, Portugal, Spain, Turkey, UK, US	Germany, Netherlands, Norway, Sweden	Czech Republic, Estonia, Finland, Greece, Slovakia, Slovenia, Switzerland

Source: Pensions at a Glance (OECD, 2013).

- *Pension bonus:* The annual pension bonus, which is a residue from previous pension regulations used in the republics of former Yugoslavia, has been maintained. In 2013, it represented 0.35 percent of GDP, or 2.9 percent of the old age benefit expenditures.

- *Tax treatment of pensions:* The treatment is generous, including various tax exemptions. First, while the basic income tax schedule has four brackets, over 98 percent of old-age pension benefits fall into the first two lower brackets. This basic structure is augmented by a general tax relief applicable to all Slovenian residents—including pensioners—which reduces the taxable income tax base by EUR 275 per month. Furthermore, pensioners also enjoy a 13.5 percent reduction of their assessed tax. Consequently, only pension benefits exceeding EUR 1,095 per month are subject to income tax. This implies that only 5 percent of beneficiaries pay any income tax.

Slovenia: Distribution of Old Age Pensions vs. PIT Brackets
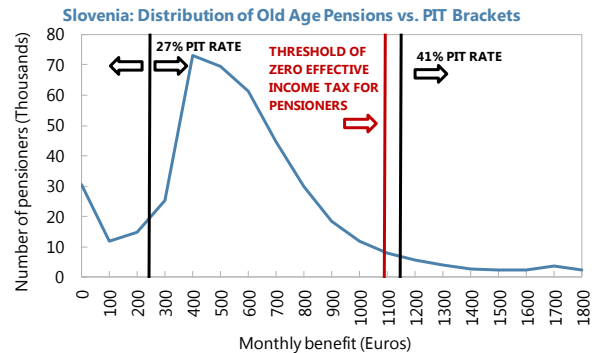
Sources: Ministry of Finance and IMF staff calculations.

Analysis

11.   Slovenia is facing sharp population aging pressures in the coming decades. According to the United Nations' projections, the old-age dependency ratio is expected to more than double to reach 53 percent by 2050, one of the steepest increases in the euro area. Moreover, the "system dependency ratio" is likely to rise even faster, from 67 percent now to 145 percent by 2050. The latter assumes a declining eligibility ratio, gradually reaching 105 percent as result of the retirement age increase and stricter early retirement rules, partly offset by a higher take up of other forms of social insurance, notably disability pensions.

Slovenia: Long-Term Demographic Trends

Slovenia: Old Age vs. System Dependency Ratios, 2015–2050
(Percent)
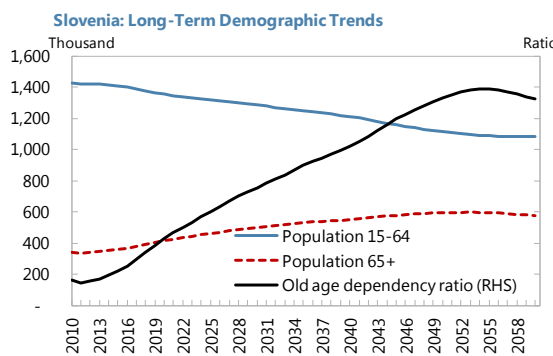
Sources: Ministry of Labro and IMF staff calculations.
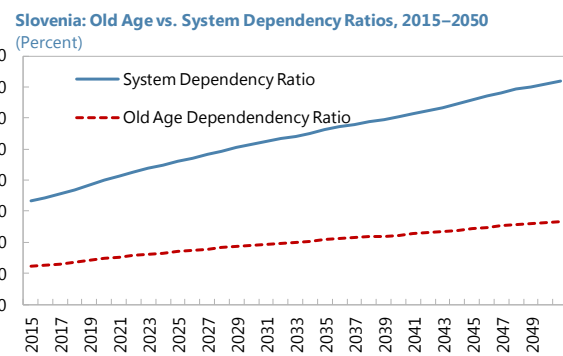
12.   As a result, pension spending is projected to increase by 6 percent of GDP during 2013–50. These projections already take into account the effects of the 2012 reform, and are based on the identity below:

$$\frac{PE}{GDP} = \frac{population\ 65+}{population\ 15-64} * \frac{pensioners}{population\ 65+} * \frac{average\ pension}{average\ wage} * \frac{population\ 15-64}{workers} * \frac{Compensation}{GDP}$$

| Old-age dependency ratio | Eligibility ratio | Replacement rate | Inverse of employment ratio | Compensation share in GDP, assumed constant over time |

Old age and eligibility ratios are as described in the paragraph above**.**

The replacement rate is assumed to gradually decline to 50 percent as a result of the 2012 reform modifying indexation, lowering accrual rates, prolonging benefit assessment periods and reducing the old-age pensioners' eligibility ratio. The employment ratio and the compensation share in GDP are kept constant over the projection period near current levels, at 63 and 74 percent, respectively. Under these assumptions, pension spending is projected to increase from 11¼ percent of GDP in 2013 to 12¾ percent in 2030 and 17½ percent in 2050. This represents a gap of some 5½ percent of GDP by 2050 compared to the projection for advanced economies.[2]

Slovenia: Pension Expenditures – Baseline
(Percent of GDP)

Slovenia: Pension Expenditures
(Percent of GDP)
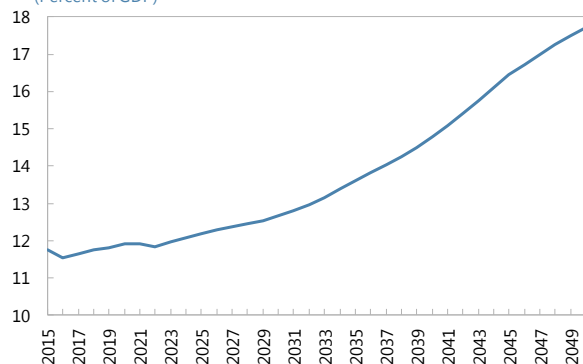
Sources: Ministry of Finance, United Nations and IMF staff calculations.
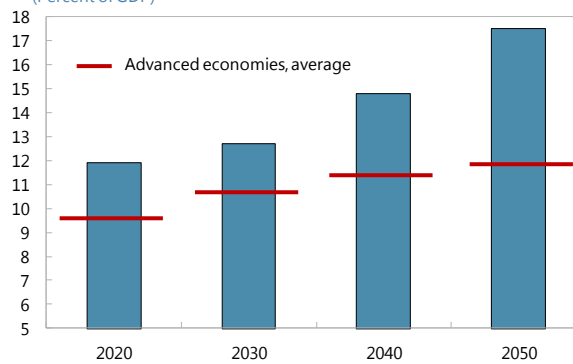
Policy reform options

13.   This section explores possible parametric pension system reforms that could reduce pension expenditure over the short and medium run. Focus on the expenditure, rather than on contributions, is motivated by two considerations: (i) as noted above, contribution levels are already high by international standards; and (ii) contribution rate hikes would have adverse labor market implications both in the short term, when the economy is exiting the recession, and over the long-term, given that the labor force is already projected to decline due to population aging. Parametric reform options to be analyzed include: (a) discontinuing the pension bonus;

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[2] European Commission, 2012.

(b) reducing the income tax easements enjoyed by pensioners; (c) price indexation of benefits; and (d) closing the gap between statutory and effective retirement ages.

14.   Eliminating the pension bonus for pensions above the average could bring immediate permanent fiscal savings of 0.2 percent of GDP. While full elimination of the bonus could yield even higher savings, this would not be desirable, as it would disproportionately affect low income pensioners and compromise the system's progressivity. As such, the authorities could consider incorporating the annual bonus—as a one-time increase— into the pension of retirees in the lowest income bracket, and eliminating it for those with pensions above the average. This is estimated yield about 0.2 percent of GDP in upfront fiscal savings.

15.   Reducing tax exemptions for pensioners, while protecting those with low pensions, could generate up-front fiscal savings of 0.5 percent of GDP, rising to 0.7 percent in the long run.

- Elimination of the 13.5 percent pension-specific income tax allowance would equalize taxation for labor and pensions and could result in up-front fiscal savings of almost 1 percent of GDP, rising to 1½ percent over the longer-term. To mitigate the welfare impact of this measure and to protect pensioners with a low level of benefits, the elimination of the tax allowance could be coupled with a one-off progressively applied compensatory income supplement, fully compensating pensioners receiving the minimum pension, and gradually tapering off along the pension distribution. For example, effectively eliminating the tax allowance only for

  Slovenia: Effective PIT Rates Paid by Pensioners
  (Percent of GDP)

  Sources: Ministry of Finance and IMF staff calculations.

  pensioners receiving benefits above the mean would translate in fiscal savings of ½ percent of GDP on impact, and ¾ percent in the longer term.
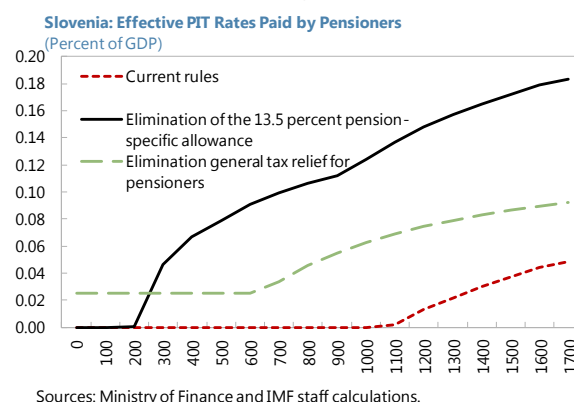
- The authorities could also consider eliminating the general tax relief for pensioners, which could yield 0.8 percent of GDP in the near-term, reaching just over 1 percent of GDP over the longer term. However, this would introduce a discrepancy with labor taxation; extending it to non-pensioners could address this problem and further boost fiscal savings, but could have potentially detrimental effects on the labor market. As such, this is seen only as a second best option.

16.   Indexing benefits to prices is estimated to yield savings of about 2 percent of GDP by 2050. The long-term baseline forecast is predicated on wage growth in line with productivity, implying wage growth in real terms of some 1½ percent on average. Prices are assumed to grow at 2 percent per year over the long term. Abandoning the wage component of indexation (now weighed at 60 percent) would thus set pension benefits as a share of GDP on a steady downward

path.[3] The resulting fiscal savings would cumulate gradually over time, amounting to slightly less than ½ percent of GDP by 2020, but rising to 1.1 percent by 2030 and 2 percent by 2050.

17.   A number of policy options to raise the effective retirement age by reducing incentives for early retirement could also help to limit long-term spending. While the 2012 reform gradually raises the *statutory* retirement age to 65, the following measures could significantly affect retirement probabilities prior to age 65:

➢ Revising the long-service-time early retirement provision to limit early retirement at no more than two years prior to the statutory retirement age of 65;

➢ Increasing the early retirement deduction from 0.3 to at least 0.5 percent of pension benefits per month,[4] with earlier retirement linked to progressively increasing monthly deductions;

➢ Reducing non-contributory service time recognition (including maternity-, national service -, early insurance – and occupational hazard- related recognition);

➢ Limiting the opportunity to purchase insurance periods to two years,[5] and revising it to reflect the actuarially fair price of earlier retirement (present value of foregone contributions as well as that of additional pension payments resulting from longer service time and the longer benefit payment period).

Quantification of the impact of these measures is more difficult, given the need for detailed and disaggregated data at the individual level. Moreover, these measures are designed primarily to work via affecting incentives, and assessing their quantitative impact would require detailed structural modeling that is beyond the scope of this chapter.

18.   In sum, the reform options presented above could help reduce pension expenditures both in the short and long run. Specifically, reforms reducing the pension bonus and tax allowance for pensioners can contribute to near-term fiscal consolidation by around 0.6 percent of GDP. Other reforms to further limit benefit indexation cumulate over time, with savings estimated at up to 2 percent of GDP by 2050. In all, a combination of proposed reforms could yield about 2.6 percent of GDP, reducing by about 40 percent the expected increase in pension spending by 2050.[6]

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[3] Under our assumptions and the current indexation formula, the expected pension growth over the long run is estimated at 0.4*2% + 0.6*3.5% = 2.9 percentage points. Full price indexation would thus result, over the long run, in pension growth equal to inflation (2 percent).

[4] In OECD countries, except Germany, early retirement deductions range between 0.4-0.6 percent per month.

[5] Workers can pay up to two years' worth of extra contributions at the time of retirement, effectively purchasing service time ex-post.

[6] The combined effect takes into account the impact on tax revenue of lower pension benefits relative to the baseline (due to the reduction in the bonus and the changed indexation formula); hence, the combined impact of the three reforms is somewhat smaller than the sum of their individual impact.

Table 2. Pension Reform Options and Their Potential Fiscal Impact
(Percent of GDP)

	2015	2016	2020	2030	2040	2050
Old age and early retirement pension spending (baseline)	8.6	8.6	9.1	10.2	12.1	14.7
Change from Baseline						
Discontinue annual pension bonus for pensions above the average (A)	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Discontinue 13.5 percent pension allowance for pensions above the average (B)	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7
Index benefits to prices (C)	0.0	0.0	-0.4	-1.1	-1.6	-2.0
Reforms with short-term impact (A+B)	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9
Proposed reform scenario (A+B+C)	-0.6	-0.6	-1.0	-1.6	-2.2	-2.6

19.   The proposed reforms can help improve the long-run viability of the pension system. Assuming constant pension contribution rates and labor shares over the long run, without reform, the pension system balance (contributions minus benefits) is projected to continue to deteriorate from 2 percent of GDP at end-2013 to 8¼ percent of GDP at end-2050. In net present value terms, this represents a cumulative deterioration of some 40 percent of GDP during 2015–50. In contrast, the combined reforms proposed above can help to reduce the system's deficit significantly, contributing to a cumulative improvement of just under 15 percent of GDP in net present value terms during 2015–50 relative to the status quo.

Slovenia: Pension System Financial Balance
(Percent of GDP)
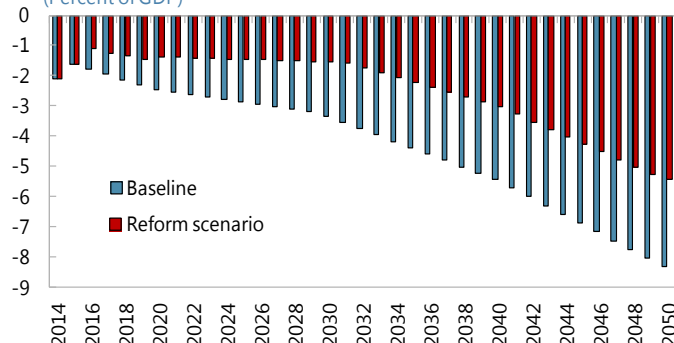
Source: IMF staff calculations.

20.   The proposed reforms can also help improve the overall debt dynamics. Assuming a constant (non-pension) primary expenditure-to-GDP ratio and revenue-to-GDP ratio, in the absence of reforms, the debt-to-GDP ratio is projected to rise to 200 percent by 2050 as a result of rising pension spending and the endogenously determined interest payments. The combination of reforms proposed above can significantly mitigate the increase in public debt, which would reach just over 100 percent of GDP by 2050. Additional, non-pension-related, measures would be needed to ensure that the debt ratio can be placed on a sustainable downward path. The next section will explore some avenues to achieve further consolidation by enhancing the efficiency of health and education spending.

Slovenia: Public debt
(Percent of GDP)
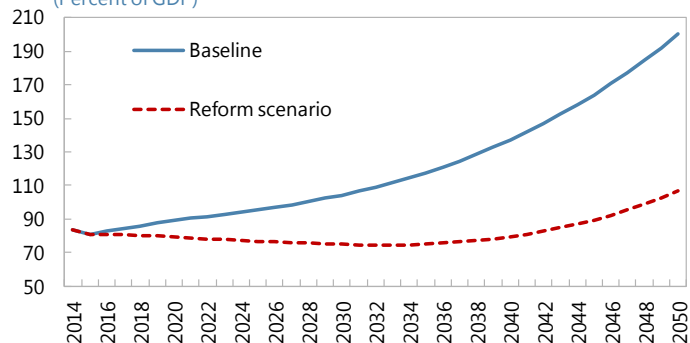
Source: IMF staff calculations.

C.   Health and Education—Issues and Policy Options

Main issues

21.   Spending on health and education constitutes a substantial part of public expenditure. After a sharp decline in 2007, publicly-funded spending on health and education has been rising, reaching almost 12 percent of GDP in 2011. While recent reforms (mainly public wage reductions for education, tightening of hospital budget constraints and cuts in pharmaceutical prices for healthcare) have managed to stem this rising trend, there could be scope for further strengthening the efficiency of health and education systems to help fiscal consolidation.

Slovenia: Health and Education Expenditure
(2003–11, percent of GDP)

Source: OECD.
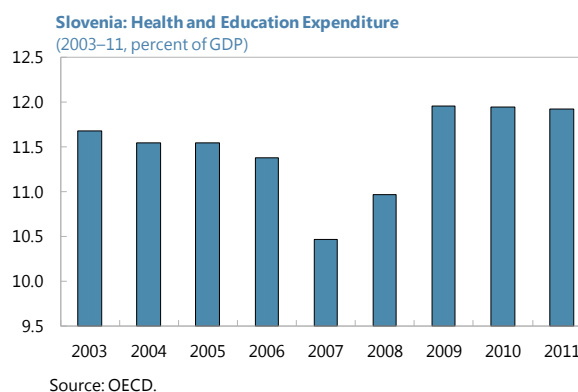
22.   While its level is below the OECD average, the efficiency of spending in these sectors lags behind peers (Panel 1). Slovenia's health outcomes, such as life expectancy, are on par with OECD average. However, compared to countries with a similar performance (Luxembourg or Korea), Slovenia's spending is relatively higher (by close to 3 percent of GDP). Similarly, in education, Slovenia ranks above the OECD average on PISA scores, but spends relatively more (by about 1 percent of GDP) compared to others with similar outcomes (Czech Republic, Germany, and Japan).

23.   A number of sector-specific and budget rigidities account for Slovenia's relatively lower level of efficiency spending in healthcare and education:

* *Sectoral rigidities:* In the health sector, a recent OECD study identifies a number of factors, including: (i) continued reliance on costly inpatient and specialist care, which undermines the strong foundation of primary care in Slovenia; (ii) insufficient partnership with the private sector in ambulatory settings; (iii) a historically generous public-health benefit package; (iv) variable quality of care, not always targeted to rewarding high performance; (v) insufficient care given to ensuring that public funding is focused on treatments of proven clinical and cost effectiveness. In education, low efficiency is largely related to a rigid education system despite a declining student population. This resulted in low pupil-teacher ratios in pre-primary and lower-secondary education, which are currently significantly below OECD average. In addition, population dynamics have differed widely across geographical areas, while education services did not adjust to this, with class size ranging from 4.5 to 24.2 pupils, around 40 percent of schools having less than 15 students per class, and around 56 percent of schools having less than 200 pupils.

Figure 1. Health and Education: Output and Expenditure

Slovenia: Life Expectancy at Birth, 2011
(Years)

Country	Years
South Africa	52.6
India	65.5
Russian Fed.	69.0
Indonesia	69.3
Brazil	73.4
China	73.5
Mexico	74.2
Turkey	74.6
Hungary	75.0
Slovak Rep.	76.1
Estonia	76.3
Poland	76.9
Czech Rep.	78.0
Chile	78.3
US	78.7
Denmark	79.9
OECD	80.1
Slovenia	80.1
Belgium	80.5
Ireland	80.6
Finland	80.6
Portugal	80.8
Greece	80.8
Germany	80.8
Canada	81.0
Korea	81.1
UK	81.1
Austria	81.1
Luxembourg	81.1
New Zealand	81.2
Netherlands	81.3
Norway	81.4
Israel	81.8
Sweden	81.9
Australia	82.0
France	82.2
Iceland	82.4
Spain	82.4
Italy	82.7
Japan	82.7
Switzerland	82.8

Slovenia: Total Health Expenditure, 2011 (or latest available)
(Percent of GDP)

Legend: ■ Public ■ Private

Country	Percent of GDP
Indonesia	2.7
India	3.9
China	5.2
Estonia	5.9
Turkey	6.1
Mexico	6.2
Russian Fed.	6.2
Luxembourg	6.6
Poland	6.9
Korea	7.4
Czech Rep.	7.5
Chile	7.5
Israel	7.7
Hungary	7.9
Slovak Rep.	7.9
South Africa	8.5
Slovenia	8.9
Brazil	8.9
Ireland	8.9
Australia	8.9
Finland	9.0
Iceland	9.0
Greece	9.1
Italy	9.2
Norway	9.3
Spain	9.3
OECD	9.3
UK	9.4
Sweden	9.5
Japan	9.6
Portugal	10.2
New Zealand	10.3
Belgium	10.5
Austria	10.8
Denmark	10.9
Switzerland	11.0
Canada	11.2
Germany	11.3
France	11.6
Netherlands	11.9
US	17.7

Slovenia: Average PISA Score, 2012

Mexico, Chile, Turkey, Greece, Slovak Rep., Israel, Sweden, Iceland, Hungary, Portugal, Italy, Spain, Luxembourg, US, Norway, OECD, Denmark, Slovenia, France, Czech Rep., Austria, UK, New Zealand, Belgium, Australia, Germany, Ireland, Switzerland, Netherlands, Poland, Canada, Estonia, Finland, Japan, Korea

Slovenia: Expenditure on Education Institutions, 2010 (or latest available)
(Percent of GDP)

Country	Percent of GDP
India	3.5
Indonesia	3.6
Hungary	4.6
Slovak Rep.	4.6
Italy	4.7
Czech Rep.	4.7
South Africa	4.8
Russian Fed.	4.9
Japan	5.1
Germany	5.3
Switzerland	5.6
Spain	5.6
Brazil	5.6
Austria	5.8
Poland	5.8
Portugal	5.8
Slovenia	5.9
Estonia	6.0
Australia	6.1
Mexico	6.2
OECD	6.3
Netherlands	6.3
France	6.3
Chile	6.4
Ireland	6.4
Sweden	6.5
UK	6.5
Finland	6.5
Canada	6.6
Belgium	6.6
Argentina	6.8
New Zealand	7.3
United States	7.3
Israel	7.4
Norway	7.6
Korea	7.6
Iceland	7.7
Denmark	8.0

Source: Education at a glance, 2013, OECD Health at a Glance, 2013.

- *Budgetary rigidities*: Indirect budget users in both health and education (institutional and legal structures spending that are beyond direct government funding control) have grown in number and are increasingly fragmented.[7] Moreover, here is a high degree of dispersion of their funding sources, with some relying on the state budget transfers and others on a mix of state and own resources. As a result, oversight and control on their spending is weak, hampering transparency, prioritization, and efficiency. In the health sector, he quasi-autonomous legal status of hospitals constrains the government's centralized efforts to rationalize costs. For example, the costs of primary health clinics established by local governments are difficult for the central government to control, even though it is obliged to cover their operating expenses, including wages. In education, local governments establish primary schools, while the federal government finances a significant share of their operational and employment costs. Since these facilities serve multiple community functions, there might be resistance from local governments to rationalize excess facilities despite high overhead costs.

Analysis

24.   A frontier analysis is used to assess the efficiency of Slovenia's spending on health and education. This is based on the OECD's Data Envelopment Analysis (DEA) methodology (Box 2).The DEA calculates an efficiency benchmark by estimating the "best practice frontier" that includes countries which provide the optimal combination of inputs and outputs. It then summarizes the distance from the efficiency frontier by an efficiency score, which is weighted by the public sector's share in the sector in question. This is then used to estimate the fiscal savings that can be generated by improving efficiency to the levels of best-performing peers.

25.   The efficiency score of the Slovenian healthcare system is below best practice. For the most recent period available (2010–12), it is estimated at about 52 percent relative to best practice (including countries such as Chile, Israel, Italy, and Japan). Interestingly, Slovenia's efficiency score appears to have increased substantially in 2010–12 compared to the pre-crisis period, when the score was broadly stable at around 32 percent. With the trend improvement in life expectancy close to historical norms, this efficiency improvement almost fully reflects the sharp expenditure compression undertaken as part of fiscal consolidation, including control of costs of pharmaceuticals, low employment growth in the sector, introduction of new technologies, and partly shifting the financing of health care needs from public to private complementary health insurance.
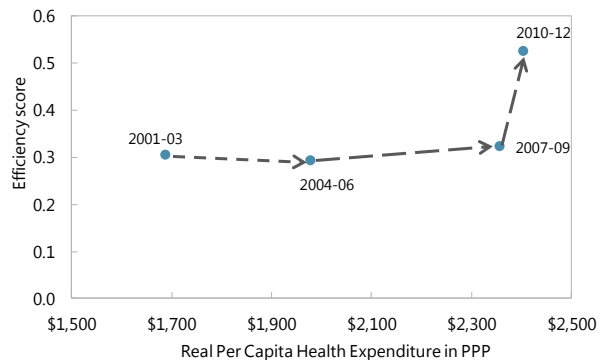
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[7] See Mattina and Gunnarsson (2007).

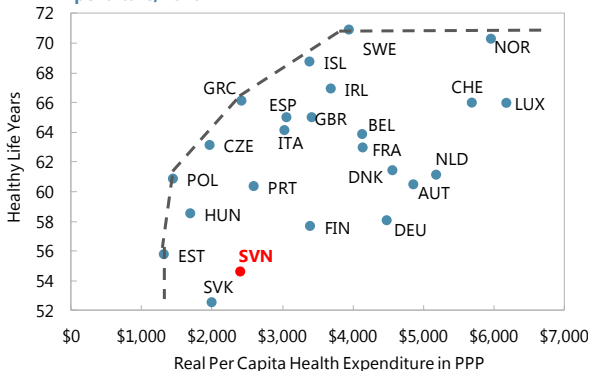**Slovenia's Health Performance: Life Expectancy and Health Expenditure, 2010–12**
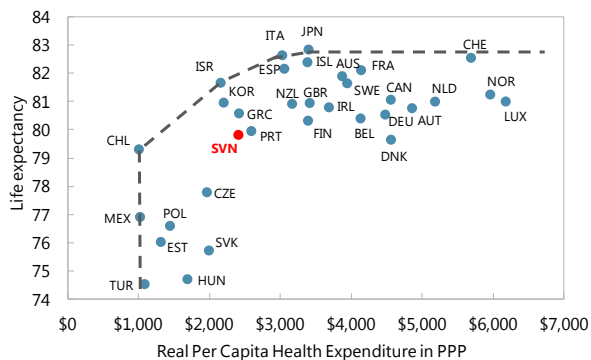
Slovenia's Health Performance: Efficiency Score and Expenditure, 2001–12

Source: IMF Staff calculations.

26.   This suggests that fiscal savings in the health sector of some 2 percent of GDP could be achieved by closing half of the distance to the efficiency frontier. If Slovenia had a similar capacity to convert inputs into health outcomes as the countries on the efficiency frontier, it could cut its health spending in half and still achieve comparable outcomes. The results are robust to different indicators. For example, if the Healthy Life Years Indicator is used instead of life expectancy, the estimated score is 0.55 and close to the result above, and the gap to the frontier is 45 percentage points, suggesting similar savings by closing half of the efficiency gap. Moreover, to the extent that some of the recent efficiency gains prove to be only temporary, the fiscal savings from moving toward the frontier could be larger; conversely, if the trend improvement observed in 2010–12 has continued in 2013–14 and proves permanent, the savings would be correspondingly lower.

Slovenia's Health Performance : Healthy Life Years and Health Expenditure, 2010–12

Slovenia's Health Performance with Healthy Life Years: Efficiency Score and Expenditure, 2004–12

Source: IMF Staff calculations.
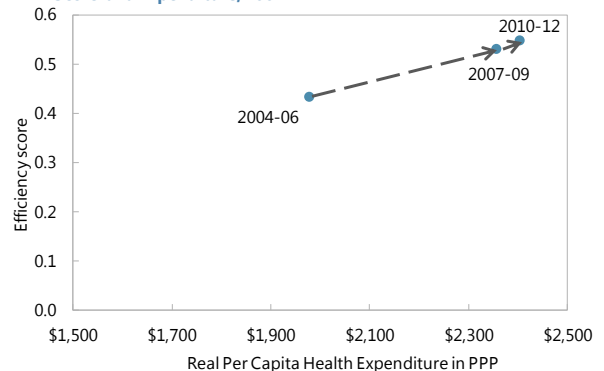
27.   Similarly, the education efficiency gap is found to be significant. During 2010–12, Slovenia's efficiency score is estimated at about 53 percent compared to best practice (defined by such countries as Estonia, Hungary, Korea, Mexico, and Poland). The efficiency of Slovenia's educational system improved markedly in the 2010–12 period, with the efficiency score rising by about 6 percentage points from an average level of about 47 percent up to 2009. While in part reflecting an improvement in educational attainment in the latter period, this efficiency improvement was also primarily related to the ongoing fiscal consolidation.

**28.   Closing half of the education efficiency gap could yield savings of around
1½ percent of GDP.** This implies that the same literacy level could be reached with about half of
the current education spending, implying potential fiscal savings of around 1.4 percent of GDP.
As with healthcare, the potential fiscal savings through improved education spending efficiency
could be larger if some of the recent gains prove only temporary, or lower if the gains are
sustained and higher in 2013–14.

Slovenia's Education Performance: PISA Score and Education Expenditure, 2010–12
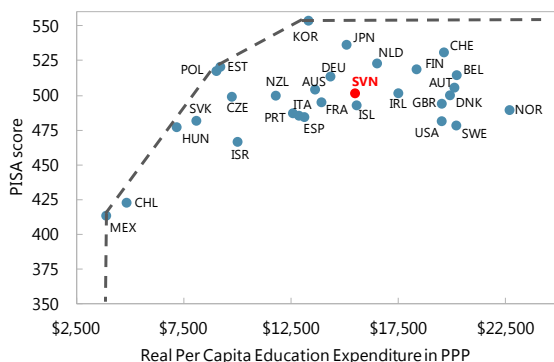
Slovenia's Education Performance: Efficiency Score and Expenditure, 2004–12

Source: IMF Staff calculations.

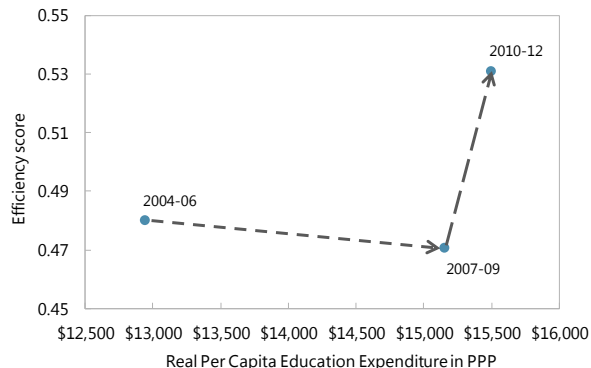## Policy reform options

**29.   To achieve efficiency gains, comprehensive healthcare reforms will be needed over
the medium term.** In recent years, and in the context of broader fiscal consolidation efforts,
there has been noteworthy effort to bring healthcare costs under control – as indeed captured by
the improvement in the efficiency indicators discussed above. Cost control efforts have included
some hardening of budget constraints, control of costs of pharmaceuticals, low employment and
wage growth in the sector, and introduction of new technologies; partly shifting the financing of
health care needs from public to private complementary health insurance may also have helped.
While these policy measures could translate in continued efficiency gains in coming years, some
of them could also be subject to reversal. In any event, with the estimated efficiency gap still
considerable, there is scope for further reforms of a more structural nature. Several options can
be considered, as recommended by a recent OECD study:[8]

- *A health technology assessment* is needed to analyze the extent to which the healthcare
  system reflects the best clinical practices (i.e. inpatient versus ambulatory care and the supply
  of general practitioners), and whether the government purchases of medical equipment and

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[8] Kierzenkowski, R. (2013).

pharmaceuticals are cost-effective. On this basis, measures would need to be taken to improve practices and reduce costs.

- *Reforming health financing* could also bring sizeable savings. The recent broadening of the contribution of compulsory health insurance to working students was an important step. Further reform options include aligning the health insurance contribution of pensioners with the standard contribution of employees and allowing for an increase in premiums of complementary health insurance with the age of participants.

- *Other reform areas* could include further developing options for homecare, and allowing for a system of vouchers.

30.   Efficiency gains in the education sector can be achieved though adjustments to demographic trends and improved funding for tertiary education. As in the case of healthcare, recent cost-cutting measures may not prove sustainable, especially if the recent tight public-wage policy (directly impacting a major component of the sector's cost structure) were to be loosened in the coming years. In this context, reforms of a more structural nature would be called for. Specifically:

- There is scope to further improve efficiency by raising pupil-teacher ratios in pre-primary and lower-secondary education, including by increasing class size (through minimum class size, especially for urban zones).

- Spending efficiency can be achieved through optimization of the school network (by addressing the issue of overcapacity of schools that are not geographically isolated) and rationalization of teacher workloads.

- Finally, to help promote access and equity in tertiary education and boost spending efficiency, the introduction of universal tuition fees along with means-tested grants and loans with income-contingent repayments would help promote access and equity in tertiary education while minimizing costs.

31.   Overcoming rigidities in the budgetary process for both healthcare and education is also important for achieving efficiency gains. Bringing the oversight and control over indirect health and education spending users in line with the degree of control exercised on direct spending users would improve expenditure control and could thus usefully support efforts to strengthen expenditure efficiency in these sectors. A number of measures could be considered, as follows:

- Merge financial management functions across smaller indirect budget entities (IBE) or make more and better use of shared financial services (accounting and reporting, internal control and audit).

- Increase the involvement of the central government in the preparation of the financial plans by indirect budget entities. Supervising ministries should be able to review financial plans of indirect budget entities before approvals by their governing/management board.

- Standardize and unify budget execution systems across IBE. This can be achieved for instance through the installation of a unique IT system for budget execution, payment, accounting and reporting system.

32.   Together with pension reform, reforms in health and education can help place the public debt ratio on a sustainable downward path. Assuming that reforms in health and

education can begin to have an impact on the sectors' finances with a 2-year lag, and that this impact is felt only gradually over an 8-year window, even if half of the fiscal savings estimated above (1 ¾ percent of GDP) could be achieved, reforms can still make a powerful contribution to counteracting the effects on population aging. Together with pension reforms, they would place the debt ratio on a firmly declining path through 2040, and allow it to broadly stabilize around 40 percent by 2050.

Slovenia: Public Debt
(Percent of GDP)

Source: IMF staff calculations.
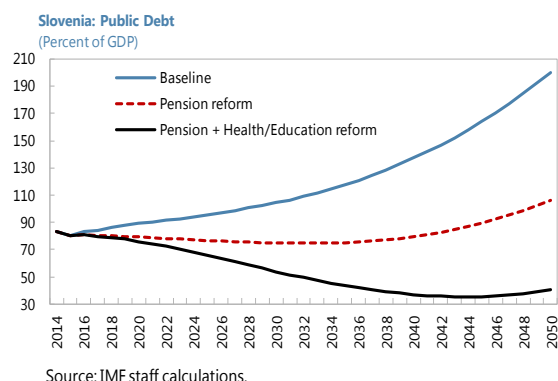
D. Concluding Remarks

33.   This paper assessed policy options to generate fiscal savings in social spending. The paper's motivations are threefold. First, with the substantial deterioration of public finances through the crisis, the authorities need to undertake additional consolidation efforts to put the public finances on a sustainable path. Second, population aging is expected to put significant pressure on the pension system over the long run. Third, there is evidence of inefficiencies in both healthcare and education spending.

34.   The paper finds that significant fiscal savings could be achieved by reforming the pension, health, and education systems. Regarding pensions, reforms to the pension bonus and the tax treatment of pension benefits can generate up-front savings, and can thus support near-term consolidation, while the fiscal impact of reforms to benefit indexation and policies to raise the effective retirement age can help address longer-term challenges to pension finances. In the areas of healthcare and education, reforms addressing sector-specific structural rigidities as well as budgetary controls could help close the efficiency gap with the best practice frontier and generate sizeable long-term savings. Together, these reforms can help place public debt on a sustainable downward path.

35.   The quantitative results presented in this section should be interpreted with caution. With regard to *pensions*, they depend on assumptions and on the precise specification of reforms, which needs to take into account the protection of low income pensions. The results also do not take into account the potential behavioral responses to these reforms, which could be significant. Regarding *healthcare and education*, life expectancy and PISA scores used in the analysis may capture the output of these sectors only imperfectly. Use of alternative indicators

would greatly strengthen the degree of confidence in assessing efficiency, but scarcity of comparable data for a sufficiently large set of countries is an important limitation.

36. **The paper is not exhaustive, suggesting future avenues of research**. For example, the paper does not include a welfare assessment of pension reform: such an analysis would be important, given the intertemporal nature of the effects in question, with issues of intergenerational equity featuring prominently. Moreover, the paper adopted an explicitly partial-equilibrium approach, and thus did not attempt to endogenize the important interactions between pension reform and labor market dynamics, which could affect the results. On the menu of policy options, it does not consider structural and/or paradigmatic pension reforms, such as indexing the statutory retirement age to life expectancy so as to keep life expectancy at retirement constant, reducing the role of the state in providing old age income replacement, and relying more on fully funded, privately managed pension products. In order to continue protecting the elderly against poverty in a fiscally prudent manner, the option of relying on non-contributory targeted social pensions could also be investigated, as part of Slovenia's long-term pension policy. As to healthcare, policy reforms did not explicitly consider the impact of aging on the longer-term dynamics of health spending. The literature in this area has established that these effects could be significant, and incorporating this dimension in the analysis would only strengthen the urgency of efficiency-enhancing reforms in this sector.

Box 1. Slovenia's Pension System: Institutional Features

Slovenia has a mandatory, pay-as-you-go financed, contributory defined benefit public pension system. The system pays old age, disability and survivor pensions as primary benefits. Primary benefits may be supplemented by secondary pensions, such as assistance and attendance supplements and supplementary survivor benefits. Other benefits include various cash and in-kind benefits designed to assist people with disabilities and other grants. In addition to the mandatory defined benefit scheme—Compulsory Pension and Disability Insurance (CPDI)—the system includes Compulsory (Occupational) Supplementary Pension Insurance (CSPI) for people performing hazardous or strenuous work, and Voluntary Supplementary Pension and Insurance.

Eligibility for old age pensions is conditional on age and contribution history. As of 2013, the normal, full-entitlement retirement age was 63 for men and 61 years for women, by which ages individuals must have accrued at least 20 years of insurance periods. Early retirement is permissible no sooner than 5 years before reaching the normal retirement age, and results in a 0.3 percent pension deduction per month of early retirement. However, these deductions do not apply to people who accrue 40 years of service without purchasing additional insurance periods, and further retirement age easements are available to various groups (mothers, those in compulsory national service, and those who became contributors at before turning 18).

Pension benefits reflect the beneficiary's past wage history. As of 2013, CPDI benefits were assessed on the basis of the average net wage of the best consecutive 19 years of insurance since 1970, subject to a floor and a ceiling—respectively at 76.5 percent and 306 percent of the previous year's average economy-wide wage. The application of the floor and the ceiling compresses the benefit distribution compared to earnings and also introduces a non-contributory minimum pension (at 19.9 percent of the average wage in the year preceding retirement). Benefits are regularly indexed to a 60/40 weighted composite of gross wage growth and the consumer price index, subject to a minimum of half the price index.

The system achieves full coverage: 100 percent and 90 percent old age pension coverage is reached by age 64 among men and women, respectively. Since the statutory retirement age is below 65 and early retirement is available, the eligibility ratio (old age pensioners as a percentage of people aged 65 and above) is higher: in 2013 it was 120%. It is expected that age-specific eligibility ratios will decline as a result of retirement age increases and stricter early retirement rules—at the same time, it is also assumed that coverage will remain full for people older than the statutory retirement age.

Compliance rates have been declining. The service time among new retirees between 2010 and 2013 is 38 years and 36 years, on average, for men and women, respectively. Compliance rates, as measured by age-specific coverage ratios among active age people, have been gradually declining since 2010. This trend exposes the pension system to risks: its contribution revenues would start to decline well before its expenditures begin to contract, driving the system's deficit up; and declining compliance rates among prime age individuals may compromise the system's ability to provide an adequate pension.

Box 2. Estimating Efficiency Gaps: The DEA Methodology

A frontier analysis is used to assess the efficiency of Slovenia's health and education sectors. The methodology applied is the Data Envelopment Analysis (DEA).[1] The DEA traces a "best practice frontier", populated by countries that provide the optimal combination of inputs and outputs. This frontier is constructed using linear programming techniques from the most efficient observations, which then "envelop" the less efficient ones (Sutherland and others 2007). Efficiency gains are derived by measuring the distance from the frontier and expressing it as a ratio of an observation's distance from the efficiency frontier to the distance from the axis. These gains can be defined as the amount by which input could be reduced while holding constant the level of output (input inefficiency) or as the amount by which output could be increased while holding constant the level of input (output orientation). The efficiency score ranges from 0 to 1, and measures the conversion rate of input into output. Implicitly, the efficiency gains determine the size of potential savings.

Slovenia: DEA Efficiency Frontier

Source: IMF staff calculations.
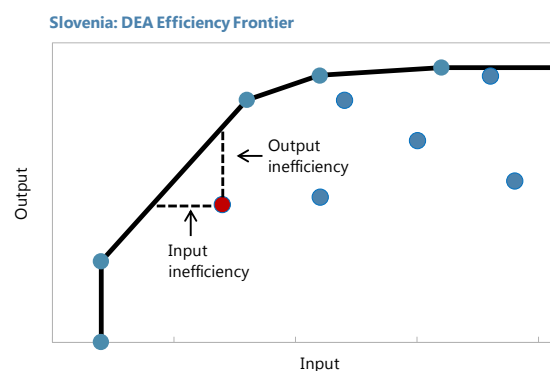
For each type of expenditure, Slovenia's conversion rate is then compared to that of other OECD countries. For the purpose of this analysis, life expectancy and PISA scores are considered as the socially valuable outcomes for health (*i.e.*, longer life as a result of a good healthcare system) and education (*i.e.*, literacy as a product of good schools), respectively. The conversion rate is applied to both public and private systems because of the lack of disaggregated data. To evaluate possible fiscal gains, we simply weight the size of the savings by the share the public sector in the expenditure. Latest figures from the OECD suggest that general government account for almost 80 percent in the education and health sectors. Moreover, it should be noted that the analysis focused on outcomes rather than output of education or health. For instance knowledge acquisition is a better indicator of the performance of the education system than output variables such as enrollment rate. Moreover, because of the nature of the technique used, variables are selected to their comparability across countries.

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[1] The DEA technique is more appropriate for homogeneous sample such OECD countries. Indeed, as a relative measure of efficiency, DEA is highly sensitive to sample selection and measurement errors in terms of quality of production factors. Outliers can exert a large effect on the efficiency scores and shape of the frontier.

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STRUCTURAL REFORMS TO SUPPORT SLOVENIA'S RECOVERY[1]

A. Introduction

1.   Slovenia is slowly emerging from a deep and protracted recession, the worst economic crisis in its history as independent nation. The downturn was triggered by a sudden stop of capital inflows in the wake of the global financial crisis, which forced domestic banks to repay their external funding. The ensuing credit crunch resulted in a steep fall in investment (see chart to the right), as companies lost access to bank funding. While investment is now recovering, it is mainly driven by EU-funded public projects rather than by private-sector initiatives.

Slovenia: Real GDP and Investment Ratio
(Billion)

Legend: Real GDP; Potential output; Investment to GDP ratio (rhs)
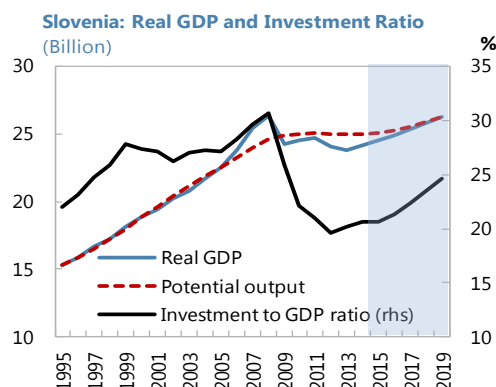
2.   The strength of the recovery, as well as its long-term growth potential, will thus depend on efforts to reignite and sustain domestic demand and, in particular, private investment. This also requires strengthening the economy's capacity to put its full labor endowment back to use in the most productive occupations. With no scope for fiscal support given fast-growing public debt and the need to steadily reduce the public deficit, boosting investment and employment can be achieved by implementing structural reforms that raise the economy's overall efficiency, e.g. by reducing the cost of doing business, improving firms' capacity to access finance (including in the form of equity and FDI), and underpinning employment creation and human capital accumulation.

3.   This paper discusses the scope for structural reforms to reignite investment and jobs in Slovenia. It uses the methodology developed by Tavares (2004) for Portugal and expanded to the EU by Cheptea and Velculescu (2014) to prioritize structural reforms in the case of Slovenia. This involves not just estimating the potential growth impact of bringing Slovenia in line with best practice in the various areas, but also factoring in how this may compare with the efforts required to implement the required reforms. Doing so one can assess the relative "efficiency of reforms", or bang for the buck, and focus on those reforms with the greatest efficiency.

4.   The paper is organized as follows. The next section will offer a short overview of the main channels through which institutions can affect growth in the Slovenian context.

Subsequently, the paper will present how Slovenia compares to other EU countries and the world's best practice across several institutional indicators covering a broad range of areas. Then, a methodology to gauge the reforms' growth impact and prioritize them will be developed, and its results for Slovenia presented. A final section will conclude with policy recommendations.

B.   Channels Through which Institutions Affect Growth

5.   Institutions are important for growth. The literature on the importance of institutions for growth is extensive.[2] The main insights as to how and why institutions matter can be gained from the definition of institutions given by North (1990). As he puts it, institutions are "the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction." As such, they include laws, regulations, practices and other features of the economic infrastructure, and can lead to better or worse economic outcomes. In particular, they will lead to higher growth if they reduce transaction costs, uncertainty, waste, or if they incentivize savings and thus investment over consumption. Thus institutions help shape the determinants of growth in the neoclassical theory (see, e.g., Solow (1956) or the endogenous-growth variant in, e.g., Romer (1996) and Romer (2000)), namely saving (with the attendant capital accumulation) and technological growth. The implication is that differences in institutions can help explain why economic performance can differ—sometimes starkly—across countries.

6.   There are several channels through which institutions can affect growth. These include the extent to which institutions:

- *Facilitate access to finance for firms, thus enabling them to invest, hire, and grow.* Low interest rates needed to facilitate financing require sound macroeconomic policies (e.g., stable low inflation and sustainable public debt).[3] But the amount of financing available and its cost also depend on the extent to which the laws and their enforcement through the courts protect investors' property rights (La Porta *et al.* (1998), Lombardo and Pagano (2002), Lombardo and Pagano (2005)), thus encouraging them to part with their moneys in the expectation of a risk-adjusted return. In the extreme, a legal system which always favors managers over financiers will result in no funding being made available to managers. A conducive legal system is especially important for equity finance, because equity investors, as residual claimants, face the maximum uncertainty as to the payoff that they can expect to receive from their investment. Other important aspects of a conducive environment for finance have to do with the minimization of uncertainty regarding taxation and the establishment of a credible and level playing field between different investors. In particular, foreign funds will not be forthcoming if the interests of foreign investors are systematically subordinated to those of domestic nationals.

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[2] For a discussion and relevant references, see Acemoglu *et al.* (2004).

[3] Structural fiscal reforms are often essential in this respect, but are not covered in this paper. For a discussion of important structural reform needs in Slovenia, see Halikias and Tapsoba (2015).

- *Increase economic efficiency and/or reduce the cost of doing business.* When the costs of doing business (e.g., applying for licenses and permits, complying with the relevant laws and regulations, etc.) are reduced, investments are incentivized because the hurdle rate that they have to overcome is lower. This is true for all regulations, including those on trade and on product and service markets. A less burdensome regulatory framework also encourages more FDI (World Bank (2012), which in turn brings funding as well as technological advances, thus boosting growth. Countries with pervasive public sector intervention in the economy, over and beyond the provision of essential public services, tend to remain well within the production possibility frontier. This is because public companies might have less incentive to maximize profits and adopt the most efficient cost-minimizing strategies, either because they face soft budget constraints or because they have other objectives in addition to profit maximization.

- *Increase the economy's capacity to approach full employment.* Certain labor market institutions, such as high unionization and centralized wage bargaining, can hinder wage adjustment to evolving economic conditions, and result in higher structural unemployment. More generally, however, the impact of labor market institutions on growth is somewhat ambiguous. For example, strong employment protection legislation can lower equilibrium employment, especially in sectors exposed to greater volatility. But, by giving more security to workers, it may also give them greater incentive to accumulate job-specific human capital, thus raising their productivity.[4]

- *Encourage innovation, research, development and technological progress.* For example, institutions that support the receipt of commercial gains from discoveries, e.g. a strong protection of intellectual property rights and patents, lead to greater investment in research and development, thus boosting the average rate of technological growth, and thus growth. An education system that better adopts its curricula to the evolving needs of the economy is likely to produce generations of graduates with higher average productivity than a less dynamic and flexible one.

C. Slovenia's Institutions in an International Perspective

7.   This section attempts to assess Slovenia's institutional quality in various areas relative to the best performers in the EU and world-wide. The 116 indicators covered[5] span eight main areas: labor market; product and service markets; business regulations; legal system; finance and corporate governance; trade; infrastructure and corruption; and education and R&D.

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[4] See OECD (2003).

[5] The indicators used here are from a recent study by Cheptea and Velculescu (2014), and were compiled from various sources, such as the OECD (2013 data, as per end-2014 vintage), the World Bank's Doing Business Report (2014 data as per their 2015 report), the World Economic Forum (2012), etc. (for a description of the indicators and their sources, please see the appendix in Cheptea and Velculescu (2014)). Where possible, the data in Cheptea and Velculescu (2014) have been updated to reflect latest releases.

8.   The data indicate that Slovenia lags best performers in both the EU and the overall sample across many indicators in all areas covered (Figure 1). Specifically:

- In the *labor market*, burdensome hiring and firing regulations and a relatively weak link of wages to productivity exhibit large gaps to best practice. These indicators, however, do not reflect the impact of the 2013 reform, which, according to a recent study,[6] has brought the OECD Employment Protection Legislation index for regular contracts against individual dismissals closer in line with the average in the OECD, although the protection against collective dismissals remains higher than in the OECD average.[7]

- In *product and service markets* Slovenia lags many of its peers mainly as a result of the pervasive involvement of the state in the economy, higher barriers to entry into some professions, and weak anti-monopoly practices.

- The *business environment* is also characterized by a high level of red tape and regulations, as attested by lower scores along general indicators (such as regulatory burden and regulatory quality) as well as on more specific ones (such as days to register a property).

- The *legal system* is also less business-friendly than that of peers, in particular when it comes to efficiency with which many types of contracts are enforced, as well the impartiality and independence of the courts.

- In the areas of *finance and corporate governance*, Slovenia fares worse than EU peers in particular in terms of protection of minority shareholders' rights and of the restrictions imposed on foreign ownership.

- *Trade regula*tions (e.g., procedures to import and export, barriers to trade and investment) are also relatively burdensome.

- The quality of *infrastructure* (especially railroad) is another dimension in which Slovenia falls short of best performance, including because of the heavier involvement of the government, and the scope that this generates for perceived favoritism and corruption in key decisions.

- Finally, in terms of *innovation*, Slovenia has fewer scientists and engineers, obtains fewer patents per capita and spends less in corporate R&D.

9.   Figure 2 describes how Slovenia ranks in each dimension relative to its EU-27 peers. Looking at the simple average in each area, Slovenia lags in particular in the areas of finance and corporate governance and in the labor market (in both cases the average rank is 21). The area with the lowest (i.e., better) average rank is that of business regulations (average rank 14).

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[6] See IMAD (2014).

[7] In particular, the 2013 Employment Relationships Act has simplified hiring and firing procedures and lowered redundancy costs (including by shortening notice periods and reducing severance pay). IMAD (2014) discusses the reform in greater detail.

Figure 1. Slovenia: Indicators of Institutional Quality

— World Best Practice   --- EU best practice   — Slovenia

Labor Market
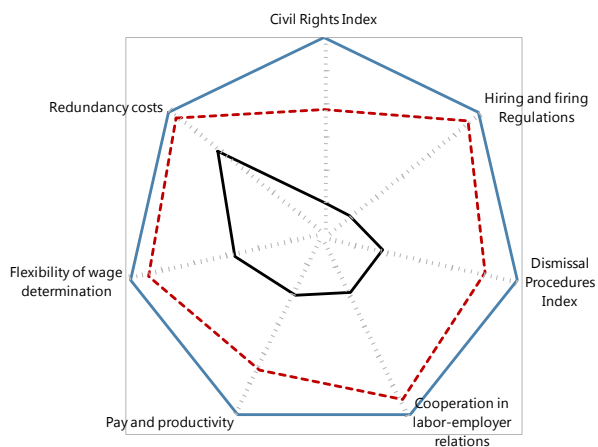
Product and Service Markets
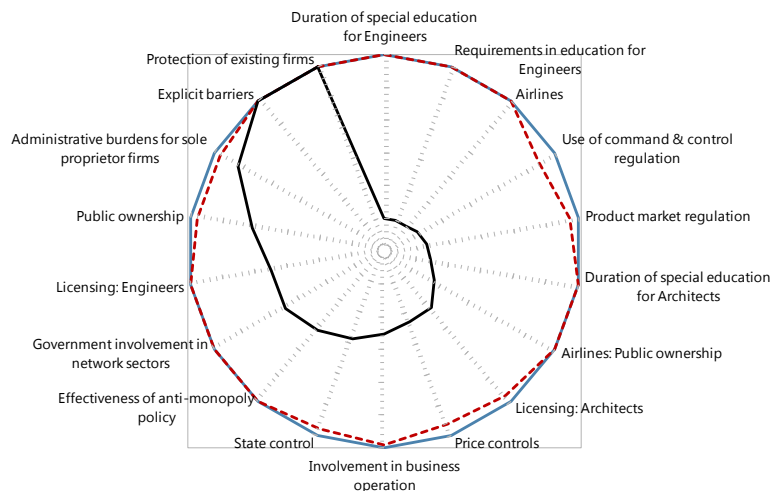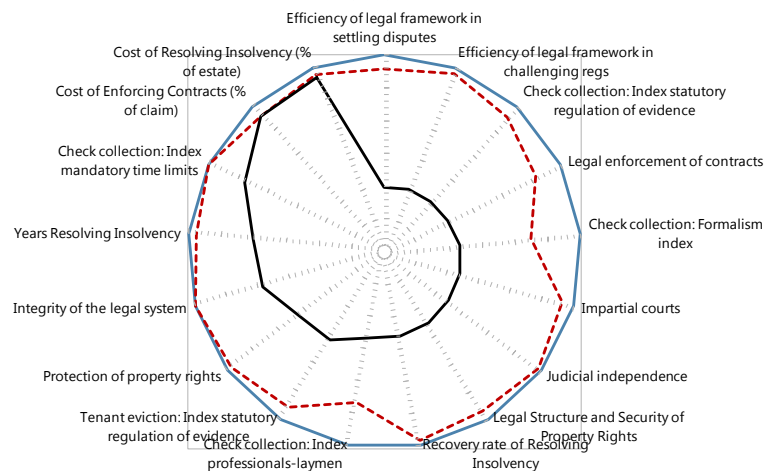
Business regulations

Legal System

Notes: For each indicator, "World Best Practice" is defined as the average of the five best performers and is set equal to 100, while the worst performer in the EU27 is set equal to zero. For a description of the indicators and their sources, see Cheptea and Velculescu (2014).

Figure 1. Slovenia: Indicators of Institutional Quality (concluded)
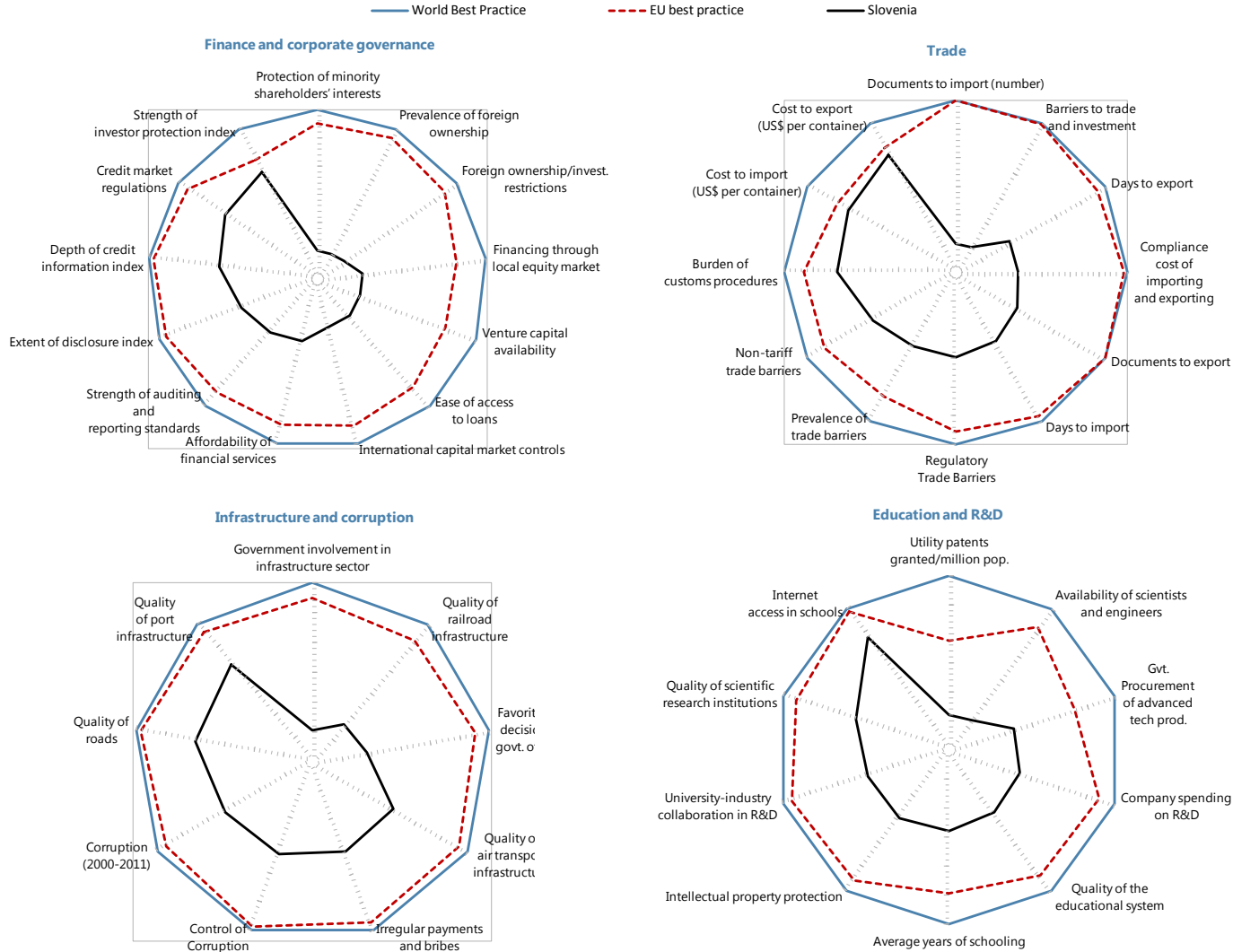
——— World Best Practice ----- EU best practice ——— Slovenia

Finance and corporate governance

Trade

Infrastructure and corruption

Education and R&D

Notes: For each indicator, "World Best Practice" is defined as the average of the five best performers and is set equal to 100, while the worst performer in the EU27 is set equal to zero.
For a description of the indicators and their sources, see Cheptea and Velculescu (2014).

Figure 2. Slovenia's Rank in EU27

■ Slovenia's rank   □ Number of EU27 countries for which indicator exists
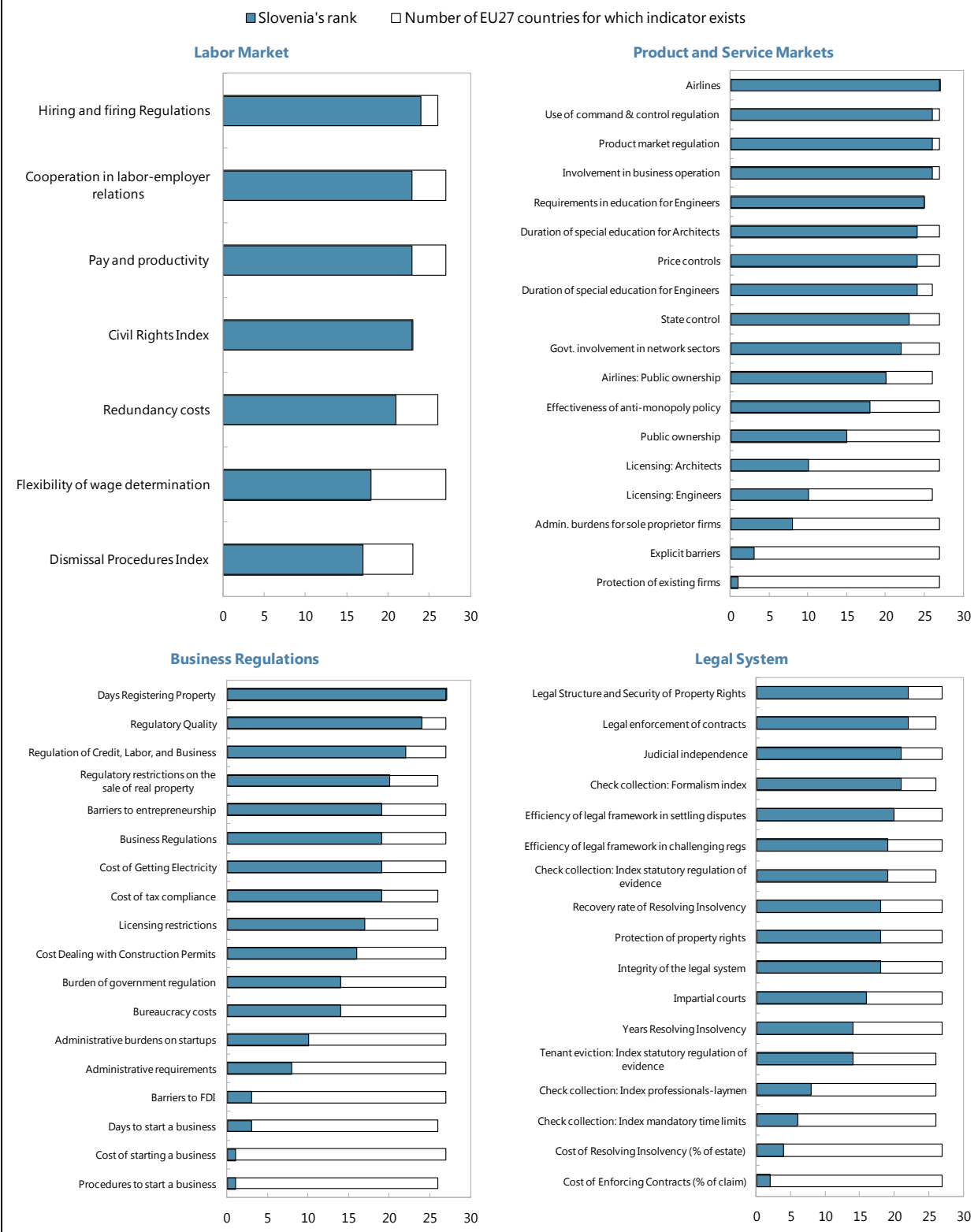
Note: For a description of the indicators and their sources, see Cheptea and Velculescu (2014).

Figure 2. Slovenia's Rank in EU27 (concluded)

■ Slovenia's rank   □ Number of EU27 countries for which indicator exists

Finance and corporate governance

- Protection of minority shareholders' interests
- Prevalence of foreign ownership
- Foreign ownership/investment restrictions
- Financing through local equity market
- International capital market controls
- Depth of credit information index
- Ease of access to loans
- Venture capital availability
- Affordability of financial services
- Strength of auditing and reporting standards
- Credit market regulations
- Extent of disclosure index
- Strength of investor protection index

Trade

- Barriers to trade and investment
- Documents to import (number)
- Regulatory Trade Barriers
- Days to export
- Compliance cost of importing and exporting
- Days to import
- Documents to export
- Prevalence of trade barriers
- Non-tariff trade barriers
- Burden of customs procedures
- Cost to import (US$ per container)
- Cost to export (US$ per container)

Infrastructure and Corruption

- Government involvement in infrastructure sector
- Quality of railroad infrastructure
- Favoritism in decisions of government officials
- Quality of air transport infrastructure
- Irregular payments and bribes
- Quality of roads
- Control of Corruption
- Corruption (2000-2011)
- Quality of port infrastructure

Education and R&D

- Availability of scientists and engineers
- Average years of schooling
- University-industry collaboration in R&D
- Government procurement of advanced tech prod.
- Quality of the educational system
- Quality of scientific research institutions
- Intellectual property protection
- Company spending on R&D
- Utility patents granted/million pop.
- Internet access in schools

Note: For a description of the indicators and their sources, see Cheptea and Velculescu (2014).

D. A Methodology for Prioritizing Reforms

10.   Given that Slovenia lags peers in many areas, one challenge for policymakers is to find a way to choose and prioritize reforms. This section summarizes a methodology for doing so on the basis of the impact of reforms on growth, also taking into account the cost of reforms and their relative efficiency, following Tavares (2014) and Cheptea and Velculescu (2014).

11.   In a first step, the growth effect of reforms is estimated. To do so, we use the results of cross-country regressions of long-run growth against the initial level of GDP (to control for convergence) and the relevant indicator. The effect of a given reform will then be quantified as the product of the estimated regression coefficient $\widehat{\text{Beta}}_i$ and the distance between a country's starting position and the frontier, as measured by the average of the five EU best performers (along the given dimension) in the sample:

$$R_i = \widehat{\text{Beta}}_i * (Best_i - X_i)$$

12.   In a second step, the cost of reforms is quantified. We follow the original approach in Tavares (2004), and assume that cost of reaching the frontier depends positively on how far the frontier is, relative to the starting position (i.e., on the required percent improvement). In formal terms, let's denote with the cost function C(X_i, $Best_i$) the cost of reaching the frontier (i.e., $Best_i$) for indicator i starting from a level X_i. The cost function is then assumed to be :

$$C(X_i, Best_i) = \left| \frac{X_i - Best_i}{X_i} \right|$$

13.   In a third step, a measure of reform efficiency is developed. Armed with an estimate of the benefit from the reform, i.e. R_i, and the functional form for its cost $C(X_i, Best_i)$, we can then estimate the "efficiency" of a given reform by dividing the benefit (the "bang") by the cost (the "buck"):

$$E_i = \frac{\widehat{Beta}_i(Best_i - X_i)}{\frac{|Best_i - X_i|}{X_i}} = \left| \widehat{Beta}_i \right| \cdot X_i$$

Note that this measure of efficiency would not change if the particular indicator is rescaled. This is because if the units of measurement of the institutional indicators i are multiplied by a constant K, then the estimated coefficient $\widehat{Beta}'_i$ will be divided by the same constant, leaving the measure of efficiency unchanged. This is an important feature for our purposes, since we will be comparing efficiency from reforms captured by indicators which come from different sources and whose units do not have the same scale or a natural interpretation necessarily. [16]

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[16] Cheptea and Velculescu also consider a "concave" specification for the costs of reform, i.e.:
$C(X_i, Best_i) = \ln(|X_i - Best_i| + 1)$. However, under this specification, the measure of the efficiency of a reform is given by:

(continued)

E. Results

14.   According to our methodology, reforms in a number of areas could help maximize the impact on long-run GDP, with some also being associated with high efficiency (Table 1 and Figure 3):

- *Labor market:* the most promising reform appears to be improving the relations between employers and employees, say by improving collective bargaining processes to facilitate cooperation. Closing the gap with best practice in the EU is estimated to boost long-run GDP by 1.8 percent. This also appears to be relatively more efficient than other labor-market reforms. Three other reforms have estimated impact on long-run GDP of about 1 percent, related to wage formation mechanisms and hiring and firing regulations (the scope for the latter, as discussed above, may have been already partly addressed with the 2013 reform).

- *Product and services markets***:** strengthening the effectiveness of anti-monopoly policies, say by providing the anti-monopoly institution with more resources and powers, appears to have the largest impact on long-run GDP (1.6 percent) and to also be highly efficient. The estimated growth impacts of the other reforms in this area are generally smaller, with one other reform, namely limiting price controls to industries for which economies of scale may reduce the effectiveness of competition (e.g., power generation), having an impact close to 1 percent.

- *Business regulations***:** improving the general quality of the regulatory framework and reducing bureaucracy costs by cutting "red tape" could yield the largest estimated impact on long-run GDP (1-1.2 percent). Reforms strengthening business regulations are also associated with high efficiency indices, suggesting relatively low implementation costs.

- *Legal system:* a number of reforms in this area are estimated to have significant growth effects. For example, improving the efficiency of the legal framework in settling disputes and challenging regulations, strengthening the impartiality of courts and their independence, and boosting the legal basis of property rights by ensuring that collateral and bankruptcy laws protect the rights of borrowers and lenders, are all associated with estimated impacts on long-run GDP in excess of 2 percent. A further four legal reforms related to the protection of property rights, insolvency processes, legal enforcement of contracts, and integrity of the judicial system, have estimated growth impacts in excess of 1 percent. Strengthening property rights and the integrity of the legal system are also some of the most efficient reforms in this area.

- *Finance and corporate governance***:** the highest growth impact would stem from reforms enhancing the protection of minority shareholders' interests, improving access to loans, expanding the availability of venture capital, and increasing foreign ownership. For each of these

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$E_i(concave) = \frac{Beta_i|Best_i - X_i|}{ln(|Best_i - X_i| + 1)}$, which is <u>not</u> invariant to a linear transformation of the indicator i and thus in principle cannot be used to compare across reforms, unless the units in which each indicator is expressed are meaningful enough (Note also that this estimate of efficiency also depends of how far a given country is from the best practice).

areas, closing the gap with EU best practice would be associated with a permanent increase in Slovenia's GDP of about 2 percent. In addition, improving financing through equity markets and strengthening auditing and reporting standards would also bring substantial growth dividends, with the latter being particularly efficient.
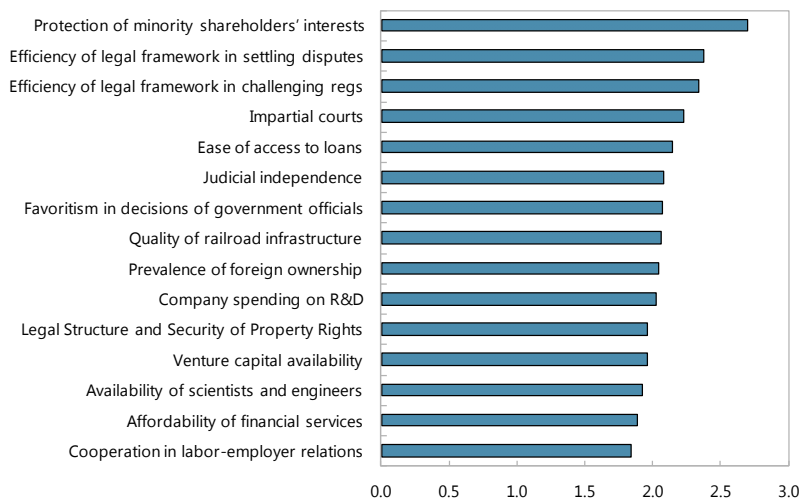
- *Trade***:** reducing the number of documents required to import could boost GDP by about 1.4 percent of GDP. Reducing nontariff trade barriers and the compliance cost of importing and exporting would be associated with a 1.1 percent higher long-run GDP. Reducing the burden of customs procedures and the prevalence of trade barriers appear to be associated with low relative cost and therefore high efficiency.

- *Infrastructure and corruption:* reducing favoritism by government officials to well-connected firms and individuals and strengthening the quality infrastructure (in particular for railroads) are associated with long-run GDP impacts in excess of 2 percent. Strengthening infrastructure in other areas also appears important to long-term growth (impact of 1 percent or higher on long-term GDP), while also relatively efficient (while political costs may be low, actual economic costs of strengthening infrastructure may be higher than proxied by the cost function assumed in this paper).

- *Education and R&D***:** reforms in most areas covered by the indicators included in this paper have estimated long-run GDP impacts in excess of 1 percent. The largest impact (2 percent) is associated with providing adequate incentives to increase company spending on R&D. Improvements in some areas (such as bringing the per-capita number of utility patents in line with EU best practice) are estimated to be rather difficult/costly, while the least cost per point of long-run GDP impact is found to be associated with the prevalence of internet access in schools.

15.   Looking across the various areas, reforms improving corporate governance, access to finance, and judicial processes appear most important for growth in Slovenia (see text chart on next page). Together, they represent 10 entries in the top 15 reforms that have the highest long-run GDP impact, estimated—on average—at around 2 percentage points. Strengthening the protection of minority shareholders' interest tops the chart, and is also in line with the need to expand equity versus debt finance, which is critical to reducing the large corporate debt overhang that was exposed by the crisis. Judicial reforms enhancing the efficiency, predictability, and independence of the courts are also key not only to facilitate access to finance, but also to facilitate corporate restructuring.[17] Other areas that are important for growth include reducing the scope for corruption and favoritism by government officials, improving the quality of the railroad infrastructure, increasing spending on R&D, reforming the education system to form more scientists and engineers, and strengthening the cooperation in labor-employer relations.
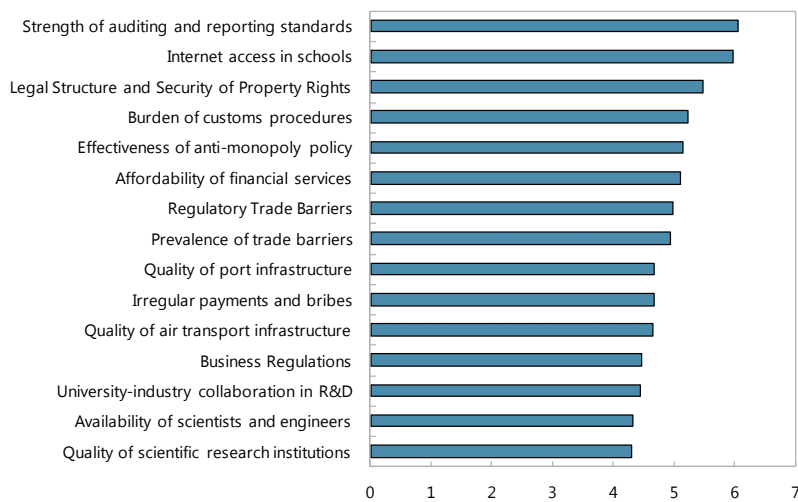
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[17] See Garrido (2015).

15 Highest Long-Run GDP Impacts from Closing Gap with EU
(Percent)

Protection of minority shareholders' interests	
Efficiency of legal framework in settling disputes	
Efficiency of legal framework in challenging regs	
Impartial courts	
Ease of access to loans	
Judicial independence	
Favoritism in decisions of government officials	
Quality of railroad infrastructure	
Prevalence of foreign ownership	
Company spending on R&D	
Legal Structure and Security of Property Rights	
Venture capital availability	
Availability of scientists and engineers	
Affordability of financial services	
Cooperation in labor-employer relations	

0.0   0.5   1.0   1.5   2.0   2.5   3.0

16.   Corporate governance and legal reforms, in addition to reforms in other areas, are also among those reforms with most efficient reforms (see text chart below). Looking at the "efficiency" of a given reform, i.e. its benefits in relation to its costs, reforms from a broader set of areas could be prioritized, including corporate governance (i.e., enhancing the strength of auditing and reporting standards), legal system (e.g., strengthening the structure and security of property rights), administrative regulations (reducing the burden associated with custom and business regulations, strengthening anti-monopoly policy), trade (reducing trade barriers), infrastructure (improving port and air infrastructure), education and R&D (expanding internet in schools, improving the quality of research institutions and their cooperation with industry, increasing the number of scientists and engineers) and fight against corruption (clamping down on irregular payments and bribes).

15 Reforms with Highest Estimated Efficiency
(Percent)

Strength of auditing and reporting standards	
Internet access in schools	
Legal Structure and Security of Property Rights	
Burden of customs procedures	
Effectiveness of anti-monopoly policy	
Affordability of financial services	
Regulatory Trade Barriers	
Prevalence of trade barriers	
Quality of port infrastructure	
Irregular payments and bribes	
Quality of air transport infrastructure	
Business Regulations	
University-industry collaboration in R&D	
Availability of scientists and engineers	
Quality of scientific research institutions	

0   1   2   3   4   5   6   7

F.   Conclusions

17.   This paper attempts to estimate the potential impact on long-run GDP of various reforms in the Slovenian context and to develop a framework to prioritize reform efforts.

The main findings are as follows:

- First, Slovenia can increase economic efficiency and thus activity and growth by closing gaps vis-à-vis the best performers in the EU and worldwide in several areas.

- Second, the biggest estimated dividend in terms of permanent increase in GDP would stem from reforms addressing the weak corporate governance framework, the low legal and judicial efficiency, the limited access to finance (including by foreign owners). Closing the gap in these areas vis-à-vis best performers in the EU would increase Slovenia's GDP by some 2-2¾ percent. Going further and aligning these areas with world-wide best practices would be associated with an even greater GDP dividend. Other promising areas include reforms limiting the scope for favoritism in government decisions, improving railroad infrastructure, and enhancing the economy's capacity to innovate.

- Third, when resources are limited (including political capital), prioritization of reforms is important. Taking implementation costs into account, a reform strategy that would maximize the growth impact while minimizing the costs could encompass more areas in addition to corporate governance and judicial reforms, to also include reforms to reduce business regulations (red tape), simplify trade and customs procedures, and boost research and development, among others.

18.   The corporate governance and judicial reforms identified above are also important to address the large corporate overhang that was exposed by the crisis. The continued deleveraging needs of the corporate sector make for a subdued outlook for investment. As such, reforms that facilitate equity finance directly (such as the availability of venture capital, among the top 15 most efficient reforms) or indirectly through improving governance (by protecting minority shareholder rights or strengthening auditing and reporting standards, which top the charts for growth impact and efficiency, respectively) can be important to strengthen firm viability and their ability to repay debts and reignite investment. Enhancing the efficiency of the courts can also help facilitate equity financing as well as promote debt restructuring.

19.   The quantitative results estimating the growth effect of reforms should be interpreted with caution. Individual results are sensitive to assumptions and are only indicative of the relative importance of various reforms for growth. Moreover, they should not be interpreted as independent from each other, so that introducing multiple reforms would lead to an impact equal to the sum of the individual impacts. To obtain such an estimate one would need to run a cross-country growth regression including simultaneously all the relevant indicators. But the small number of observations and the high collinearity of many of these indicators reduce the significance of the estimates.

20.   Moreover, reform efficiency results are sensitive to the cost specification. As discussed in Cheptea and Velculescu (2014), results depend on whether the cost function is assumed convex or

concave. While the convex function adopted here is intuitive, it also implies that reform efficiency, as defined in this paper, increases with the starting level of the institutional quality, which could be seen as counterintuitive. This is partly due to the assumed linearity of the effect of institutional quality on growth. Assuming diminishing returns to scale to closing the gap with best practice would, for example, result in greater efficiency, all else equal, for reforms in areas where the initial gap is larger. The challenge is that it is difficult to estimate with precision non-linear relationships between long-run growth and institutional variables, including because the cross-country samples are usually small. In addition to generalizing the functional form for the effect of institutional reforms on growth, future research could also consider other functional specifications for the costs of reform, which would possess desirable qualities while still remaining invariant to linear transformations of the institutional indicators.

Table 1. Slovenia: Impact on Long-run GDP, Required Reform Effort and Efficiency of Reform

Indicator	Significance of estimated coefficient [1]	Slovenia (1)	Best 5 in EU27 (2)	Coefficient (3)	Distance (4) (2)-(1)	Impact on long-run GDP (5) (3)*(4)	cost of reform (6)	Efficiency of reforms (7) (5)/(6)
Labor market								
Cooperation in labor-employer relations	***	3.8	5.7	1.0	1.9	1.8	0.5	3.6
Civil Rights Index	**	0.9	0.6	-3.1	-0.4	1.1	0.4	2.9
Hiring and firing Regulations	***	2.2	9.3	0.1	7.1	1.0	3.2	0.3
Pay and productivity	***	3.5	4.7	0.9	1.2	1.0	0.3	3.0
Dismissal Procedures Index	**	0.7	0.2	-1.4	-0.5	0.7	0.8	1.0
Redundancy costs	**	37.0	6.0	0.0	-31.0	0.2	0.8	0.2
Flexibility of wage determination	*	3.8	5.7	-0.3	1.8	-0.6	0.5	-1.2
Product & Service markets								
Effectiveness of anti-monopoly policy	***	4.3	5.6	1.2	1.3	1.6	0.3	5.2
Price controls	**	3.0	8.2	0.2	5.2	1.0	1.7	0.6
Airlines	***	3.5	0.0	-0.3	-3.5	0.9	1.0	0.9
Duration of special education for Engineers	***	6.0	0.0	-0.1	-6.0	0.8	1.0	0.8
Involvement in business operation	***	2.2	1.0	-0.6	-1.2	0.8	0.6	1.4
Product market regulation	***	1.7	1.1	-1.3	-0.6	0.7	0.3	2.2
Requirements in education for Engineers	**	5.7	0.0	-0.1	-5.7	0.7	1.0	0.7
State control	***	2.5	1.6	-0.8	-0.9	0.7	0.3	1.9
Use of command & control regulation	**	3.4	1.2	-0.3	-2.2	0.6	0.6	1.0
Duration of special education for Architects	**	5.5	0.0	-0.1	-5.5	0.6	1.0	0.6
Airlines: Public ownership	**	5.1	0.0	-0.1	-5.1	0.6	1.0	0.6
Government involvement in network sectors	**	3.7	1.8	-0.3	-2.0	0.5	0.5	1.0
Licensing: Architects	**	4.5	0.3	-0.1	-4.2	0.5	0.9	0.5
Licensing: Engineers	***	3.0	0.0	-0.1	-3.0	0.4	1.0	0.4
Public ownership	**	2.8	1.9	-0.3	-0.9	0.3	0.3	0.9
Admin. burdens for sole proprietor firms	***	0.4	0.1	-0.5	-0.3	0.1	0.7	0.2
Explicit barriers	***	0.0	0.0	-0.6	0.0	0.0	0.0	0.0
Protection of existing firms	***	0.0	0.0	0.2	0.0	0.0	...	...
Business regulations								
Regulatory Quality	***	0.9	1.8	1.2	1.0	1.2	1.1	1.1
Bureaucracy costs	***	2.8	1.4	-0.8	-1.4	1.1	0.5	2.2
Business Regulations	***	5.9	7.1	0.8	1.3	1.0	0.2	4.5
Days Registering Property	***	109.5	3.6	0.0	-105.9	0.9	1.0	1.0
Licensing restrictions	***	7.5	9.3	0.4	1.8	0.7	0.2	3.0
Regulation of Credit, Labor, and Business	***	6.7	7.7	0.6	1.0	0.6	0.1	4.3
Barriers to entrepreneurship	***	1.8	1.2	-0.9	-0.6	0.5	0.3	1.6
Regulatory restrictions on the sale of real propert	**	7.2	9.3	0.2	2.2	0.5	0.3	1.5
Burden of government regulation	*	3.0	4.1	0.4	1.1	0.4	0.4	1.1
Administrative burdens on startups	***	2.0	1.4	-0.6	-0.6	0.3	0.3	1.1
Administrative requirements	**	4.1	5.2	0.3	1.1	0.3	0.3	1.2
Cost of tax compliance	**	7.1	9.0	0.1	1.9	0.3	0.3	1.0
Cost Dealing with Construction Permits	***	1.3	0.2	-0.1	-1.1	0.1	0.8	0.1
Cost of Getting Electricity	***	119.3	32.0	0.0	-87.3	0.0	0.7	0.0
Days to start a business	**	6.0	5.2	0.0	-0.8	0.0	0.1	0.1
Barriers to FDI	***	0.0	0.0	-0.3	0.0	0.0	0.0	0.0
Cost of starting a business	***	0.0	0.2	0.0	0.2	0.0	...	...
Procedures to start a business	*	2.0	3.0	-0.1	1.0	-0.1	...	0.1
Legal system								
Efficiency of legal framework in settling disputes	***	2.9	5.6	0.9	2.7	2.4	0.9	2.6
Efficiency of legal framework in challenging regs	***	3.0	5.5	1.0	2.4	2.3	0.8	2.9
Impartial courts	***	4.0	7.5	0.6	3.6	2.2	0.9	2.5
Judicial independence	***	3.8	6.4	0.8	2.6	2.1	0.7	3.0
Legal Structure and Security of Property Rights	***	6.2	8.4	0.9	2.2	2.0	0.4	5.5
Protection of property rights	***	6.0	8.7	0.7	2.7	1.8	0.4	4.1
Recovery rate of Resolving Insolvency	***	50.1	88.9	0.0	38.8	1.5	0.8	1.9
Legal enforcement of contracts	***	4.2	7.0	0.5	2.7	1.3	0.7	2.0
Integrity of the legal system	***	7.5	10.0	0.5	2.5	1.1	0.3	3.4
Check collection: Index statutory regulation of ev	**	0.5	0.1	-2.1	-0.4	0.8	0.8	1.0
Tenant eviction: Index statutory regulation of evi	**	0.4	0.1	-2.3	-0.3	0.6	0.7	0.9
Check collection: Formalism index	**	4.3	2.6	-0.3	-1.7	0.5	0.4	1.4
Years Resolving Insolvency	***	2.0	0.8	-0.4	-1.2	0.5	0.6	0.8
Check collection: Index professionals-laymen	*	0.7	0.3	-0.9	-0.4	0.4	0.6	0.6
Check collection: Index mandatory time limits	**	0.2	0.0	-1.2	-0.2	0.2	1.0	0.2
Cost of Resolving Insolvency (% of estate)	***	4.0	3.7	-0.1	-0.3	0.0	0.1	0.2
Cost of Enforcing Contracts (% of claim)	***	12.7	12.8	0.0	0.1	0.0	...	0.5

[1] *, **, *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Table 1. Slovenia: Impact on Long-run GDP, Required Reform Effort and Efficiency of Reform (concluded)

Indicator	Significance of estimated coefficient [1]	Slovenia (1)	Best 5 in EU27 (2)	Coefficient (3)	Distance (4) (2)-(1)	Impact on long-run GDP (5) (3)*(4)	cost of reform (6)	Efficiency of reforms (7) (5)/(6)
Finance and corporate governance								
Protection of minority shareholders' interests	***	3.4	5.6	1.2	2.2	2.7	0.6	4.2
Ease of access to loans	***	2.3	4.3	1.1	2.0	2.1	0.9	2.5
Prevalence of foreign ownership	***	3.7	6.1	0.8	2.4	2.0	0.7	3.1
Venture capital availability	***	2.4	4.0	1.2	1.6	2.0	0.7	2.8
Affordability of financial services	***	4.1	5.6	1.3	1.5	1.9	0.4	5.1
Foreign ownership/investment restrictions	***	5.1	8.1	0.6	3.0	1.8	0.6	3.1
Financing through local equity market	***	2.8	4.6	0.8	1.8	1.5	0.6	2.3
Strength of auditing and reporting standards	***	4.9	6.0	1.2	1.2	1.4	0.2	6.1
International capital market controls	***	4.5	7.8	0.3	3.3	0.9	0.7	1.2
Depth of credit information index	***	4.0	7.8	0.2	3.8	0.7	1.0	0.7
Extent of disclosure index	**	5.0	9.6	0.1	4.6	0.5	0.9	0.5
Credit market regulations	***	8.4	9.7	0.4	1.3	0.5	0.2	2.9
Strength of investor protection index	***	6.8	7.1	0.4	0.3	0.1	0.0	2.7
Trade								
Documents to import (number)	***	7.0	2.6	-0.3	-4.4	1.4	0.6	2.2
Regulatory Trade Barriers	***	7.2	8.7	0.7	1.5	1.1	0.2	5.0
Compliance cost of importing and exporting	***	7.5	9.3	0.5	1.8	0.9	0.2	3.9
Documents to export	***	5.0	2.6	-0.4	-2.4	0.9	0.5	1.9
Prevalence of trade barriers	***	5.0	5.9	1.0	0.9	0.9	0.2	4.9
Non-tariff trade barriers	***	6.8	8.3	0.6	1.4	0.8	0.2	3.8
Burden of customs procedures	***	5.0	5.6	1.0	0.6	0.7	0.1	5.2
Barriers to trade and investment	***	0.8	0.2	-0.8	-0.6	0.5	0.8	0.7
Days to export	***	16.0	6.8	0.0	-9.2	0.4	0.6	0.7
Days to import	***	14.0	5.4	0.0	-8.6	0.3	0.6	0.5
Cost to import (US$ per container)	***	830.0	740.0	0.0	-90.0	0.0	0.1	0.3
Cost to export (US$ per container)	***	745.0	687.0	0.0	-58.0	0.0	0.1	0.3
Infrastructure and corruption								
Favoritism in decisions of government officials	***	2.7	5.2	0.8	2.5	2.1	0.9	2.2
Quality of railroad infrastructure	***	2.9	5.8	0.7	2.9	2.1	1.0	2.0
Quality of air transport infrastructure	***	4.6	6.4	1.0	1.7	1.7	0.4	4.7
Control of Corruption	***	0.9	2.3	1.2	1.4	1.7	1.6	1.1
Irregular payments and bribes	***	4.9	6.5	1.0	1.6	1.5	0.3	4.7
Corruption (2000-2011)	***	6.1	8.9	0.5	2.8	1.5	0.5	3.3
Quality of roads	***	4.7	6.3	0.9	1.6	1.4	0.3	4.0
Quality of port infrastructure	***	5.2	6.3	0.9	1.1	1.0	0.2	4.7
Government involvement in infrastructure sector	**	5.0	1.6	-0.2	-3.4	0.7	0.7	1.1
Education and R&D								
Company spending on R&D	***	3.4	5.4	1.0	1.9	2.0	0.6	3.6
Availability of scientists and engineers	***	3.8	5.5	1.1	1.7	1.9	0.4	4.3
University-industry collaboration in R&D	***	4.0	5.5	1.1	1.5	1.7	0.4	4.5
Intellectual property protection	***	4.2	6.0	1.0	1.8	1.7	0.4	4.1
Utility patents granted/million pop.	***	12.0	145.4	0.0	133.4	1.4	11.1	0.1
Quality of the educational system	***	3.8	5.4	0.8	1.6	1.2	0.4	3.0
Government procurement of advanced tech proc	***	3.4	4.5	1.1	1.1	1.2	0.3	3.9
Average years of schooling	***	7.4	10.2	0.4	2.9	1.2	0.4	3.0
Quality of scientific research institutions	***	4.6	5.8	0.9	1.2	1.2	0.3	4.3
Internet access in schools	***	5.8	6.4	1.0	0.6	0.6	0.1	6.0

[1] *, **, *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

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# LEGAL AND INSTITUTIONAL CHALLENGES IN CORPORATE INSOLVENCY[1]

A. Introduction

1.   Corporate debt overhang is one of the legacies of the economic crisis in Slovenia, which needs to be addressed. Apart from the use of other debt restructuring techniques, formal insolvency processes will play an important role in the process of deleveraging the corporate sector. Reforms of the insolvency legislation in recent years have brought the framework closer to international best practices. However, debt restructuring and deleveraging is proceeding slowly, suggesting that there may be impediments, including legal and institutional factors that could hinder the implementation of the insolvency legislation.

2.   This paper assesses remaining challenges to the insolvency framework. The next section summarizes the main changes implemented in recent years and the progress with corporate debt restructuring. The following sections discuss in detail issues related to the legal, institutional, and the environment for credit. The paper concludes with some policy recommendations.

B. Background

3.   The crisis exposed a large corporate debt overhang, which requires the use of all restructuring tools. Numerous companies suffer from over indebtedness and have difficulty in repaying their loans, which has led to an increase in corporate NPLs to around 20 percent of total loans (even after substantial transfers to the state owned asset-management company). This indicates that a number of firms in Slovenia require substantial debt restructuring or even need to exit the market through liquidation, highlighting the importance of effective corporate insolvency procedures[2].

Figure 1: Leverage of firms in Slovenia (percent, 2013)
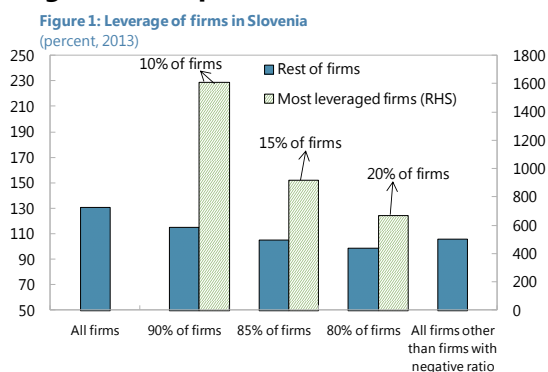
Source: Financial Stability Review (2014) of Bank of Slovenia.

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[1] Prepared by José M. Garrido (LEG).

[2] On the role of insolvency procedures in addressing the problems of debt distress, both by direct application and also as a backdrop for out-of-court negotiation, see generally UNCITRAL, *Legislative Guide on Insolvency Law,* p. 22; IMF, *Orderly & Effective Insolvency Procedures,* Secc.2; World Bank, *Principles for effective Insolvency and Creditor/Debtor Regimes,* Principle B3.6; . On the relationship between formal insolvency frameworks and out-of-court restructuring, see Hagan, "Restructuring Corporate Debt in the Context of a Systemic Crisis"; Laryea, "Approaches to Corporate Debt Restructuring in the Wake of Financial Crises," Garrido, *Out-of-court debt restructuring*.

4.   To address this problem, two reforms of the Slovenian legal insolvency regime were introduced in 2013. The reform—representing the 5th and 6th time the insolvency law was amended since its implementation in 2007—brought the legal framework closer to international best practice and it was done largely in line with the rationale of the Recommendation of the European Commission (Boxes 1 and 2). The Slovenian system is based on the following insolvency procedures:

- *Compulsory settlement* is a reorganization procedure applicable to companies and entrepreneurs, with special rules for mid-sized and large companies;

- *Simplified compulsory settlement* offers a reorganization option for micro-companies, small companies and individual entrepreneurs and is similar to compulsory settlement.

- *Pre-insolvency restructuring proceedings* offer a tool for distressed mid-sized and large companies to restructure their financial claims before becoming insolvent.

- *Bankruptcy* is designed to liquidate insolvent, non-viable enterprises.

5.   On this basis, corporate debt restructuring has begun, but it is proceeding only slowly. During 2013–14, about 30 compulsory settlements were completed per year. Simplified compulsory settlements have increased significantly since its introduction in late 2013 to 90 cases in the first ten months of 2014. And in 2014, some 8 pre-insolvency restructuring proceedings were concluded for the first time in Slovenia. By comparison, corporate bankruptcy procedures remain widespread, amounting to close to 1000 per year in 2013–14, double their level of 2012.

Figure 2: Reorganization and restructuring procedures in Slovenia, 2013-14
(number)
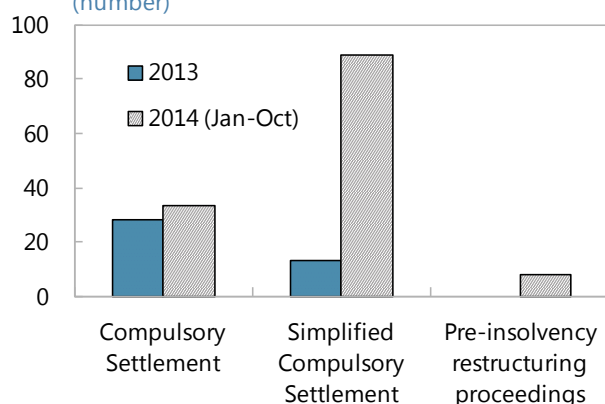
Figure 3: Corporate bankruptcies in Slovenia, 2012-14
(number)

Box 1. The Reform of Corporate Insolvency Law in Slovenia, 2013

The reform introduced **pre-insolvency restructuring proceedings** for large and medium-sized firms to restructure financial claims (including secured claims) more efficiently and speedily, with a stay on creditor actions and majority voting. The introduction of these proceedings, together with the reform of the compulsory settlement procedures, is largely consistent with the principles of the European Commission Recommendation (see Box 2).

Important changes to reorganization procedures **(*compulsory settlement*)** were introduced, including:

- Increased control of the proceeding by financial creditors, including the ability to initiate proceedings, to introduce a plan that takes precedence over the debtor's plan, and to take management control in certain cases;

- An absolute priority rule to ensure that if the value of equity is zero, debtor equity will be eliminated;

- Corporate restructuring features, including debt/equity swaps and corporate spin-offs to facilitate viable firms continuing as a going concern;

- Secured creditors are included in the compulsory settlement process and can pool collateral under a settlement plan;

- The write-down of collateral to market value with a corresponding conversion of the now unsecured portions of collateralized loans into unsecured claims is permitted; and

- The process recognizes the possibility that requisite majorities of creditors can agree to reduce principal on unsecured debt, and to extend maturity and/or to reduce the interest rate for both secured and unsecured debt.

The 2013 reform also introduced the **simplified compulsory settlement** as a streamlined reorganization procedure for micro and small enterprises, although with limited options for the restructuring of their debt.

These changes have brought the framework closer to international best practices. In addition, the Slovenian system has adopted solutions similar to those used in other European economies, and has joined some emerging trends in this area, such as the facilitation of **debt/equity swaps** as a debt restructuring tool.

	Countries following a similar approach to Slovenia	**Alternative models**
Debtor in Possession	Ireland, Germany	UK The debtor is removed from management
Different procedures for reorganization and liquidation	Italy, Ireland, France	Germany, Spain There is a unitary insolvency process
Different procedures (or procedural rules) for small enterprises and large companies	Italy, Germany, Spain	UK, France Same procedural rules apply to all enterprises
Facilitation of debt/equity swaps	Germany	France, Italy Debt/equity swaps need to comply with all requirements of company law

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**Box 2. The Recommendation of the European Commission
and Pre-Insolvency Proceedings**

The European Commission issued a non-binding Recommendation on a New Approach to Business Failure and Insolvency on March 12, 2014. One of the main themes in the Recommendation is the establishment of pre-insolvency proceedings supported by minimal court intervention. According to the Recommendation, pre-insolvency proceedings should be available to distressed entrepreneurs as early as possible, leave the debtor in control (debtor in possession) during the restructuring process, and, be streamlined to reduce costs:

- The Recommendation envisages a stay of all creditor actions, based on the intervention of the court, and limited to 4 months (extendable to no more than 12 months). Court appointed mediators could be used if necessary.

- The Recommendation suggests that all creditors are bound by a restructuring plan if approved by a majority of creditors' claims (as determined under national law) divided into separate classes (at a minimum, secured and unsecured creditors). The procedure should include protective measures for dissenting creditors, namely the provision that dissenting creditors may not receive less under the plan than what they would receive in a liquidation of the enterprise.

- The Recommendation underlines the importance of protecting new financing during debt restructuring, especially against the risk of avoidance actions in a subsequent insolvency process, and of protecting the debtor's management against potential criminal or civil liabilities.

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6. **The limited progress with corporate restructuring suggests that legal and institutional impediments may be at play.** Despite the substantial progress made with the recent reform of the insolvency legal framework, the Slovenian insolvency system faces the pressure of a rising number of insolvency cases, the burden of administering a complex legal framework, and the difficulties of participants in adapting to the new framework. The following sections assess potential bottlenecks to the implementation of the framework, covering legal and institutional issues, as well as some issues affecting the legal environment for credit.

C. Legal Issues

7. **Despite the recent reforms, the procedure to approve insolvency plans remains complex**. It is necessary to obtain supermajorities to adopt insolvency plans, and the rules to calculate the voting power of creditors are intricate: for instance, the voting power of secured creditors in compulsory settlement is calculated by adding 20 percent to the value of the collateral in order to determine whether there is an unsecured portion of the claim for voting purposes. There are also complex rules to calculate the voting power of creditors when a debt/equity swap is part of a reorganization plan. There is no voting of insolvency plans by classes of creditors.[3]

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[3] Approval of insolvency plans by classes of creditors is considered best international practice: see UNCITRAL

8.   The options to restructure the debt of companies under simplified compulsory settlement are limited. The availability of simplified compulsory settlement for SMEs is important, given the prevalence and importance of small firms in the economy. However, unlike in reorganizations of larger enterprises under compulsory settlement, for smaller firms under simplified procedures, secured claims may not be affected by the reorganization plan. Moreover, debt/equity swaps are not allowed in simplified compulsory settlement procedures. This makes it difficult for small firms to renegotiate an effective reduction in their debt burden under the simplified regime.

9.   The recognition of claims is slow and litigious. One of the main bottlenecks in compulsory settlements and in bankruptcy relates to the recognition of claims. The procedure is based on an initial recognition by the insolvency administrator (basic list of claims), which may be objected by interested parties. A supplemented list of claims may also be challenged, until a final list of claims is approved by the court, Decisions on recognition of claims are frequently appealed by the debtor or by creditors. The result is that the insolvency process is often delayed until challenges or actions regarding claims are decided. This problem is common to numerous insolvency systems. [4]

10.   The sale of assets also presents difficulties. These difficulties can be attributed not only to the scarcity of investors willing to acquire distressed assets, but also to the rigid controls over the sales and the lack of flexibility of the process. Recent reforms have introduced more flexibility in asset sales, setting the price for the initial auction of asset at 70% of the market price, with an additional auction at 50% of the market price. These reforms need to be tested in practice, and they rely on the quality of the work of valuators.

11.   The high number of liquidations suggests that insolvency proceedings are initiated too late. Bankruptcy may be the only option when the financial difficulties of enterprises are addressed too late. The law includes rules that establish the personal liability of directors for not acting in time in the event of corporate debt distress, but these provisions do not seem to be applied or enforced in practice. As a result, there are numerous bankruptcy cases where there are no assets to liquidate. The law also recognizes the possibility of recovering assets illegally transferred before insolvency, by way of avoidance actions, but there is little experience with these actions.

12.   Finally, the perception of users of the insolvency system is that the legal framework is extremely complex. The law is extremely detailed, ripe with procedural details, and often difficult to understand and apply. For example, the law includes aspects of company law, apart from rules on insolvency law, and incorporates slightly different rules for procedural situations which are

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Legislative Guide on Insolvency Law, p. 218. It is the system followed by most of the advanced economies, including the USA, Japan, and Germany.

[4] *"When coupled with rights of appeal and the difficulties associated with processing types of claim requiring valuation, the complexity of the process has the potential to significantly interrupt the conduct of the proceedings and cause delay that will affect other steps in the proceedings. For these reasons, it is highly desirable that formalities be minimized and that decision-making be as streamlined as possible"* (UNCITRAL *Legislative Guide on Insolvency Law*, p. 257).

substantially similar (for instance, voting, contents of insolvency plans, or effects of the procedures on creditors). This complexity hinders its implementation and results in the delays mentioned above.

D. Institutional Issues

13.   The complex legal framework requires an intensive use of judicial resources. The application of the law requires the constant intervention of the court to authorize each significant action and to decide every dispute within the procedure. In other words, the legislative model is based on the idea of a "hands-on" judge that takes an interventionist approach to the insolvency process. However, users of the system note that judges sometimes lack sufficient understanding of the economic realities of insolvency. Moreover, appeal judges lack specialization, although recent amendments of the law have concentrated the appeal jurisdiction nationally in the appellate court of Ljubljana. This should offer the opportunity for a *de facto* specialization of the appeal judges.

14.   The increase in cases has overburdened the courts. Although Slovenia has a higher number of judges than the European average, the number of judges specialized in commercial matters and insolvency is small. For example, there are only six judges in the commercial division of the District Court of Ljubljana, the most important first instance court for insolvency matters in Slovenia. Apart from the very substantial increase in corporate insolvency cases, the courts are also experiencing the enormous increase in personal insolvency cases: the number of personal bankruptcies has jumped from 880 in 2013 to 4006 in 2014.[5] The same judges are responsible for corporate and personal insolvency cases, and their role in the personal insolvency cases requires that they devote a considerable amount of time to them, detracting from corporate cases, which could be of a macro critical nature. Indeed, while aggregate household debt is small, the most indebted 100 companies are responsible for between 52 and 56 percent of the estimated debt overhang of 9.6 to 134.2 billion Euros in Slovenia.[6]

15.   The collaboration between judges and insolvency practitioners is limited. The assumption of the law is that the insolvency administrator is an official of the court, under the court's supervision, and assisting the court in the fulfillment of its functions. In practice, there is barely any communication, let alone any cooperation, between the insolvency administrator and the court. The judges don't benefit of any expertise that insolvency administrators may bring for the better treatment of insolvency cases. The supervision of the court concentrates only on the formal aspects of the work of the insolvency administrator, such as the timely submission of reports.

16.   The number of insolvency administrators is insufficient relative to the number of insolvency cases. The number of insolvency administrators is too small for the number and complexity of corporate insolvency cases in the jurisdiction. According to the official lists, which are

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[5] The remarkable increase in personal bankruptcies seems to be connected to a change of rules of procedure that exempts the petitioner from advancing the costs of the procedure.

[6] See Damijan, J. P. "Corporate financial soundness and its impact on firm performance: Implications for corporate debt restructuring in Slovenia",

publicly available, there are 145 insolvency administrators in Slovenia,[7] of which it is estimated that only 80-90 are active. In order to qualify as insolvency administrator, it is necessary to pass as special exam and to have 3 years of experience publicly available; there are 145 insolvency administrators for insolvency matters. The qualification exam is demanding, and very few candidates (typically, only 2 or 3 of them) qualify every year. This does not guarantee the provision of services for the stock of cases currently outstanding, nor the continuity of the profession itself.

17.   The role and skills of insolvency administrators present shortcomings. In Slovenia, insolvency administrators tend to have a legal background, as in many other countries in Central Europe, and their knowledge and skills in the areas of accounting and finance are limited. Moreover, the role of the insolvency administrators in the restructuring process is not as relevant as suggested by best international practices: the scope of action of the insolvency administrators is limited and, as noted above, they require approval of the court for most of their actions. The regime of insolvency administrators is based on their selection at random, in most cases, and their remuneration is not based on performance. Indeed, according to the EBRD, Slovenia is in the group of countries with the weakest score (50 percent or below) for the appointment of administrators, given a lack of matching of administrators based on previous experience to the insolvency case.

18.   There are weaknesses in the supervision of insolvency. Supervision over the administrators is divided among the courts, the Chamber of administrators (a self-regulatory organization) and the Ministry of Justice. The division of supervisory competences leads to a
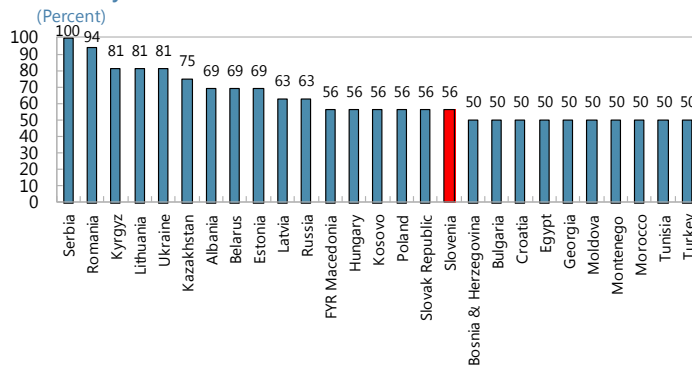
Assessment results: Development of insolvency office holder appointment systems
(Percent)
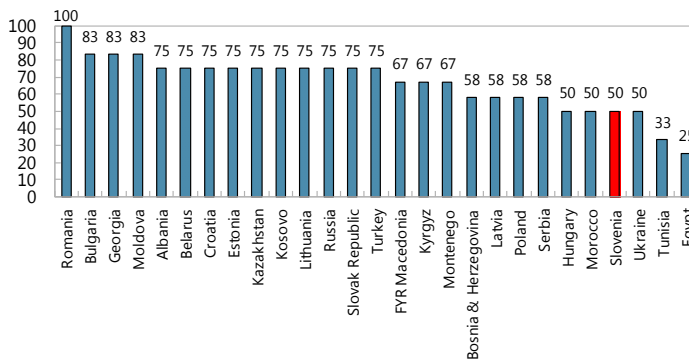
Note: This bar chart indicates the results achieved in the assessment benchmark "Appointment Process" for each of the countries assessed. The average score aggregates the scores for each of the key indicators examined under this benchmark. These include whether the prospective insolvency office holders can be selected on the basis of professional experience and whether the creditors have an influence on appointment of a particular insolvency office holder. The result 100 per cent is intended to signal the existence of a "comprehensive" regulatory and/or professional framework.
Source: 2012-14 EBRD insolvency office holder assessment.

Assessment results: Frameworkf or regulation, supervision and discipline of insolvency office holders
(Percent)

Note: This bar chart indicates the results achieved in the assessment benchmark "Regulation, Supervision and Discipline" for each of the countries assessed. The average score aggregates the scores for each of the key indicators examined under this benchmark. These include whether the regulatory body actively monitors the performance of insolvency office holders and operates a complaints system. The result 100 per cent is intended to signal the existence of a comprehensive regulatory and/or professional framework.
Source: 2012-14 EBRD insolvency office holder assessment.

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[7]See the list of insolvency administrators at www.ajpes.si (website of the Agency of the Republic of Slovenia for Public Legal Records and Related Services).

situation in which none of them exercises a truly effective supervisory role. As a result, the EBRD ranks Slovenia among countries with deficiencies in the supervision of insolvency administrators as a result of no regular statutory monitoring of their activity.[8]

E. The Legal Environment for Credit

19.   The legal environment for credit in Slovenia presents additional challenges. The insolvency system rests on the general system for individual enforcement of claims. However, the enforcement of claims, particularly mortgages, is slow and cumbersome. The enforcement regime allows ample possibilities for the use of delaying tactics by recalcitrant debtors. It is estimated that enforcing a mortgage can take between two and four years. To address this, the authorities have introduced a number of changes, including a reduction of appeals for several acts within the enforcement process, and the assignment of functions to judicial clerks in order to rationalize the use of judicial resources. Moreover, the regime for auctions, both in insolvency and outside insolvency procedures, has been streamlined. But the most important reform, consistent in the possibility of enforcing mortgages by way of a notary sale, has been suspended by the Constitutional Court, pending a final judgment.

20.   The legal system does not offer effective mechanisms to support lending to SMEs such as receivables-based financing. Financing of enterprises requires the use of assets different from real estate, and receivables are among the most reliable collateral. The current law does not offer creditors assurances in the use of receivables as collateral for loans, and this diminishes the opportunities in obtaining fresh financing for numerous enterprises.

F. Recommendations and Conclusions

21.   While the insolvency legislation of Slovenia has experienced several important amendments, bottlenecks to its implementation remain. The current paper highlights issues related to the legal, institutional, and the environment for credit. Given the frequent changes to the legal framework in recent years and the assessment that the framework has been brought closer in line with international best practice, it will be important to maintain legal stability in the short run to ensure that recent changes can be absorbed by economic and legal operators. This will be crucial in ensuring that all existing legal tools can be used to facilitate much needed corporate restructurings.

22.   The priority in the short term should be placed on implementation and reinforcement of the institutional framework of the insolvency system. Reinforcing the courts and allowing their specialization of judges in insolvency matters are essential steps for the effective implementation of the insolvency regime. At the same time, efforts need to be focused on ensuring a deeper professionalization of insolvency administrators, including by revisiting the system of qualification, designation and remuneration of insolvency administrators. In addition, their supervision needs to be strengthened, as a precondition to eventually granting more powers and responsibilities to insolvency

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[8]See EBRD 2014.

administrators and alleviate the responsibilities of the courts in the process. Finally, insolvency administrators need to improve their skills and have adequate resources to be able to implement the new law effectively and pursue enforcement actions against corporate directors, and avoidance actions of antecedent transactions, when needed.

23.   The legal environment for credit also needs to be strengthened. Mechanisms for the enforcement of mortgages need to be improved to afford speedy recovery of claims. It will be crucial to implement a system in which makes enforcement faster and more efficient, while remaining in line with Constitutional requirements. This would benefit access to credit and would provide a solid foundation for debt restructuring activities. Rules for security over movable assets, especially receivables, also need to be strengthened. A system based on the registration of security interests over movable assets, especially receivables, easily accessible to the public, would afford the necessary certainty to develop new lending practices, improving access to finance for SMEs.

24.   Over the medium term, the insolvency law could be made simpler and more flexible. For example, differences between simplified and ordinary compulsory settlement could be based on the reduction of cost and complexity rather than on the size of firms. Moreover, full respect of the principle of absolute priority and the best interest of creditors' test would be sufficient safeguards for all restructuring and reorganization plans, without limitation to their contents. This would allow the full integration of secured creditors in the process, and afford more aggressive and sustainable possibilities of corporate restructuring for viable companies. Voting on insolvency plans should be based on the value of the claims, with creditors grouped in classes according to their respective positions in the creditors' hierarchy.

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