



# ICELAND

## SELECTED ISSUES

December 2019

This Selected Issues paper on Iceland 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 December 4, 2019.

Copies of this report are available to the public from

International Monetary Fund • Publication Services  
PO Box 92780 • Washington, D.C. 20090  
Telephone: (202) 623-7430 • Fax: (202) 623-7201  
E-mail: [publications@imf.org](mailto:publications@imf.org) Web: <http://www.imf.org>  
Price: \$18.00 per printed copy

**International Monetary Fund**  
**Washington, D.C.**



# ICELAND

## SELECTED ISSUES

December 4, 2019

Approved By  
European Department

Prepared by Jorge Ivan Canales Kriljenko (EUR)

## CONTENTS

<b>SCOPE FOR IMPROVING ICELAND'S FISCAL FRAMEWORK</b>	<b>2</b>
A. Overview of the Fiscal Rules	2
B. Implications for Fiscal Sustainability	3
C. Fiscal Policies that Could Reduce Procyclicality Within the Framework	5
D. GIMF Simulations	15
E. Conclusions and Recommendations	19
<b>References</b>	<b>21</b>
<b>FIGURES</b>	
1. Overall General Government Balance and Net Public Debt	3
2. Correlation Real GDP - Real Primary Spending, 1990–2018	6
3. European OECD Countries: Real GDP and Primary Spending Growth, 1990	6
4. Primary Spending to GDP – Output Gap	7
5. Counterfactual Simulations: Key Assumptions	9
6. Counterfactual Simulations: Balanced Budget Rule	9
7. Counterfactual Simulations: Regime Switching Rule	10
8. Counterfactual Simulations: Acyclical Fiscal Rule	11
9. Finland: Countercyclical Structural Primary Spending	12
10. Counterfactual Simulations: Countercyclical Fiscal Rule	13
11. Counterfactual Simulations: Debt Stabilizing, Countercyclical Fiscal	14
12. GIMF Simulation Assumptions	16
13. GIMF Simulations of Countercyclical Fiscal Policy through Transfers	17
14. GIMF Simulations of Countercyclical Fiscal Policy through Government	18
15. GIMF Simulations of Countercyclical Fiscal Policy through Government	19
<b>ANNEX</b>	
I. Reasons to Expect Falling Interest Rate Burden in Iceland	22

# SCOPE FOR IMPROVING ICELAND'S FISCAL FRAMEWORK

**1. Iceland's fiscal framework has most of the characteristics of successful fiscal policy rules.**<sup>1</sup> The framework is a rules-based, multi-year fiscal planning tool for the general government, consolidating the municipalities into a medium-term policy decision exercise (IMF, 2016). It has a firm legal basis reflecting political consensus on fiscal policy objectives; comprehensive coverage of public sector institutions; a medium-term orientation; and support from sound accounting concepts and budget management arrangements, which facilitate the preparation, execution, and monitoring of budgets in a manner consistent with the rules. This paper reviews the framework with a view to suggesting options to make it more robust to fluctuations in economic activity.

## A. Overview of the Fiscal Rules

**2. Iceland's fiscal framework provides for a forward-looking exercise in consolidated fiscal planning.** The 2015 Organic Budget Law requires new administrations taking office to submit to Parliament a fiscal policy statement that sets general government fiscal objectives in percent of GDP consistent with the fiscal rules for no fewer than five years.<sup>2</sup> It also requires the administration to submit, every year, five-year fiscal strategy plans consistent with the fiscal policy statement. The corresponding budgets of the central government and for the aggregate of all municipalities need to be consistent with these documents. The plans are based on a medium-term macroeconomic forecast prepared by the national statistical agency (Statistics Iceland). The annual budget establishes the corresponding nominal revenue projections consistent with the latest economic forecast and binding nominal spending appropriations for the year. The budget for the central government contains a general contingency reserve of at least 1 percent of total appropriations to fund unforeseen, temporary, and unavoidable increases in nominal spending.<sup>3</sup> If such spending cannot be accommodated by the contingency reserve or other measures during the budget year, higher spending appropriations could be requested in a supplementary budget.

**3. The fiscal rules involve a lower bound on general government balances and an upper bound on public debt in percent of GDP.** They require the five-year average of the balances of the general government to be higher than zero and any eventual deficit to be less than 2.5 percent of GDP in any given year. The rules also require net public debt to remain below 30 percent of GDP and any excess to decline on average (over three years) by at least 5 percent per year. Net public debt excludes pension liabilities and accounts payable and subtracts currency and deposits. In 2018, it stood below 28 percent of GDP. The rolling five-year fiscal strategy plans shall also set targets for

<sup>1</sup> See Hughes et al. (2019), which identifies common elements to successful fiscal policy rules, based on a review of 30 years of experience with such rules.

<sup>2</sup> The administration also sets fiscal targets for the public entities, although these are not subject to the fiscal rules.

<sup>3</sup> Some expenditure functions have additional small contingency reserves amounting to up to 2 percent of the budget appropriations for that expenditure function.

the nominal increase in public spending and total government liabilities, including pensions, in percent of GDP. The central government also sets ceilings in real terms for 35 spending areas.

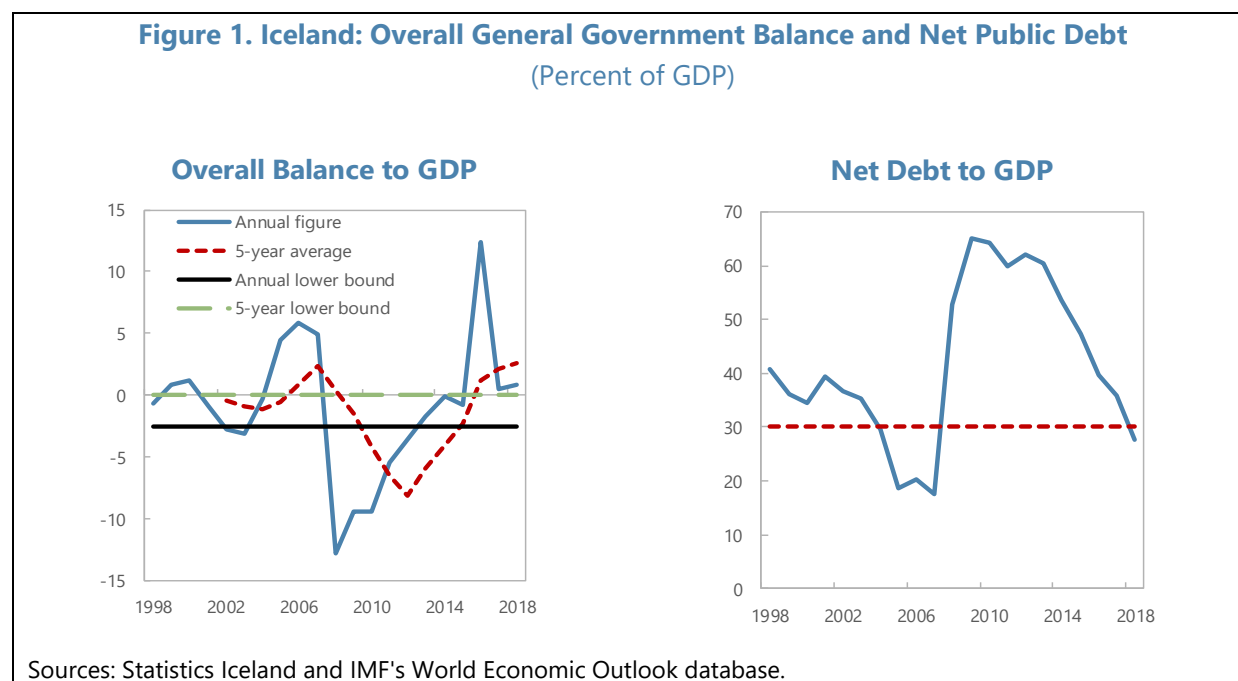
**4. The rules also allow for an escape clause, which was invoked in 2019.** Following the collapse of WOW air, the Minister of Finance submitted a revised fiscal policy statement and amended accordingly the 5-year strategy plan. Parliament approved the revisions through a resolution that included an uncertainty margin for the overall fiscal balance in case GDP growth weakened more than expected. The margin was contingent on deviations from the macroeconomic forecast used for the approval of the revised fiscal policy statement, and its use will need to be justified each year with the budget proposal submitted to parliament.

## B. Implications for Fiscal Sustainability

**5. Iceland's fiscal rules ensure fiscal sustainability and the creation of fiscal space over time.** The lower bound on overall fiscal balances and upper bound on public debt could be expressed in the following way:

$$(a) \quad \sum_{t=1}^5 b_t \geq 0; \text{ where } \forall t, b_t \geq -0.025 \text{ and } d_t \leq 0.3$$

where  $b_t$  is the overall general government balance as a ratio to GDP at time  $t$ ;  $d_t$  is net public debt as a ratio to GDP in the period  $t$ .<sup>4</sup> To put these rules in context, the 5-year average of the overall general government balances became positive in 2016 and net debt fell below the 30 percent threshold in 2018.



<sup>4</sup> The notation closely follows Escolano (2010).

**6. The overall general government balance rule ensures a declining public debt-to-GDP ratio when nominal GDP growth is positive.** This conclusion follows from the dynamic relationship between these two random variables:

$$(b) \quad d_t = \left( \frac{1}{1 + \gamma_t} \right) d_{t-1} - b_t - AM_t$$

where  $\gamma_t$  is the nominal GDP growth rate; and  $AM_t$  corresponds to asset management operations that are not registered in the overall general government balance. For the rest of this discussion,  $AM_t$  is assumed to be zero, while bearing in mind that such operations could give rise to significant changes in public debt levels given Iceland's sizable nonfinancial and financial asset holdings. Because the term in parenthesis is lower than 1 when nominal GDP growth is positive, this relationship implies the public debt ratio will fall each year that nominal growth is positive and the general government accounts are balanced or in surplus. And because the rule holds on a five-year average, debt will tend to fall accordingly. For example, the ratio in parenthesis averaged 0.93 in 1998–2018 (excluding the global financial crises years of 2008–9). The standard deviation is 0.03, and 67 percent of the annual observations in that period are in the [0.9, 0.96] range.<sup>5</sup> Moreover, if potential growth is 2 percent and inflation bobs around the 2.5 percent inflation target, the ratio in the dynamic equation would fluctuate around 0.956. Taking this relationship forward implies that the public debt ratio would eventually decline to zero. As an illustration, if nominal GDP is expected to grow in steady state, the constant debt-stabilizing overall balance would be negative, equal to the expression below.

$$(c) \quad b^* = \left( \frac{-\gamma^*}{1 + \gamma^*} \right) d^*$$

In the absence of any adverse shock and with nominal GDP growing at potential, given the illustrative numbers above, a deficit of 1.3 percent of GDP would suffice to stabilize public sector debt at the desired level, once it has been achieved.

**7. It follows that Iceland's fiscal rules tend to create significant fiscal space to deal with adverse shocks.** A country has fiscal space when it has scope to raise spending or lower taxes without endangering market access and debt sustainability. Because the Icelandic fiscal rules persistently tend to reduce the public debt burden, and in steady state would tend to eliminate debt, they clearly guarantee debt sustainability. Market access in international market depends on global market conditions but tend to be more favorable for countries with low net debt and good track record of fiscal policy implementation. With a balanced budget over a five-year period, the rules build space to provide policy stimulus in the face of shocks. With the real interest rates and growth assumed above, the government could in principle run a deficit of 1.3 percent of GDP on

<sup>5</sup> The maximum over the whole period was 0.973 and the minimum was 0.875.

average for five years without increasing the public debt ratio of 30 percent of GDP, and hence without affecting market access or sustainability.

**8. The size of the fiscal space depends on the actual fiscal policy the authorities follow within the flexible boundaries of the rules.** The Icelandic fiscal rules give significant room to choose among a variety of fiscal policies. They give the policy maker some freedom in how to move policy levers. They do not give any indication on when to raise tax rates, reduce the tax burden, or increase spending. They provide only boundaries for the overall balances and net public debt within which the fiscal authorities, in principle, have significant room to maneuver. However, greater ability to choose the timing of fiscal interventions on average requires higher overall surpluses, so that they can be lowered if needed, as well as having lower public debt to GDP, so that it can be increased in case of severe adverse shocks. The more room that is required to lower the overall balance under adverse circumstances, the higher above zero the overall balances—and the lower public debt—would need to be to prevent invoking the escape clause too often. As suggested below, the 5-year average smoothing of overall balances does not give enough flexibility for the set of, admittedly, very large and persistent shocks Iceland has experienced over the last twenty years in the case of a balanced budget rule.

**9. When the fiscal rules become binding, making use of fiscal space requires invoking the escape clause.** Under the framework, breaching the boundaries on the overall balance or the net public debt requires parliamentary approval. This would be the case even if public debt is significantly below its upper bound, and the binding overall balances are still delivering reductions in the public debt, that is, even if there is significant fiscal space.

**10. To prevent invoking the escape clause, overall fiscal balances have to be positive on average.** But if a balanced-budget on average was enough to eventually reduce net public debt to zero, an overall positive balance would tend to produce negative net debt (positive asset) position.

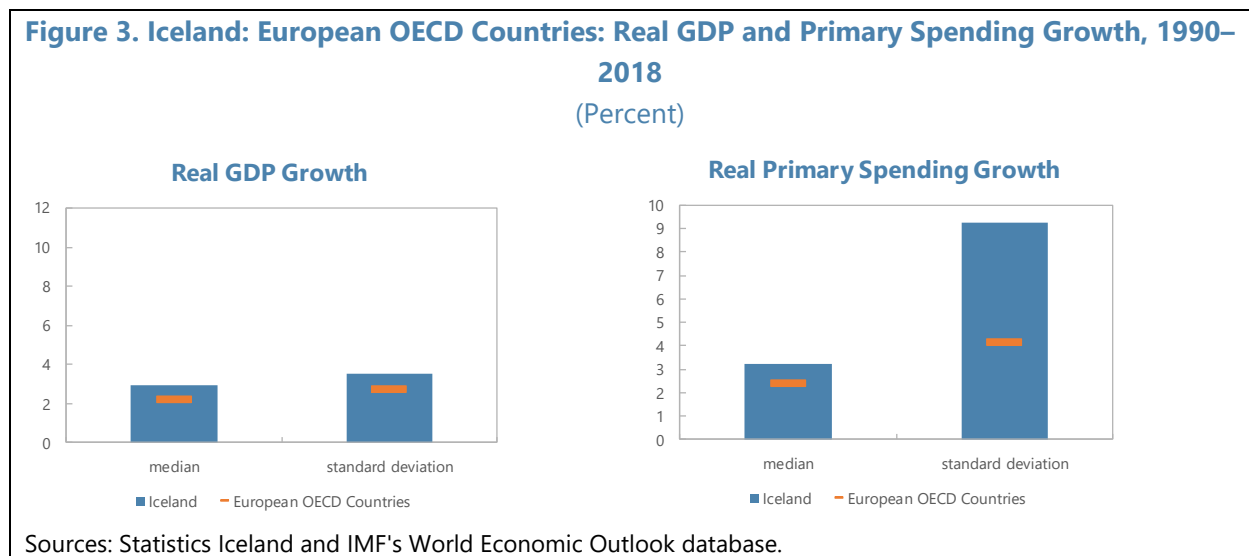
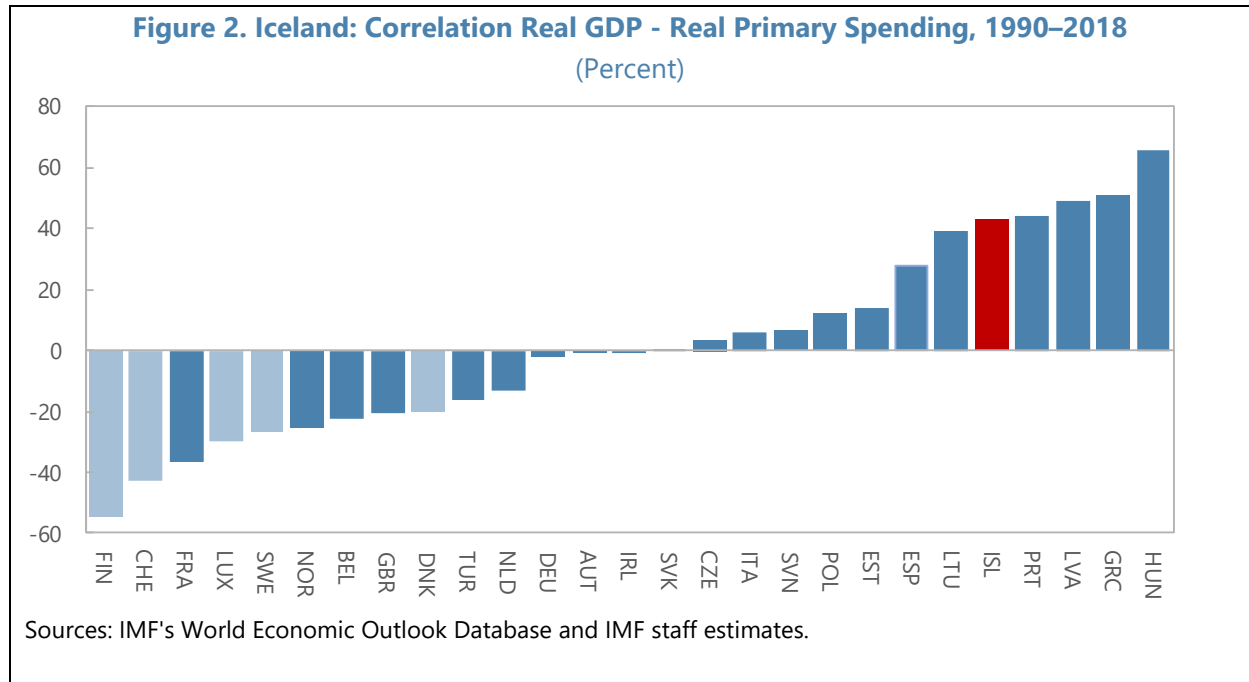
**11. In short, although the fiscal rules encourage fiscal sustainability, fiscal policy may benefit from additional guidance to deal with unexpected changes in the macroeconomic environment or strive to have positive overall balances on average.** Fiscal sustainability is encouraged not only by targeting a low public debt ratio, but also by creating fiscal margins that could be used in case of need. Nevertheless, using these fiscal margins may require parliamentary approval, unless the overall fiscal balances are positive on average. The five-year average provides some scope to have some years with low overall balances followed by years with high overall balances but could encourage procyclicality during longer cyclical fluctuations.

## C. Fiscal Policies that Could Reduce Procyclicality Within the Framework

### Historical Procyclicality in Fiscal Spending

**12. Real primary spending has been procyclical in Iceland over the 1990–2018 period.** Unlike in other Nordic countries, the simple correlation of real primary spending growth and real GDP growth has been positive. This suggests that on average primary public spending has

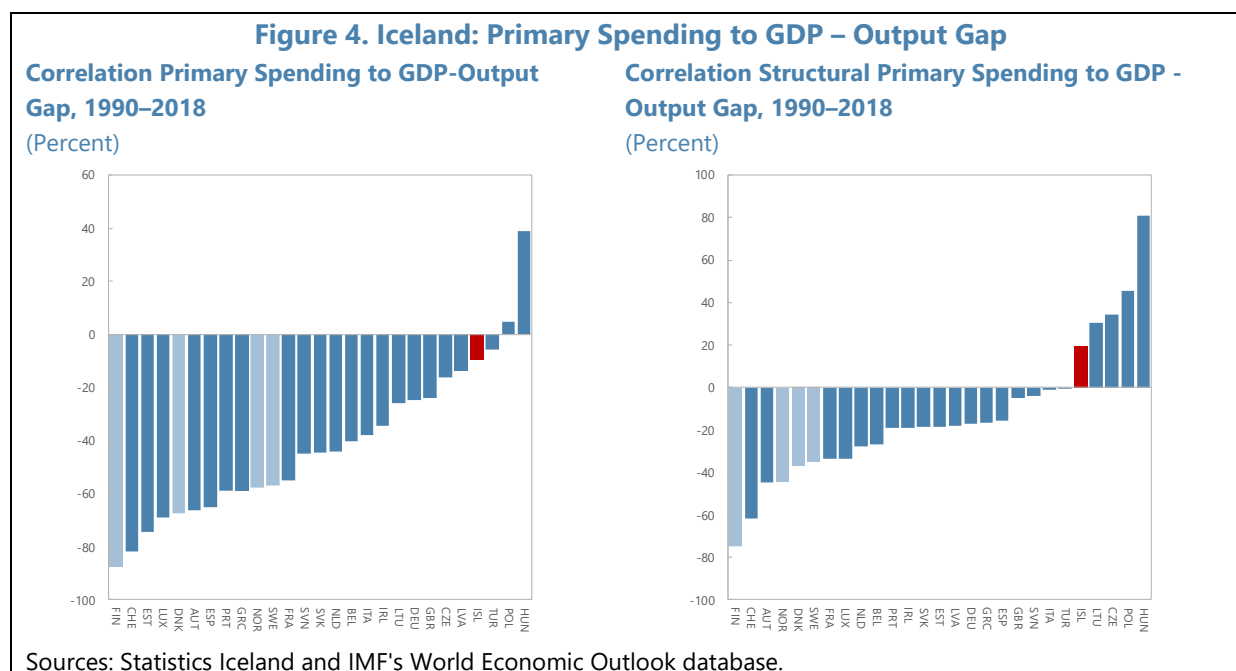
intensified cyclical fluctuations.<sup>6</sup> Iceland’s real GDP growth and volatility are slightly higher than the median in advanced European countries, although Iceland has experienced significantly larger outliers. Primary spending has grown faster than GDP in the median peer country, but primary spending growth has been higher and significantly more volatile in Iceland. Part of the procyclicality and volatility could be explained by the sharp public spending compression during the crisis and later decompression after the economy recovered.



<sup>6</sup> Like in most economies, real primary spending in Iceland has limited automatic stabilizers on the spending side, except for unemployment benefits, which account for a relatively small share of total primary spending.

**13. The primary spending ratios have also been procyclical.** Although the nominal public spending ratio was slightly countercyclical during 1990–2018, this was less so in Iceland than in peer countries. According to information in the IMF’s World Economic Outlook database, the correlation between primary spending and the output gap was slightly negative in Iceland in 1990–2018. Nevertheless, the negative correlation was much larger on average in other advanced European countries. Finland had the highest negative correlation and negative correlations in other Nordic countries were higher than the median. Furthermore, Iceland’s structural primary spending ratio (abstracting from the effects of the business cycle) was procyclical, while those in other Nordic countries were countercyclical.<sup>7</sup>

### Back to the Future: Simulation of Alternative Fiscal Policies under the Existing Fiscal Rules



**14. The Icelandic fiscal rules allow a large variety of fiscal policies in response to cyclical fluctuations.** In this section, we show how some of these policies would behave if Iceland were to apply them starting from the structural primary fiscal position it had in 2018 and facing the output gap fluctuations it faced over the last twenty years. Because Iceland is a small economy subject to significant shocks, the exercise provides a useful benchmark of the type of fluctuations that could be expected in the future gauging the implications of alternative fiscal policies. Although it could be argued that the fluctuations seen in the past twenty years in Iceland are not representative of the fluctuations that could be expected in the future, note that the fluctuations considered here correspond to the ones in the output gap with a stable potential growth. A peak-to-trough difference of 7 percentage points in the output gap is smaller than the median range of output gap fluctuations in European OECD countries during 1990–2018 according to data from the IMF’s World Economic Outlook.<sup>8</sup> The examples below are illustrative.

<sup>7</sup> Bova Carcenac and Guierguil (2014) provides similar rankings for Nordic countries.

<sup>8</sup> The standard deviation of the average output gap across European OECD countries during 1990–2018 is 3 percentage points of GDP, similar to the output gap fluctuations considered in the counterfactual exercise.



### 15. The Simulations Use the Following Assumptions:

- Potential growth is assumed to be constant at 2 percent. Actual GDP is computed by multiplying potential output and the gross output gap. The time series for the output gap are taken from the Central Bank of Iceland's Quarterly Macroeconomic Model (QMM) database published at end-August 2019 with the initial period corresponding to 1998. The nominal GDP growth assumes that inflation is at the 2.5 percent target.
- Real interest rates start at 3.44 percent and gradually decline to 2 percent, as public debt matures and is replaced with debt at lower interest rates. The initial real interest rate level delivers the prevailing 6 percent nominal interest rate in the treasury's bond portfolio. The interest rate burden assumes that the public debt ratio starts at the 2018 net public debt level.
- The primary revenue to GDP ratio does not change during the period, assuming a unit revenue elasticity to the output gap. The starting structural primary surplus is 2.1 percent of GDP.

### Balanced Budget Rule:

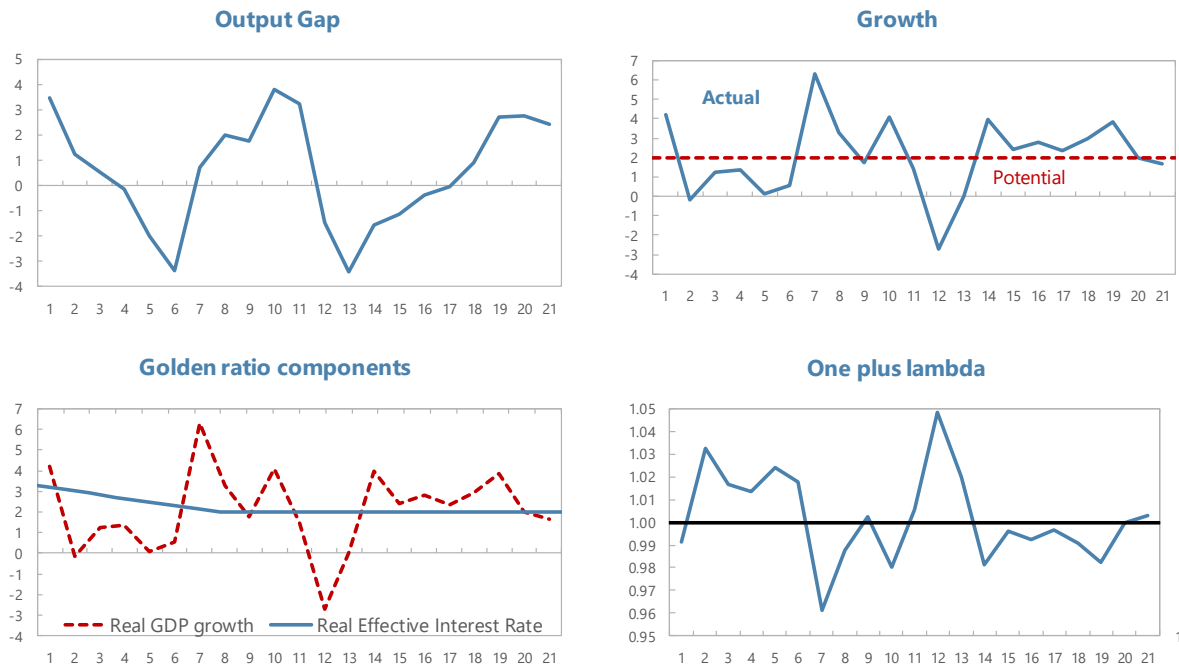
**16. The policy of setting the overall balance to zero complies with the fiscal rules.** The five-year average is zero and net public debt is below the upper bound, ending at about 10 percent of GDP at the end of the twenty-year period. The declining interest rate burden associated with declining debt levels and the assumed declining real interest rates as maturing debt is replaced with lower interest rate debt (Annex 1) provides scope for increasing primary spending over time. It has the advantage of reducing public debt and at the same time gradually increasing public spending. Nevertheless, as could be expected, the policy is clearly procyclical, with real primary spending moving closely with GDP, and the structural primary spending moving with the output gap.

**17. These dynamics follow from the relationship between the fiscal aggregates.** Given the positive nominal growth and the balanced budget, the public debt ratio will be declining. So will the interest rate burden, allowing for real spending to grow faster than real GDP given the fixed revenue to GDP ratio, as would follow from the equation below:

$$(d) \quad p_t = \frac{\left( \frac{\text{Revenue}_t}{P_t} \right)}{GDP_t^R} - \frac{\left( \frac{\text{Spending}_t}{P_t} \right)}{GDP_t^R} = b_t + \frac{i_t}{1 + \gamma_t} d_{t-1}$$

where  $p_t$  is the primary balance as a ratio to GDP at time  $t$ ;  $\text{Revenue}_t$  and  $\text{Spending}_t$  refer to the primary revenue and spending, and  $P_t$  stands for the GDP deflator.

**Figure 5. Iceland: Counterfactual Simulations: Key Assumptions**  
(Percent of GDP)



Sources: Central Bank of Iceland and author's simulations.

**Figure 6. Iceland: Counterfactual Simulations: Balanced Budget Rule**

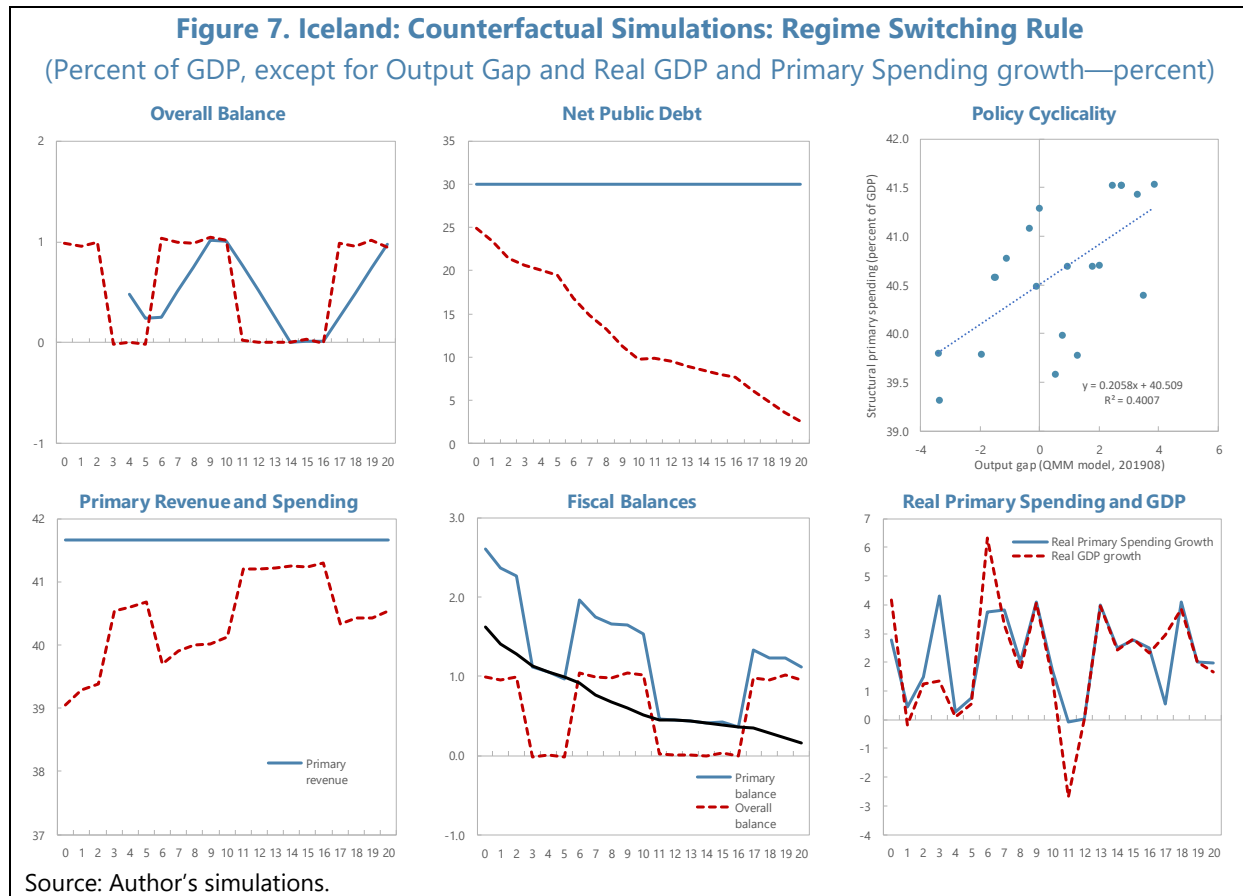
(Percent of GDP, except for Output Gap and Real GDP and Primary Spending growth—percent)



Source: Author's simulations.

**Regime Switching Rule**

**18. A rule that alternates between a balanced budget and a 1-percent of GDP surplus when the output gap switches from negative to positive would reduce procyclicality.** The policy will meet the fiscal rules, with the 5-year overall government balance by construction never below zero and public debt below the threshold. The net public debt ratio will fall, but the decline will be faster than in the balanced budget rule because overall balances are on average larger. Primary spending fluctuates but remains on an upward trend in line with the declining interest rate bill. Procyclicality is reduced but not eliminated.



**Acyclical Fiscal Rule**

**19. Increasing real public spending in line with potential GDP would result in an acyclical fiscal policy.** To explore this policy, consider that real spending is set by the equation below

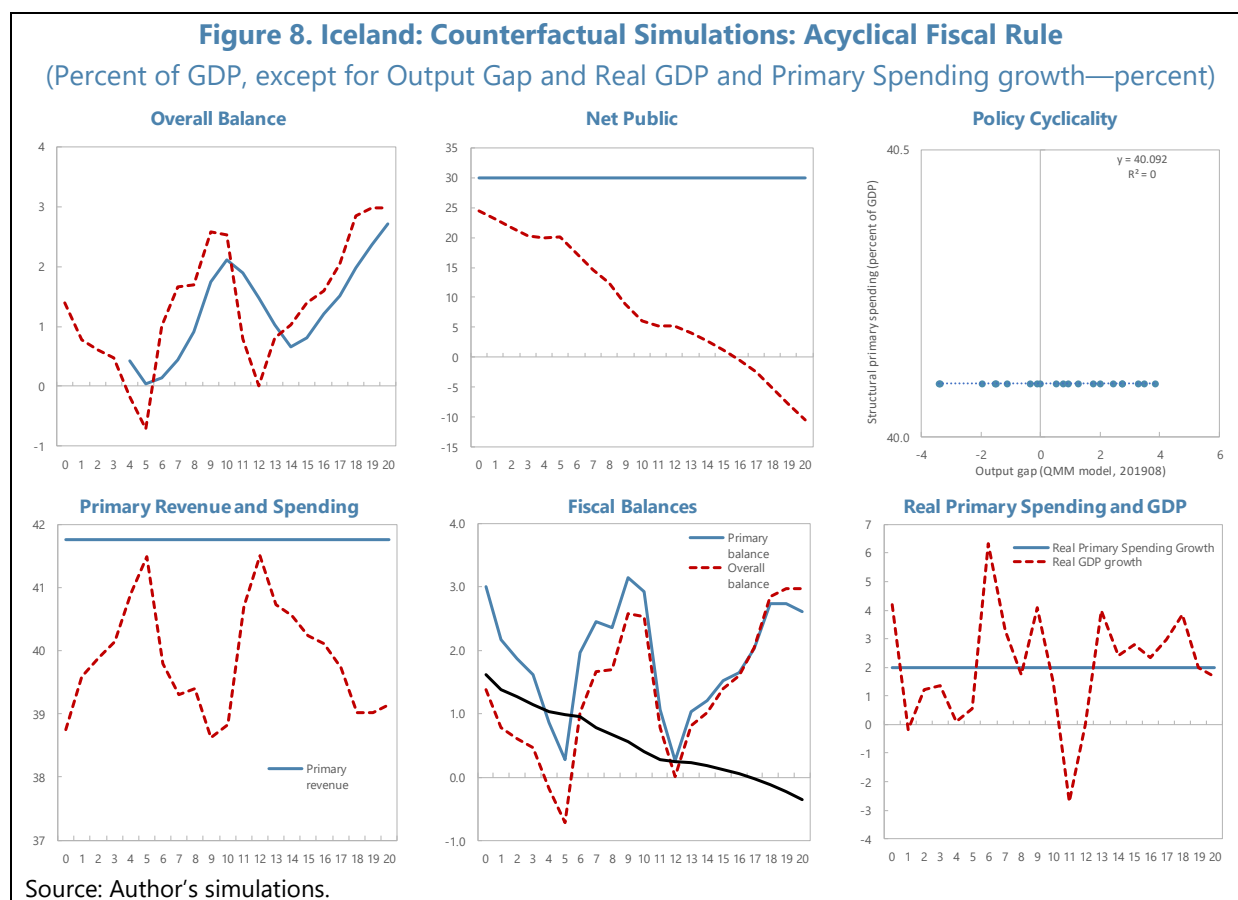
(e) 
$$\left( \frac{Spending_t}{P_t} \right) = \phi * GDP_t^{Pot}$$

Rewriting this expression, it implies that the spending to GDP ratio would fall with a positive output gap and increase with a negative one.

$$\frac{\left(\frac{Spending_t}{P_t}\right)}{GDP_t^R} = \frac{\phi * GDP_t^{Pot}}{GDP_t^R} = \frac{\phi}{\frac{GDP_t^R}{GDP_t^{Pot}}} = \frac{\phi}{(1 + gap)}$$

(f)

In the simulation below, this acyclical fiscal policy is consistent with the Icelandic fiscal rules. The overall balance experiences large fluctuations but remains positive on average. Despite being negative in one year, the 5-year average remains above zero over the whole period. Net public debt falls even faster than in the earlier exercise because overall balances are larger. Moreover, net debt becomes negative (a net asset position) and the interest rate expense becomes a net interest rate income. Despite all this, the upward trend in primary spending disappears. The procyclicality is eliminated, with real spending at the assumed constant rate of potential growth. The structurally adjusted primary spending is uncorrelated with the output gap.



## Countercyclical Fiscal Rule

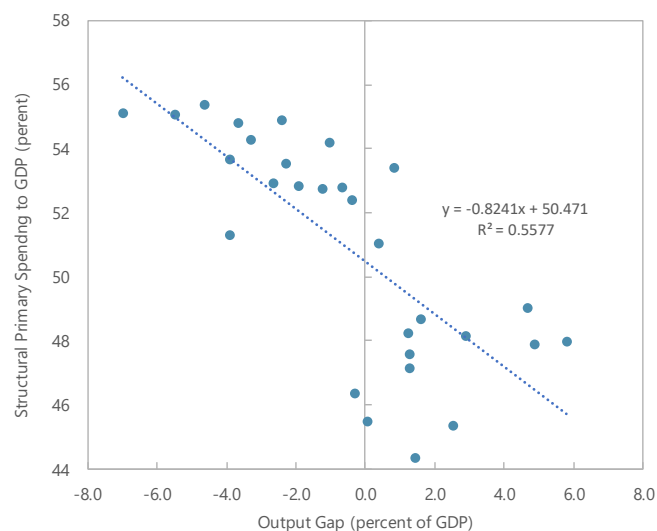
**20. A countercyclical fiscal policy would tend to increase real spending when growth is low and lower it when growth is high.** To illustrate such a policy, this simulation illustrates a fiscal policy that linearly links the structural primary spending to the output gap. In the expression below, the left-hand side is the structural primary spending assuming that spending items do not respond to the cycle, or that are a very small fraction of spending.

$$(g) \quad \left( \frac{\text{Spending}_t}{P_t} \right) \frac{1}{GDP_t^R} (1 + gap_t) = \alpha_1 + \alpha_2 gap_t$$

The intercept is the desired structural spending ratio that society is willing to pay for. The slope can be thought of as the degree of countercyclicality. For the simulation, we use -0.82, which is the number that would result in a simple regression using data from Finland over 1990–2018 as a benchmark.

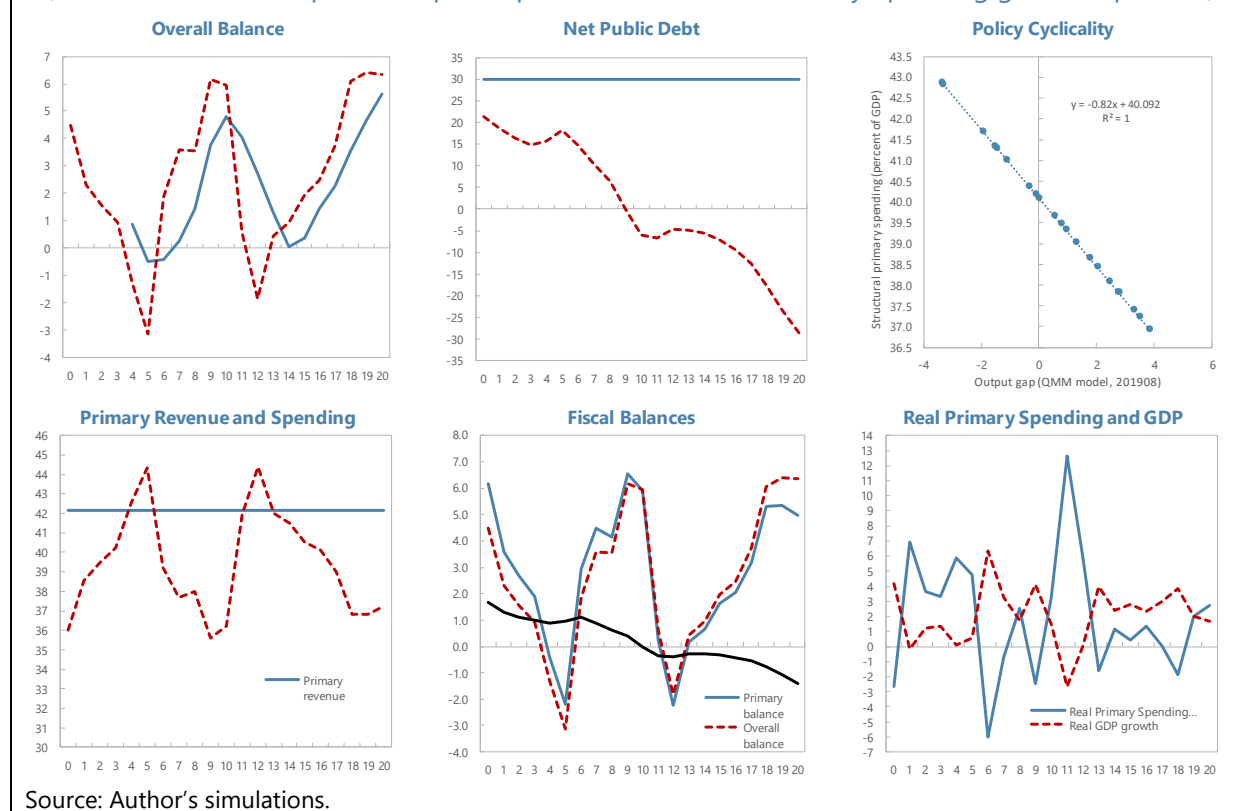
The simulation suggests that following such a rule in our exercise would require invoking the escape clause in one of the periods with a large negative output gap. Overall balances would fluctuate sharply, ranging from -3 to about 6 percent of GDP. A large average overall balance would sharply reduce public debt and deliver a net asset position in less than a decade. Primary spending would fluctuate in the sample without a clear trend, and the policy would be countercyclical by design.

**Figure 9. Finland: Countercyclical Structural Primary Spending**



Sources: IMF's World Economic Outlook database and author's estimates.

**Figure 10. Iceland: Counterfactual Simulations: Countercyclical Fiscal Rule**  
(Percent of GDP, except for Output Gap and Real GDP and Primary Spending growth—percent)



## Debt Stabilizing, Countercyclical Fiscal Policy

**21. When public debt falls to its desired social level, the fiscal rule could be changed to keep public debt on average at that level while maintaining a countercyclical stance.** Rather than following a fiscal policy that will tend to consistently reduce net public debt, it may be appropriate to modify slightly the parameters **once** net public debt reaches a desired safe low level,  $d^*$ . The determination of this safe low level is a social choice, but one that needs to be informed by the level of risks the economy faces, and by the expected reduction in interest rates and borrowing costs.<sup>9</sup> Public debt had fallen to less than 20 percent before the 2008–9 crisis but rose sharply with the capitalization of a new banking system. Once the safe level is determined, the overall balance could be changed to average

$$(h) \quad b^* = \left( \frac{-\gamma^*}{1 + \gamma^*} \right) d^*$$

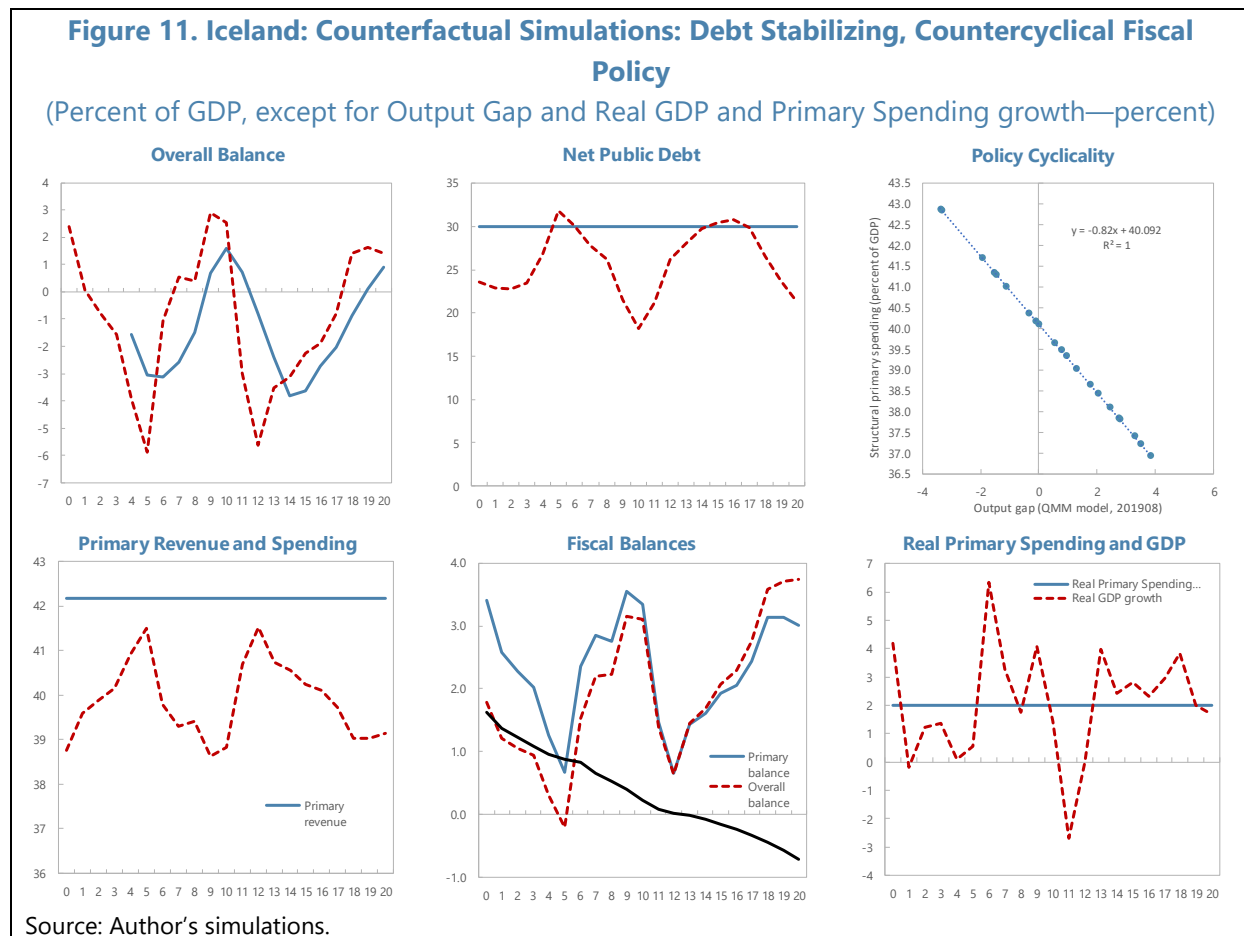
and the corresponding primary balance would be

$$(i) \quad p_t = \lambda_4 d^*$$

<sup>9</sup> A thorough discussion of the technical aspects that would involve the choice of such a safe debt level is beyond the scope of this paper.

$$(j) \quad \lambda_t \equiv \frac{i - \gamma_t}{1 + \gamma_t} \equiv \frac{r_t - g_t}{1 + g_t}$$

In our exercise, this would mean changing the parameters of the fiscal rule. Maintaining the guidance from the countercyclical structural spending rule, the 5-year average minimum could be changed to -2 percent of GDP. In the simulation, this is achieved by reducing the revenue burden on the economy.



**22. The above discussion is an illustrative exercise, which does not take into consideration the interactions between fiscal policies, monetary policies, and economic activities.** It also abstracts from movements in financial variables such as interest rates, which could add a layer of uncertainty between the overall government balances subject to the 5-year average fiscal rule and the desired changes in revenue or spending given the economic juncture. Nevertheless, it has the advantage that it is relatively easy to communicate and understand and avoids the “black-box” criticism that some dynamic general equilibrium models face. But it does not explain why countercyclical fiscal policies might be desirable as the output gap is taken as given. In principle, the benefit of running a countercyclical fiscal policy would be that output fluctuations would be smaller for the same shock the economy faces.

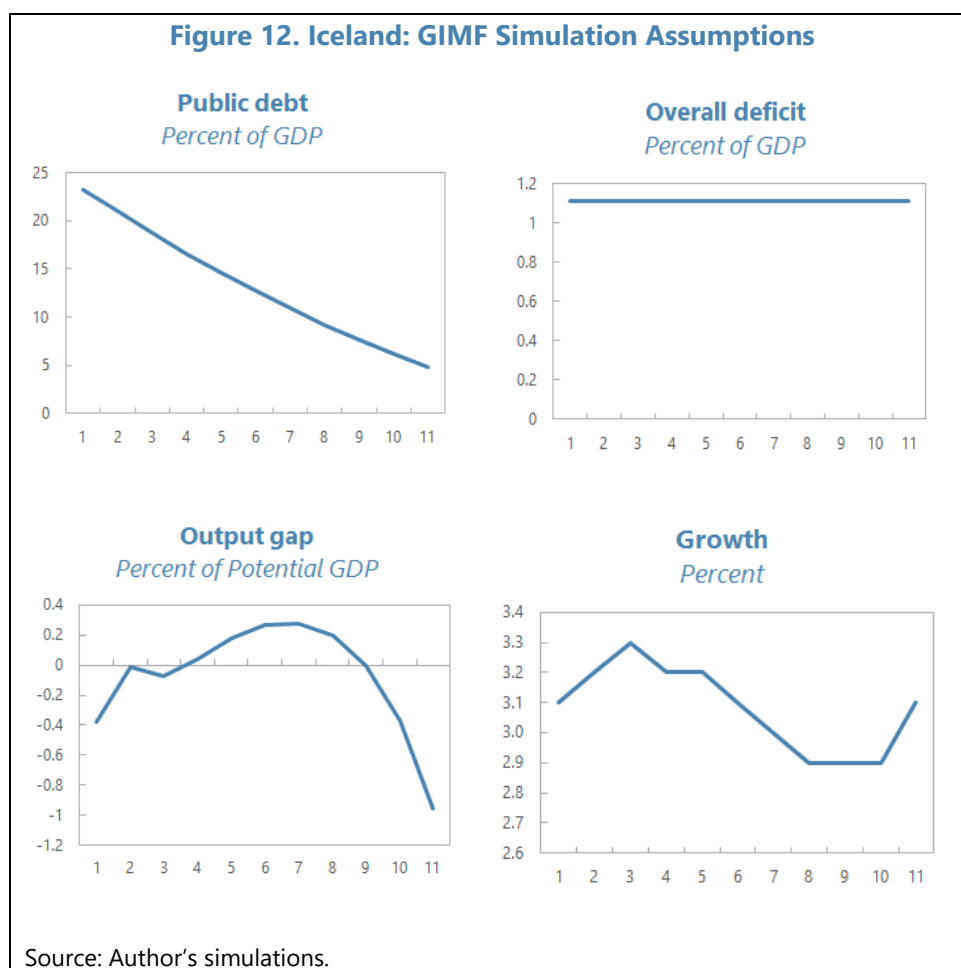
## D. GIMF Simulations

**23. The IMF’s Global Integrated Monetary and Fiscal Model (GIMF) provides a more robust analysis on the interaction between fiscal policy and real variables in the economy.** Widely used in IMF’s flagship publications, the GIMF is a dynamic general equilibrium model in which consumers react to incentives created by policy decisions. Monetary and fiscal policies have macroeconomic effects because the model includes nominal and real rigidities and several features that imply that Ricardian equivalence does not hold. The latter include myopic consumers with limited lifetimes, declining life-cycle-labor income, some consumers that lack access to financial markets, and distortionary taxes, among the most relevant (Anderson and others, 2013; Kumhof and Laxton, 2010; Kumhof and others, 2010). The interactions between shocks that affect economic activity and the policy reaction captured in the model implies that the size of the output gap is not given, as implicitly assumed in the illustrative exercise above, but depends on the monetary and fiscal policy mix. In addition, the interest rate-growth differential (that add a layer of uncertainty between overall and primary fiscal balances) is endogenous and depends on the type of shock the economy faces and the corresponding policy reaction.

**24. The calibration provides some Icelandic flavor to the model simulations.** The version in this paper uses a model structure described in *Kumhof* and others (2010) with three-economic area blocks: Iceland, the Euro area, and the rest of the world. The model parameters used here yield the main macroeconomic ratios in Iceland. Earlier versions of this model have already analyzed fiscal policy issues in Iceland, including fiscal consolidation and alternative fiscal rules (Petrova 2010, 2012). The current calibrated model delivers macroeconomic aggregates that resemble those of Iceland. The simulations analyze the likely impact of fiscal and monetary policies on a model economy with sound macroeconomic foundations that delivers macroeconomic indicators similar to Iceland’s.

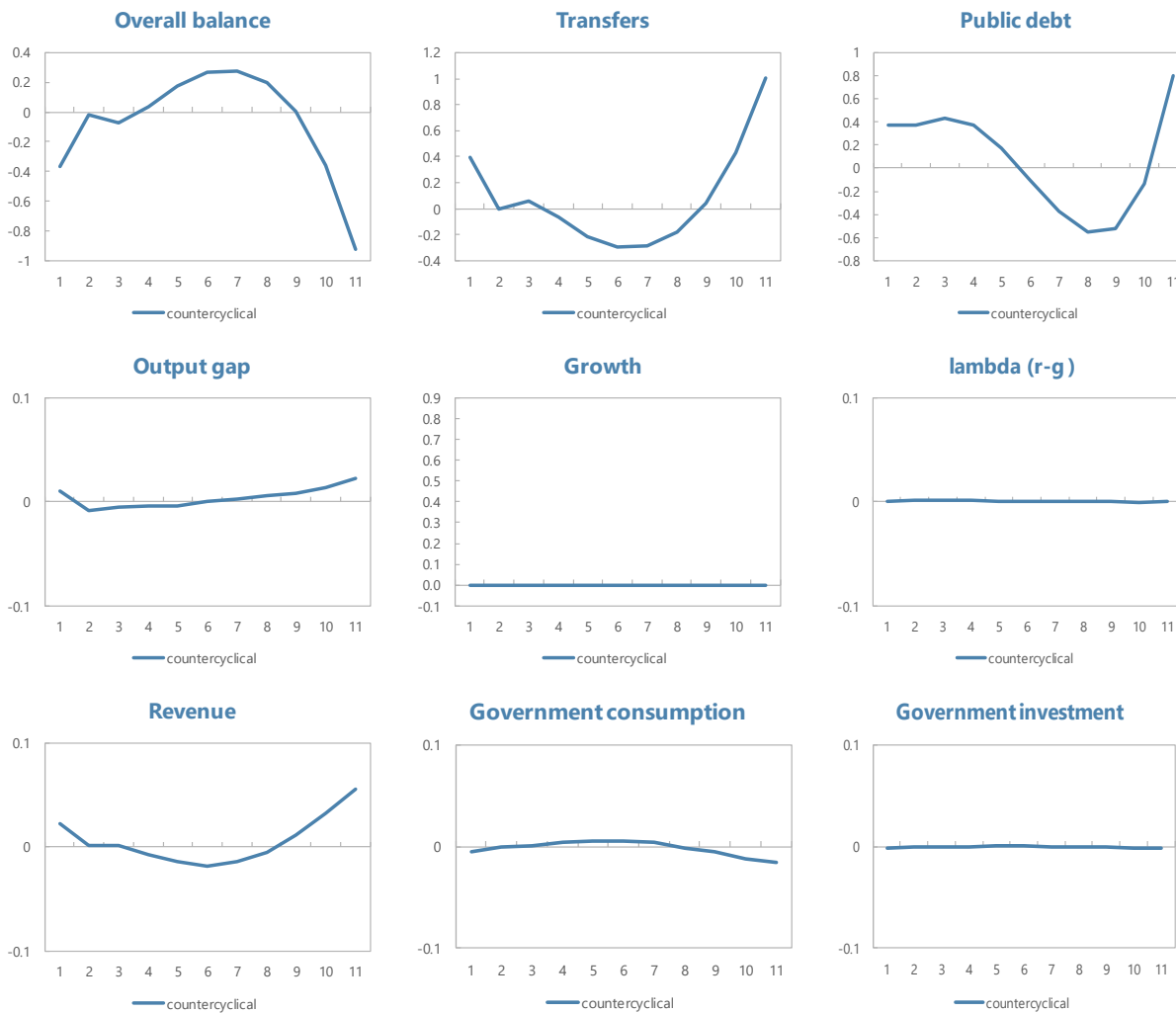
**25. The baseline simulation assumes the economy is transitioning toward a lower public debt level.** In the steady state, a 1.1 percent of GDP fiscal surplus results in a net asset position. But to become more realistic, the simulation assumes the economy has suffered an adverse shock that has raised public debt to about 25 percent of GDP. The assumed fiscal policy rule used for this illustration is to maintain a fixed overall balance of 1.1 percent of GDP, arbitrary but consistent with the original 2018–2022 fiscal policy statement. The economy then suffers a shock that temporarily opens a negative output gap, later turns it positive, and finally ends up in a very negative one. Finally, the simulations change different types of public spending to ascertain if the composition of public spending matters for the impact on growth. In other words, the simulations seek to illustrate the conditions in which a countercyclical fiscal policy can affect economic outcomes.





**26. The simulations suggest that the composition of fiscal spending matters in designing countercyclical fiscal policy.** Countercyclicality increasing fiscal spending through lump-sum transfers when the output gap is negative—and reducing overall fiscal balances as a result—has no significant impact on GDP growth. This implies that the fiscal multipliers of such operations are close to zero. On the other hand, countercyclical changes in government consumption and investment affect economic activity and can help smooth cyclical fluctuations. This suggests that for demand management, the fiscal rules could be complemented with guidance on the cyclical behavior of the components of fiscal spending that affect economic activity, rather than on the entire public spending envelope. Moreover, the general equilibrium outcomes may differ between one instrument and another depending on the shock.

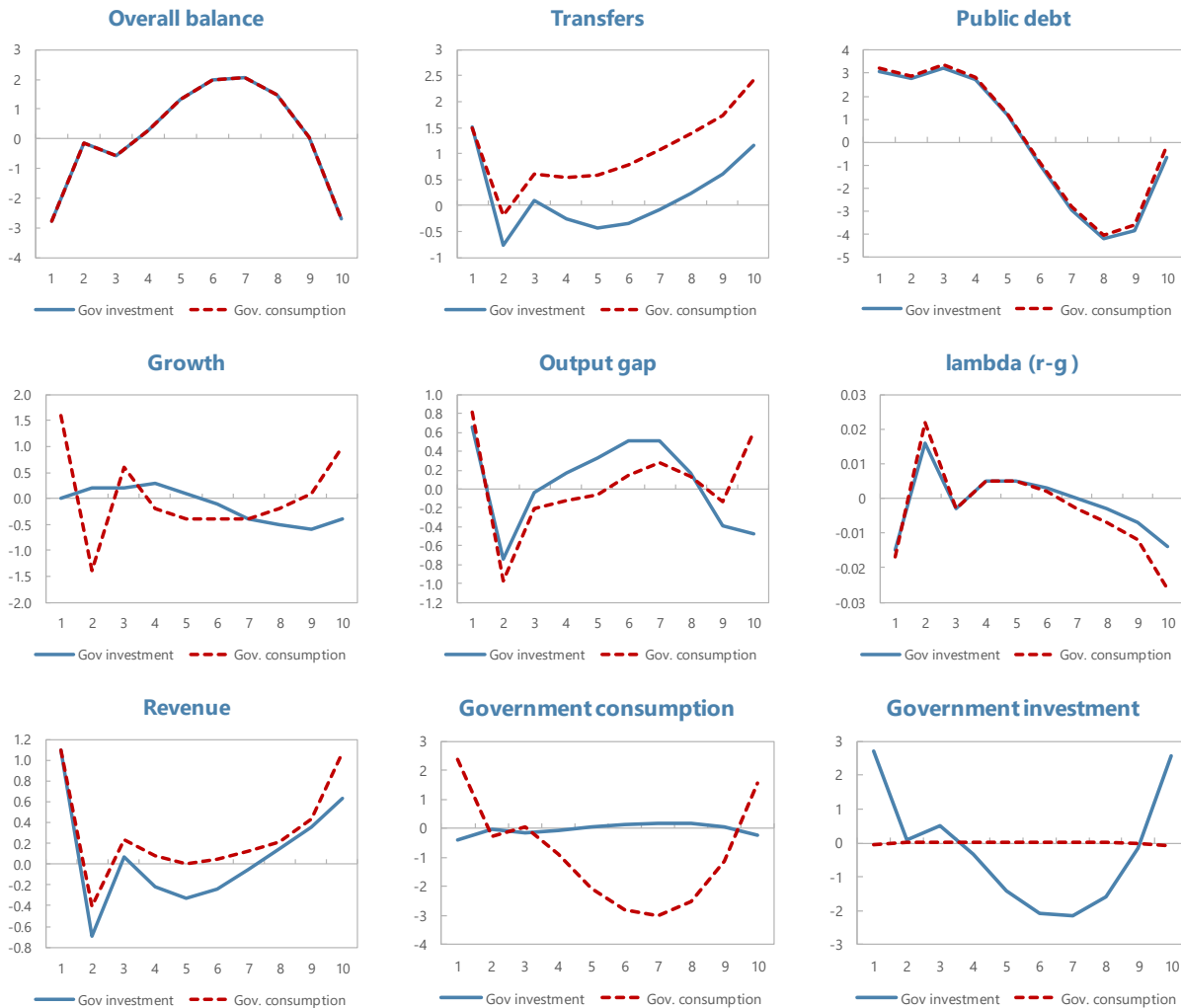
**Figure 13. Iceland: GIMF Simulations of Countercyclical Fiscal Policy through Transfers**  
(Percentage point deviation from baseline)



Source: Author's simulations.

Notes: The panel shows the evolution of key variables under a countercyclical fiscal policy that results in the overall balance in percent of GDP moving one to one with the output gap, implemented mainly by affecting lump sum transfers. The evolution is presented in terms of percentage point deviation from baseline. The policy affects public debt but has little effect on economic activity as shown with the small-to-none fluctuations in the output gap and growth. The golden ratio also remains virtually unchanged. Some minor fluctuation takes place on revenue, and government consumption and investment are virtually unchanged.

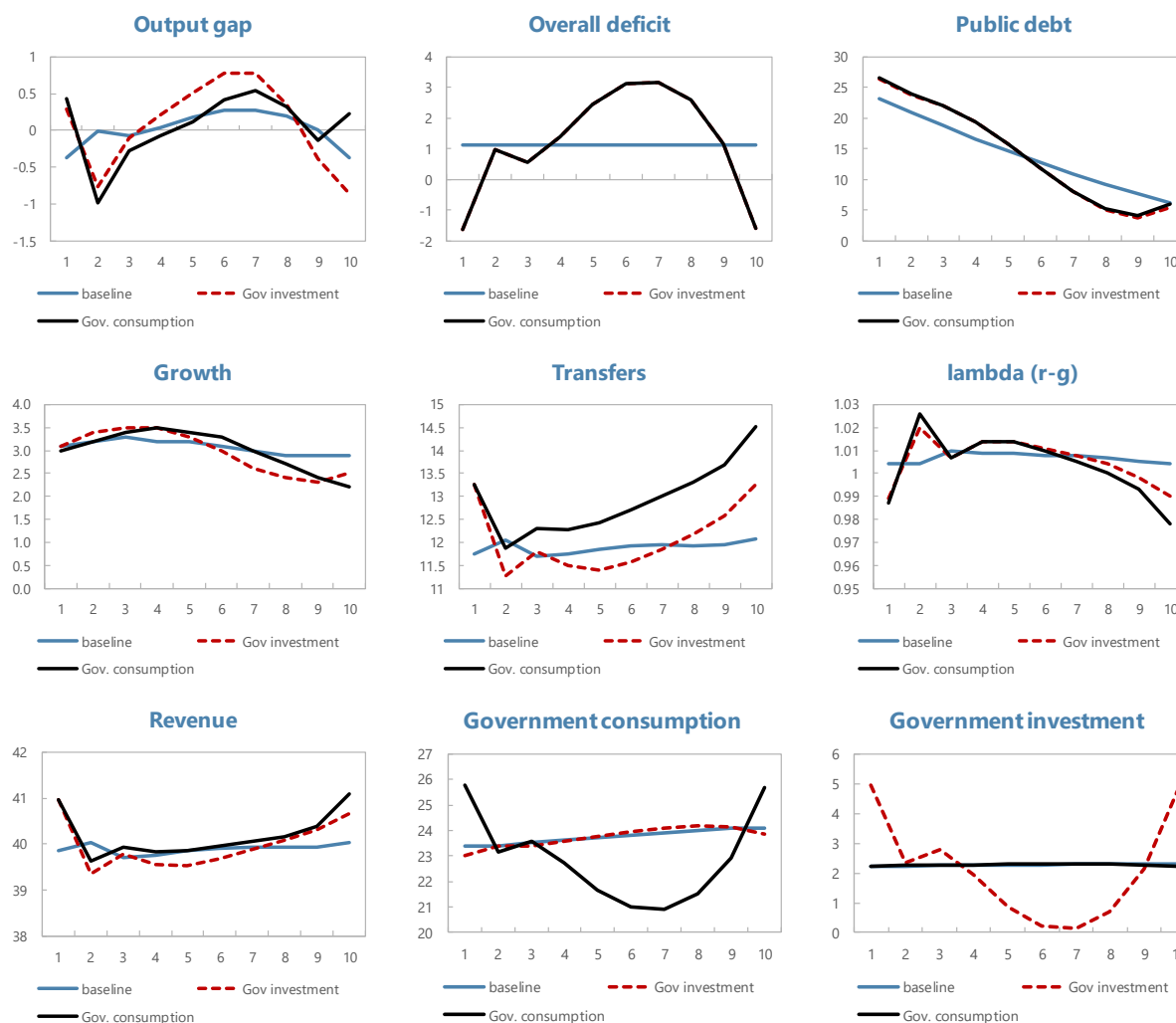
**Figure 14. Iceland: GIMF Simulations of Countercyclical Fiscal Policy through Government Consumption and Investment**  
(Percentage point deviation from baseline)



Source: Author's simulations.

Notes: This panel shows the evolution of key variables under a countercyclical fiscal policy that results in the overall balance in percent of GDP moving one to one with the output gap, implemented mainly by affecting either government consumption or public investment. The evolution is presented in terms of percentage point deviation from baseline. For comparison, the policy changes in government consumption or public investment are calibrated to be of the same magnitude in percent of GDP. Discretionary changes in government consumption require greater increases in transfers to deliver the same overall balance as when discretionary public investment is used. The impact on public debt is similar across the two types of policies. They have clear effects on economic growth and on output, but the effects differ.

**Figure 15. Iceland: GIMF Simulations of Countercyclical Fiscal Policy through Government Consumption and Public Investment**  
(Percentage of GDP, except for lambda in percent)



Source: Author's simulations.

Notes: This panel shows the evolution of key variables under a countercyclical fiscal policy that results in the overall balance in percent of GDP moving one to one with the output gap, implemented mainly by affecting lump sum transfers. It is an alternative presentation of the simulation results in the previous panel, expressed in percent of GDP, rather than percent-of-GDP deviations from the baseline.

## E. Conclusions and Recommendations

**27. The Icelandic fiscal framework shares most elements of successful fiscal frameworks but would benefit from more structured guidance in dealing with cyclical fluctuations.** It is backed by a firm legal basis that reflects political support for the fiscal policy objectives, covers the consolidated general government, and is based on sound accounting practices and budget management arrangements (Hughes and others, 2019). Nevertheless, there seems to be scope for enhancing it by providing more guidance to fiscal policy in dealing with cyclical fluctuations.

**28. The current parameters of the policy rules have a bias to reduce net public debt and gradually build fiscal space to deal with adverse shocks to economic activity.** By 2018, Icelandic net public debt was below the median level in advanced European countries but was above its own historical minimum and the median in Nordic countries. International experience and theoretical models suggest that lower net public debt levels should be expected to reduce effective real interest rates on public debt (Annex I). The sharp reduction in public debt over the last five years has already reduced interest rates for public debt remaining in the market but remain to be fully incorporated into the interest bill of the government.

**29. Within the boundaries of the fiscal rules, it is possible to run procyclical, acyclical, and countercyclical fiscal policies.** Within the framework, creating the space to move countercyclically against the shocks to which Iceland could potentially be exposed requires higher overall balances on average and lower public debt than the boundaries of the fiscal rules. Managing fiscal policy to remain at the boundaries would imply a procyclical fiscal policy. Moving to an acyclical fiscal policy would require holding on average overall fiscal balances of about 2 percent of GDP. Moving to a countercyclical fiscal policy would require even higher fiscal balances. The higher overall balances would tend to lower net public debt at a faster rate and achieve at a faster rate the socially desirable net public debt level. Unlike in Nordic countries and the median advanced European country, public spending in Iceland over the last 20 years has been procyclical. It would be desirable to have a countercyclical fiscal policy, which would imply increasing overall fiscal balances away from the lower bound toward the levels prevailing in the original fiscal policy statement when the economy recovers toward potential.

**30. An alternative is to establish protocols that allow automatic use of escape clauses more often.** These can be specified in terms of a given size of a negative output gap, so that overall balances would be higher than the boundary, but not enough to insure against the negative output gaps exceeding a given threshold. The implication would be a slower reduction in net public debt, but one that would still guarantee public debt sustainability, as long as the overall balances exceed the debt-stabilizing overall deficit. This possibility could be explored further and could involve contingent relaxation in overall balances depending on the size of the output gap expected each year.

**31. Adding a primary structural balance rule to the framework would ensure a countercyclical fiscal policy but would add significant complexity.** This could involve a countercyclical rule for the structural primary balance and an acyclical stance for the permanent components within the primary accounts. The countercyclical rule can be calibrated to be consistent with the flexible upper bounds on public debt and lower bound on overall balances. The acyclical stance on the components of primary revenue and spending that involve permanent spending commitments (such as those involving hiring of personnel) or changes in taxation would keep them growing with potential output and ensure their stability. The transitory components of the primary balance such as investment could be in charge of the countercyclical drive and could focus on those components with the highest multipliers on economic activity. Admittedly, such rules would add significant complexity to the framework and may not always be feasible given the uncertainties in the estimation of the output gap and the fiscal multipliers. Transparency will also be an issue and will require very close scrutiny by the Fiscal Council.

**32. Once the net public debt reaches a socially desirable level, the fiscal rule parameters may be modified to keep net public debt fluctuating around that level.**

## References

- Anderson, Derek, Benjamin Hunt, Mika Kortelainen, Michael Kumhof, Douglas Laxton, Dirk Muir, Susanna Mursula, and Stephen Snudden, 2013, Getting to Know GIMF: The Simulation Properties of the Global Integrated Monetary and Fiscal Model, IMF Working Paper WP/13/55.
- Bova, Elva, Nathalie Carcenac and Martine Guerguil, 2014, "Fiscal Rules and the Procyclicality of Fiscal Policy in the Developing World," IMF working paper WP/14/122.
- Dolenc, Primož and Suzana Laporšek, 2010, Tax Wedge on Labour and its Effect on Employment Growth in the European Union, Prague Economic Papers 4 p. 345.
- Escolano, Julio, 2010. "A Practical Guide to Public Debt Dynamics, Fiscal Sustainability, and Cyclical Adjustment of Budgetary Aggregates," IMF Technical Notes and Manuals 10/02, International Monetary Fund.
- Hughes, Richard, Jack Leslie, and Cara Pacitti, 2019, "Britannia waives the rules? Lessons from UK and international experience with fiscal rules," Resolution Foundation Briefing (October).
- International Monetary Fund, 2016, "Iceland: Staff Report for the 2016 Article IV Consultation," IMF Country Report No. 16/179.
- Price, Robert W.R., Thai-Thanh Dang and Jarmila Botev, 2015, Adjusting Fiscal Balances for the Business Cycle: New Tax And Expenditure Elasticity Estimates for OECD Countries, Economics Department Working Papers No. 1275.
- Kumhof, M. and D. Laxton (2009a), "Simple, Implementable Fiscal Policy Rules," IMF Working Paper Series, WP/09/76 (April 2009), available at <http://www.imf.org/external/pubs/ft/wp/2009/wp0976.pdf>.
- Kumhof, M., D. Laxton, D. Muir and S. Mursula (2010), "The Global Integrated Monetary Fiscal Model (GIMF)—Theoretical Structure", IMF Working Paper Series, WP/10/34, available at <http://www.imf.org/external/pubs/cat/longres.cfm?sk=23615.0>.
- Petrova, Iva, 2010, "Fiscal Consolidation Options," in IMF Selected Issues Papers, Country Report No. 10/304 (October).
- Petrova, Iva, 2012, "Iceland's policy objectives under a new fiscal rule," in IMF Selected Issues Papers, Country Report No. 10/304 (October).

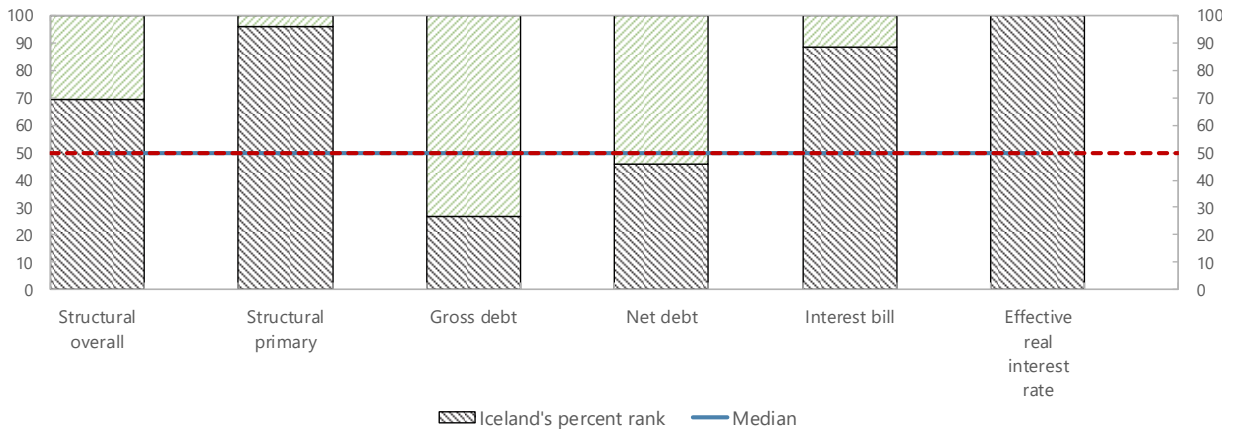
## Annex I. Reasons to Expect Falling Interest Rate Burden in Iceland

**The reduction in Iceland’s interest rate bill from a very high level is a crucial fiscal development expected over the next few years.** Compared to other European OECD countries, Iceland’s high effective interest rate stands out. Iceland has one of the highest interest rate burdens in percent of GDP,

mainly reflecting a very high implicit effective interest rate despite a low gross public debt. Its net debt is also below, but close to the median. The structural primary balance is one of the highest, reflecting both a high structural overall balance and the high interest rate bill.

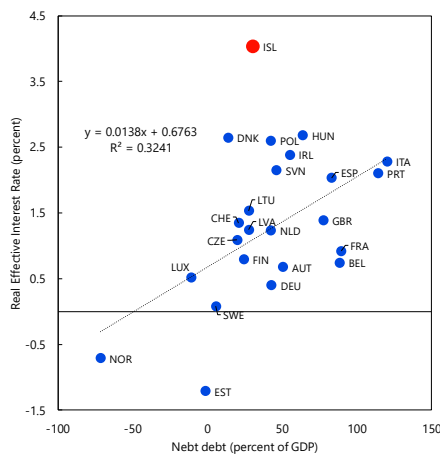
### Iceland: Key Government Variables: Relative to OECD European Countries, 2018

(Percent rank of variables in percent of GDP, except interest rates)



Sources: Statistics Iceland, Ministry of Finance, and IMF’s World Economic Outlook Database.

### Iceland: Net Debt and Real Effective Interest Rates: 2018<sup>1/</sup>



Sources: IMF’s World Economic Outlook Database.

1/ Nominal effective interest rate deflated by average CPI inflation over last 5 years. Iceland is excluded from the regression. Interest bill excludes returns on pension obligations not accounted into Iceland’s debt levels.

**Effective interest rates largely exceed market rates.** Considering the existing public debt structure, this difference was about 2.8 percentage points in September 2019. The high effective interest rates are largely a legacy of the global financial crisis. Iceland had to borrow at high rates and decided to stay

away from short-term debt to reduce liquidity risks that could have derailed the recovery. The effective rate will gradually decline as outstanding bonds mature and new ones are issued at lower market rates. Because the outstanding Icelandic bonds are not callable, they cannot be repaid without an upfront cost. The net present value of the income stream from the outstanding Icelandic bonds imply that they are equivalent to higher debt at current market interest rates than the one registered at book value. Debt management operations that reduce the outstanding bonds would imply realizing this difference upfront. Yet, they have the advantage of lowering the debt service obligations of the government, improving its borrowing capacity and reducing borrowing costs for all Icelandic borrowers.