

STRUCTURAL FISCAL BALANCES¹

An analysis of cyclically adjusted and structural fiscal balances in Montenegro offers an enhanced view of fiscal policy decisions, better isolating the underlying fiscal position. Fiscal policies have generally been pro-cyclical in Montenegro, expansionary during economic upswings and contractionary during downturns. Starting in 2018, however, fiscal policies should be appropriately counter-cyclical as Montenegro undertakes fiscal adjustment during an economic expansion. The structural fiscal balance excluding spending on the Bar-Boljare highway indicates that the necessary fiscal adjustment to restore sustainability is not as large as the headline fiscal balance would suggest. To avoid pro-cyclical fiscal policymaking in the future, the authorities should implement reforms to strengthen budget institutions, in particular medium-term budgetary frameworks, and maintain sound fiscal policies that would facilitate strong financial market access.

A. Introduction

1. **Fiscal policy analysis can be strengthened by distinguishing between discretionary fiscal decisions and the impact of the economic cycle.** While changes to the fiscal position are frequently the result of discretionary policy decisions, they can also be caused by the economic cycle, which can boost or erode revenues. Most expenditures are independent of the cycle, but certain kinds of expenditures – known as automatic stabilizers, including for example unemployment benefits – can also vary with the state of the economy. The cyclically adjusted fiscal balance attempts to remove cyclical effects from the fiscal position, thus providing an estimate of the fiscal position if there were no output gap.
2. **The underlying fiscal balance, however, can also be influenced by factors beyond the economic cycle.** Transitory factors such as one-off revenues and expenditures can have a large influence on fiscal results and may obscure the underlying fiscal position. The structural fiscal balance, which is an extension of the cyclically adjusted balance, also removes one-off revenues and expenditures. In so doing, the structural balance attempts to provide a more precise view of the underlying fiscal situation, which is necessary for judgments of fiscal sustainability and the need for fiscal adjustment.
3. **Montenegro's recent history of sharp economic cycles and one-off revenues and expenditures underscores the utility of the estimation of alternative measures of the fiscal balance.** The post-independence economic boom and subsequent recession during the Global Financial Crisis had a sharp impact on revenues. Certain expenditure policy decisions have been one-off in nature and large enough that the headline fiscal balance may not provide an accurate point from which to assess the sustainability of public finances. In this paper, we estimate the cyclically adjusted and structural fiscal balances. As an extension, we also calculate the fiscal impulse, which provides insight into whether discretionary fiscal policy changes may be expansionary or contractionary for the economy. We find that in the past, fiscal policy has been pro-cyclical, serving

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to exacerbate the economic cycle. We close with recommendations for how fiscal institutions can encourage more counter-cyclical fiscal policymaking.

B. Cyclically Adjusted Fiscal Balance

4. Cyclical adjustment breaks down the overall fiscal balance into cyclical and cyclically adjusted components.²

$$OB = CB + CAB$$

where OB is the overall fiscal balance, CB is the cyclical balance (the cyclical component of the fiscal balance, which automatically varies with the economic cycle), and CAB is the cyclically adjusted balance, which is also the result of subtracting the cyclical balance from the overall balance. The cyclically adjusted balance can be computed by removing cyclical effects from revenues (R^{CA}) and expenditures (G^{CA}):

$$CAB = R^{CA} - G^{CA}$$

5. The calculation of cyclically adjusted revenues requires an estimation of the elasticity of revenues to the output gap. The elasticity estimates the extent to which changes in the output gap result in changes to revenues. There are two approaches for calculating cyclically adjusted revenues: (1) the aggregate approach; and (2) the disaggregated approach. In the aggregate approach, the elasticity is calculated based on the *overall* level of revenues, with GDP as the revenue base. In the disaggregated approach, elasticities are calculated for individual streams of revenue. For example, the elasticity of the personal income tax may be calculated using the wage bill as the tax base. In this paper, we use the aggregate approach for simplicity and in recognition of data gaps in Montenegro's economic statistics. The elasticity of revenues to the output gap is calculated by estimating the following regression:

$$\ln\left(\frac{\text{Revenue}}{\text{Revenue}^*}\right) = \alpha + \beta_1 \ln\left(\frac{Y}{Y^*}\right) + u$$

This regression estimates the elasticity of revenues to the output gap (β_1) by relating the ratio of revenues/trend revenues to the output gap.³ Several adjustments must be made to revenues before estimating this regression:

- First, revenues should be adjusted for one-off items, including: (1) tax debt rescheduling revenues received in 2017; (2) a one-time telecommunications fee in 2016; (3) large, one-time VAT, PIT, and social contributions made by EPCG in 2014; and (4) the repayment of a loan to

² This section draws from Bornhorst et al (2011), "When and How to Adjust Beyond the Business Cycle? A Guide to Structural Fiscal Balances." IMF Technical Notes and Manuals.

³ Technically, Y/Y^* is the ratio of output to potential output, which is estimated from an HP filter. The logarithm of a negative number (when the output gap is negative) would be undefined. Trend revenues are the result of an HP filter applied to the adjusted revenue series described above (using a two-sided HP filter with $\lambda=100$).

Prva Bank in 2009. The collection of these items was unrelated to the economic cycle and should be excluded from the revenue series used in the regression.

- Second, revenues should be presented in real terms, deflated by the GDP deflator, to match output which is presented in real terms.
- Third, revenues should ideally be adjusted to reverse the effects of changes in tax policies. Increases in a tax rate, for example, will likely raise revenues above the level expected from economic growth alone. In this case, we have not made these adjustments due to a lack of data, but the authorities could do this when they further develop the work on this issue.

6. Revenues in Montenegro have historically varied strongly with the output gap. A regression of the revenue gap on the output gap, as defined above, yields an estimated elasticity of revenues to the output gap of 1.14 with a high level of statistical significance. The estimated effect is within a normal range for most countries (Table 1). The estimation of an elasticity greater than one suggests that each percentage point increase in output is associated with a percentage change in revenues greater than one.

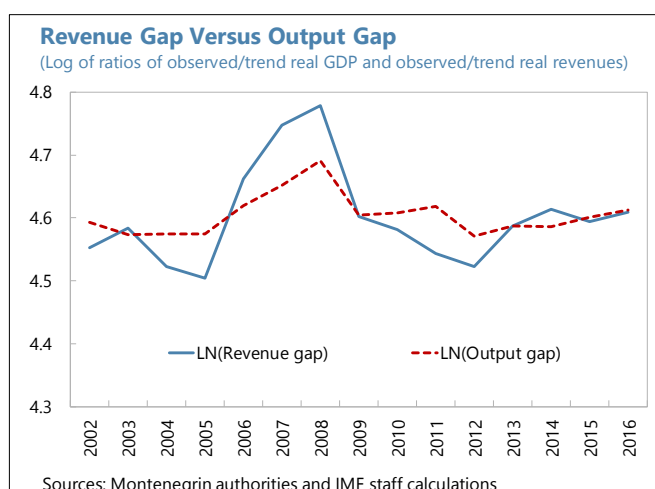


Table 1. OLS Estimation of Elasticity of Revenues to the Output Gap

| Dependent variable: Log of revenues/trend revenues | | | | |
|--|-------------|----------------|-------------|---------|
| Explanatory variables | Coefficient | Standard Error | t-statistic | P value |
| Log of output gap 1/ | 1.136 | 0.209 | 5.426 | 0.000 |
| Constant | -0.624 | 0.963 | -0.648 | 0.528 |
| Number of observations 2/ | 15 | | | |
| R-squared | 0.694 | | | |

1/ Note that the output gap is defined as a ratio of observed to potential output.

2/ Annual data from 2002 to 2016

Source: IMF staff calculations

7. Estimations of the elasticity of expenditures to the output gap suggest that expenditure policies have been pro-cyclical in Montenegro. With the exception of certain automatic stabilizers, expenditures in most countries are generally not thought to vary automatically with the output gap, and elasticities are frequently assumed to be zero. Following the same procedure as for the revenue gap (including adjustments for one-off expenditures),⁴ we have also estimated the elasticity of expenditures to the output gap. The estimated elasticity is around 0.6 with a p-value that indicates statistical significance at the 90 percent confidence level. Also, this result does not depend on the inclusion or exclusion of highway spending (Table 2). However, we do not believe this result suggests that expenditures vary automatically with the output gap. (Automatic stabilizers, such as unemployment benefits of 0.3 percent of GDP in 2017, are small.) Rather, expenditures have been pro-cyclical, increasing during periods of economic growth (and buoyant revenues) and facing cuts during downturns, as financing constraints take hold.

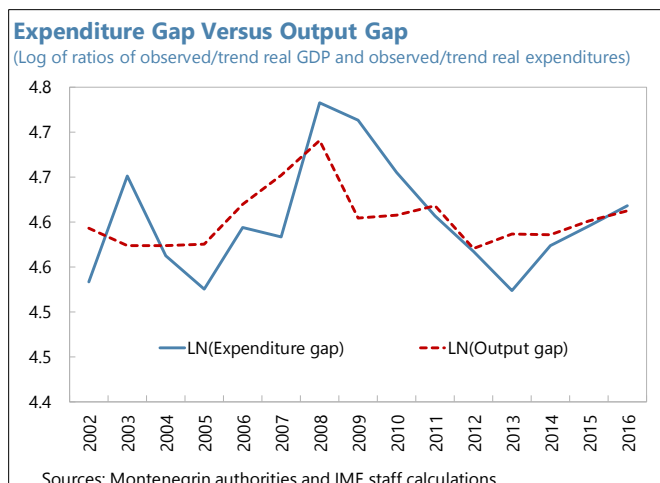


Table 2. OLS Estimation of Elasticity of Expenditures to the Output Gap

Dependent variable: Log of expenditures/trend expenditures 1/

| Explanatory variables | Coefficient | Standard Error | t-statistic | P value |
|---------------------------|-------------|----------------|-------------|---------|
| Log of output gap 2/ | 0.574 | 0.279 | 2.054 | 0.061 |
| Constant | 1.961 | 1.286 | 1.525 | 0.151 |
| Number of observations 3/ | 15 | | | |
| R-squared | 0.245 | | | |

1/ Includes highway expenditures

2/ Note that the output gap is defined as a ratio of observed to potential output.

3/ Annual data from 2002 to 2016

Source: IMF staff calculations

⁴ Adjustments for one-off expenditures are detailed in the section on the structural fiscal balance.

8. Estimated and assumed elasticities can be used to calculate the cyclically adjusted fiscal balance. The cyclically adjusted fiscal balance is calculated as follows:

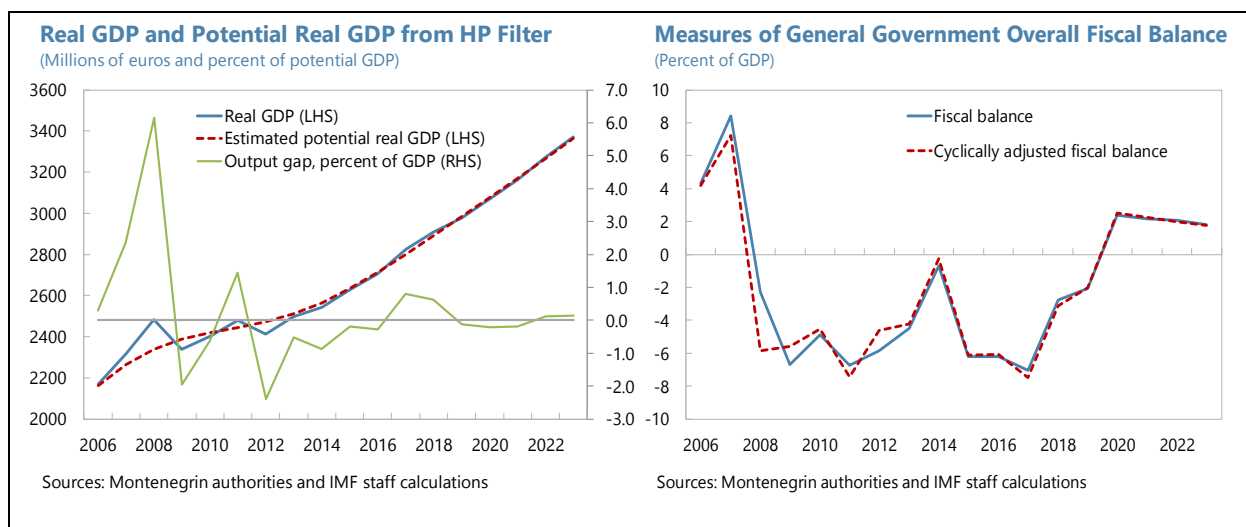
$$CAB = R \left(\frac{Y^*}{Y}\right)^{\epsilon_R} - G \left(\frac{Y^*}{Y}\right)^{\epsilon_G}$$

where ϵ_R and ϵ_G refer to the elasticities of revenues and expenditures, respectively, to the output gap. We use the estimated revenue elasticity of 1.14, but we use an expenditure elasticity of zero, since we do not believe that expenditures automatically change with fluctuations of output but rather are the product of policy decisions. With an expenditure elasticity of zero, the above equation for the cyclically adjusted fiscal balance becomes:

$$CAB = R \left(\frac{Y^*}{Y}\right)^{\epsilon_R} - G$$

Note that we use the unadjusted revenue and expenditure series in this calculation, since the cyclically adjusted fiscal balance adjusts only for the output gap, not one-off revenues and expenditures.

9. The calculated cyclically adjusted fiscal balance deviates from the headline fiscal balance. Montenegro experienced an economic boom over 2006-08 and then a subsequent recession. When the output gap was positive, strong economic growth boosted revenues, and the cyclically adjusted balance was not as strong as the headline balance. Similarly, as the output gap closed over 2012-16, the underlying fiscal position was somewhat stronger than that suggested by the overall balance. It is important to note that these output gap estimates have been produced using a two-sided HP filter with a lambda smoothing parameter of 6.25, which results in output gap estimates that are relatively small. As a result, the cyclically adjusted fiscal balance does not exhibit strong variations from the observed balance.



C. Structural Fiscal Balance

10. The structural fiscal balance provides a better view of the underlying fiscal position by adjusting for non-recurring revenues and expenditures. Because revenues and expenditures may be increased in some years by one-off items, even without changes to tax or spending policies, the fiscal balance could automatically improve or deteriorate in the future. A view of the structural fiscal balance – which adjusts for one-off items in addition to the economic cycle – can be helpful in determining, for example, the necessity and size of fiscal adjustment measures.

11. To calculate the structural balance, revenues and expenditures must be adjusted for one-off items. We can use the same adjusted revenue series described above that we created for the calculation of the elasticity of revenues to the output gap.⁵ The identification of one-off expenditure items is more complicated, since many expenditure decisions are discretionary and could be considered one-off. The European Commission (EC) has outlined some principles to identify one-off measures.⁶ According to the EC, one-offs should be: (1) large enough to have a significant impact on the fiscal balance, generally at least 0.1 percent of GDP; and (2) short-term in nature (concentrated in one year or a very limited number of years. Bornhorst et al (2011) suggest that one-off adjustments should be made sparingly. Keeping these guidelines in mind, we have excluded the following one-off expenditures:

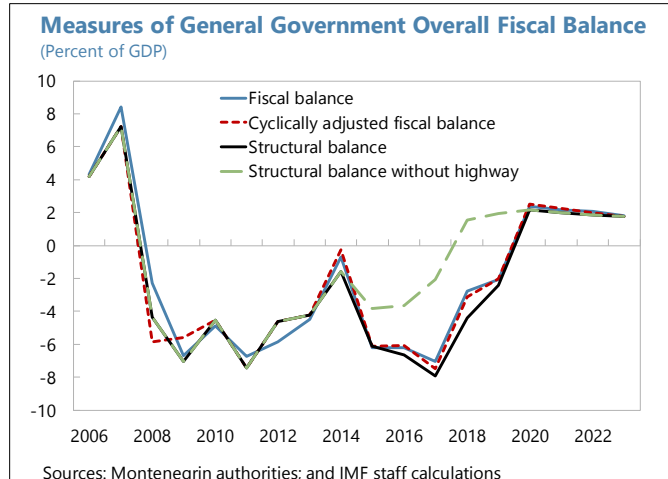
- *Loan to Prva Bank:* In 2008, the government provided a loan to Prva Bank for 1.4 percent of GDP. This operation was reversed in 2009 when the loan was repaid. (This revenue was also one-off in nature.)
- *Repayment of guarantees:* From 2009 to 2014, the government made payments on called guarantees, ranging from 0.1 to 3.2 percent of GDP each year. Since 2014, no payments have been made on guarantees. These payments can be treated as one-off in nature.
- *Transfers to public institutions:* In 2016, the government made a large one-off payment (0.8 percent of GDP) to universities.
- *Transfers to public enterprises:* A transfer to Montenegro Airlines in 2017 of 0.1 percent of GDP can be considered one-off.

12. Special treatment is necessary for expenditures related to the Bar-Boljare highway. While these expenditures should be limited to 2015-19, highway spending has had a significant effect on spending for several years and has significantly altered the fiscal trajectory. We decided to present the structural fiscal balance with and without highway spending. This treatment is also useful for our analysis of the fiscal impulse (below).

⁵ In addition to the one-off revenues described previously, we also omit a dividend payment of 0.7 percent of GDP expected from EPCG in 2018 and the related corporate income tax payment of 0.1 percent of GDP.

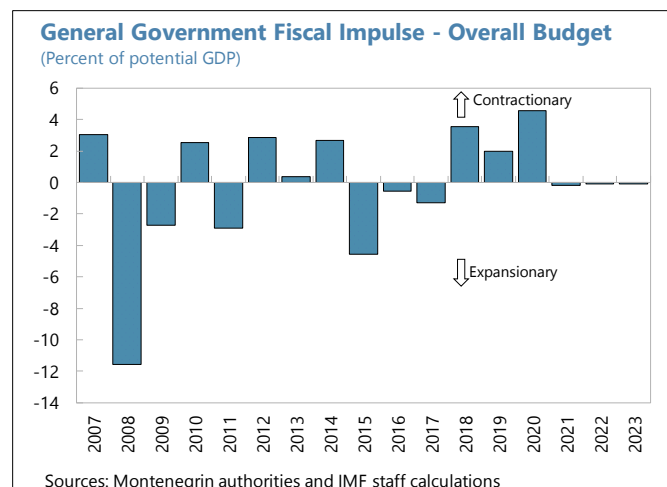
⁶ See Larch and Turrini (2009), "The Cyclically Adjusted Budget Balance in EU Fiscal Policy Making: A Love at First Sight Turned into a Mature Relationship." European Commission Policy Paper 374.

13. The structural fiscal balance (excluding highway spending) demonstrates that the underlying fiscal position is currently much stronger than the headline deficit would suggest. Including highway spending, the structural fiscal balance is broadly similar to the cyclically adjusted balance. The structural balance, however, is weaker than the cyclically adjusted balance from 2016-21 due to the use of one-off revenues. However, if we consider highway spending to be one-off in nature, the structural balance from 2015-19 is much stronger than the headline balance. This result indicates that the size of needed fiscal adjustment is much smaller than suggested by the overall balance alone. Of course, this conclusion only holds if the highway spending is truly one-off in nature and further phases of the highway are not financed through the budget.



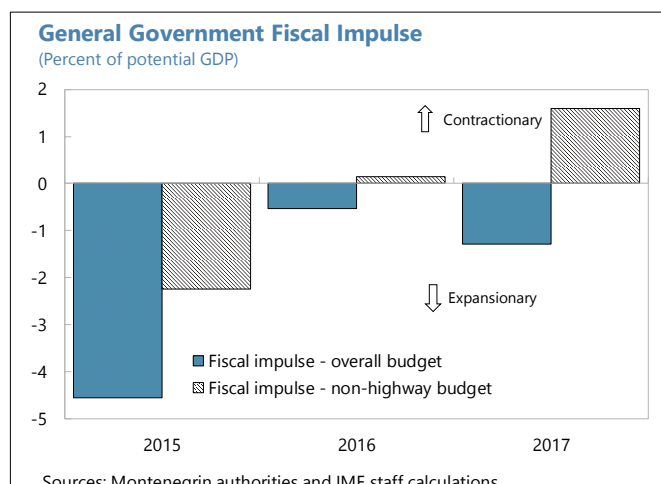
D. Fiscal Impulse

14. The fiscal impulse provides insight into the direction of fiscal policy and its impact on the economy. Sometimes known as the “fiscal stance,” the fiscal impulse is calculated as the change in the annual structural fiscal balance. By itself, the fiscal impulse does not estimate the impact of fiscal policy changes on economic growth, a calculation that also requires an estimate of the fiscal multiplier. However, the fiscal impulse does convey information on whether fiscal policy changes are expansionary, neutral, or contractionary on the economy. The fiscal impulse is also a useful complement to analyze the phasing of fiscal adjustment plans, including whether an adjustment is frontloaded or backloaded.



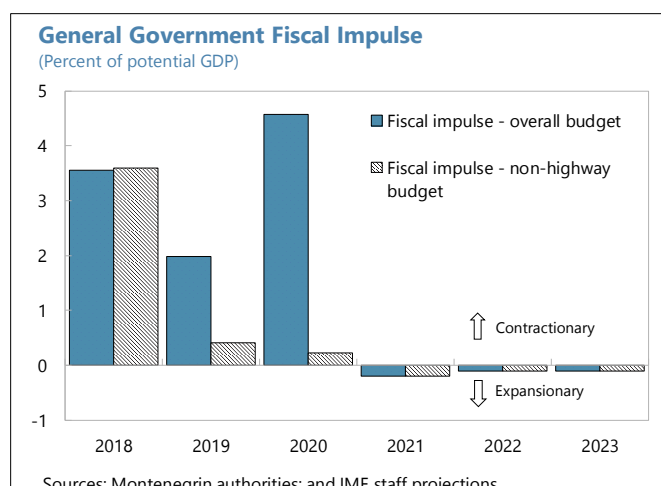
15. Fiscal policy in Montenegro has been expansionary in recent years. After the Global Financial Crisis, the fiscal impulse was on average neutral over 2009-11 before turning contractionary over 2012-14 during a period of fiscal consolidation. The beginning of the highway construction in 2015 marked the return of expansionary policies, which continued through 2017, when initial fiscal adjustment measures were offset by an acceleration of highway spending.

16. The exclusion of highway spending tells a different story about 2015-17. The non-highway budget was neutral in 2016 and contractionary in 2017 as fiscal adjustment measures were implemented. Interestingly, despite the pre-election spending increases of 2016 (including an expansion of social benefits and a large increase in public sector wages), the non-highway budget was more expansionary in 2015 due to a decline in the revenue/GDP ratio in 2015, partly caused by a reduction in the “crisis tax” personal income tax rate on higher incomes.



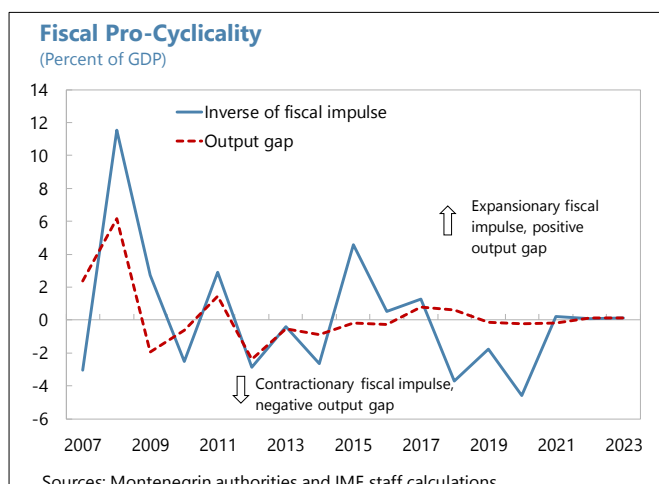
17. The fiscal stance will be tight in 2018-20 as highway spending ends.

Because highway spending is not projected to accelerate significantly in 2018, it is relatively neutral on economic growth, but the non-highway budget will be very contractionary in 2018. In 2019 and 2020, the overall fiscal impulse (including the highway) will be negative – especially in 2020 – as highway spending ends. In this sense, the authorities have appropriately phased their fiscal adjustment so that the non-highway budget adjusts while the highway budget provides stimulus to the economy, dampening the overall fiscal impulse (positive or negative) over 2017-20. When the end of highway spending in 2019-20 acts as a drag on the economy, the underlying fiscal adjustment will be largely completed. If the authorities had delayed the adjustment until 2019 or 2020, economic growth would likely be much weaker in those years.



18. The large size of the projected contractionary fiscal impulse in 2020 could present downside risk to staff’s current economic growth projection of 3.0 percent. While staff has taken into account a large decline in public investment, the beginning of supply-side effects from the completed highway section will provide some offset against this drag. The size of these supply-side effects is very uncertain, though staff currently estimates that they will be relatively small, given that the first section of the highway will not provide economically significant transportation links.

19. While Montenegro has a history of pro-cyclical fiscal policymaking, fiscal policies are currently counter-cyclical. As a general rule, policymakers should avoid generating an expansionary fiscal impulse in the presence of a positive output gap and a contractionary fiscal impulse during a time of negative output gap. These two situations have generally been the case in Montenegro's recent history. Over 2018-21, however, the fiscal impulse is projected to be contractionary, while the output gap will be positive or near zero, indicating that Montenegro's fiscal policies will be appropriately counter-cyclical.



E. Policy Recommendations

20. The authorities should ensure that tax expenditures do not sever the important link between GDP and revenue growth. Currently, tax revenues are responsive to variations in output, indicating that revenues should grow in line with the economy. However, the authorities have granted several tax exemptions that could undermine the buoyancy of revenues. For example, goods and services for the construction of five-star hotels and energy facilities have a zero rating for the VAT, and marina services are taxed at the lower VAT rate. Newly established businesses in underdeveloped areas also enjoy corporate income tax holidays. The authorities should establish a framework to evaluate the cost of such tax expenditures and strongly consider whether these policies provide sufficient economic benefits to justify their cost.

21. With fiscal spending strongly positively correlated with the economic cycle, the authorities should strengthen budget institutions to help control expenditures. The authorities should implement several reforms:

- *Medium-term budgetary framework:* Currently, the budget is adopted for a one-year period, with non-binding estimates of revenues and expenditures for two more years. Starting in 2019, the budget will be presented for a three-year period, including more details on expenditures at a granular level, but expenditures will remain only indicative for years two and three. The medium-term budgetary process should make medium-term expenditure levels more binding and force the authorities to reconcile and justify any changes in expenditures relative to the projections in the previous budget.
- *Medium-term projections:* The Ministry of Finance also needs to improve the economic and demographic parameters for baseline revenue and expenditure projections. For example, medium-term projections would be enhanced by the availability of high-quality projections for pension expenditures.

- *Process for costing new expenditures:* The Law on Budget and Fiscal Responsibility states that any proposer of a law or regulation that would lower tax receipts or increase expenditures should propose sources of financing or define the fiscal impact. However, the Law does not specifically mention the role of the Ministry of Finance. Any proposed law with fiscal implications should not be considered without analysis from the Ministry of Finance. The parliament approved the social benefit for mothers, for example, in 2015 without an analysis from the Ministry of Finance.
- *Investment spending:* The authorities should strengthen procedures to evaluate the economic and social returns of public investment projects to ensure that projects with the highest rates of return are chosen and implemented. With the authorities considering the completion of the Bar-Boljare highway project through a public-private partnership (PPP) structure, it will be critical to strengthen the PPP framework to avoid the assumption of large contingent fiscal liabilities from PPP projects.
- *Expenditure ceiling:* Currently, the growth rate of current spending must be less than the projected real GDP growth rate, while capital spending growth cannot exceed nominal GDP growth. If this rule were followed, current spending would continuously fall as a share of nominal GDP, which is not necessarily desirable nor feasible. In practice, these rules have not been consistently followed. The authorities should reform these rules over the medium term. They could consider setting medium-term expenditure ceilings, with automatic stabilizers excluded. Such a ceiling would allow revenues (and automatic stabilizers) to fluctuate with the economic cycle, helping to avoid pro-cyclical expenditures by preventing higher-than-expected revenues from being spent.

22. A successful fiscal adjustment and medium-term fiscal reforms would facilitate strong market access, supporting counter-cyclical fiscal policies during downturns. At end-2017, general government debt (including guarantees) reached 75 percent of GDP. Staff projects that full implementation of the fiscal adjustment strategy and the subsequent maintenance of a strong primary surplus (peaking at 4½ percent of GDP in 2020 and falling towards 3 percent of GDP by 2023) would lower debt to 53 percent of GDP by 2023. The authorities should also implement reforms to lower the public-sector wage bill and restrict early retirements to relieve expenditure pressures. If successful, lower debt levels and greater expenditure flexibility would facilitate Montenegro's market access, potentially easing financing constraints during downturns to avoid pro-cyclical expenditure cuts.