

## Republic of Estonia: 2019 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Republic of Estonia



# REPUBLIC OF ESTONIA

January 2020

## 2019 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR REPUBLIC OF ESTONIA

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2019 Article IV consultation with Republic of Estonia, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its January 17, 2020 consideration of the staff report that concluded the Article IV consultation with Republic of Estonia
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on January 17, 2020 following discussions that ended on November 4, 2019, with the officials of Republic of Estonia on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on December 19, 2019
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for Republic of Estonia

The document listed below will be separately released.

### Selected Issues

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## **IMF Executive Board Concludes 2019 Article IV Consultation with the Republic of Estonia**

On January 17, 2020, the Executive Board of the International Monetary Fund (IMF) concluded the 2019 Article IV consultation<sup>1</sup> with the Republic of Estonia.

Estonia's economic performance remains solid, supported by strong institutions and effective structural reforms. Real GDP growth remains high and above potential for an estimated third year in a row, supported by domestic private consumption. However, slower construction activity and the energy sector's disruptive transition to carbon neutrality are set to weigh in on economic activity. Inflation is above the EU average, and consistent with Estonia's convergence process. The labor market remains tight with wages picking up alongside increasing labor force participation. Unemployment has declined to a record low. The fiscal position has been accommodative, but public debt is very low. The external position remains substantially stronger than implied by medium-term fundamentals and desirable policies. Banks are profitable, liquid, and solvent and housing price levels are in line with fundamentals.

The outlook is favorable for the near term, but for slower economic activity for the medium term. Supported by still-strong private consumption, real GDP is projected to grow above trend in the near term, reaching 4.0 percent and 3.2 percent in 2019 and 2020, respectively. Over the medium term, growth is set to converge to its potential at around 2.8 percent, constrained largely by the level of productivity and weak foreign demand. Reflecting these developments, the current account is projected to decline toward its norm turning negative by 2024 owing to strong import growth. Inflation is expected to continue its downward path in line with low energy prices, but remain above the EU average. Externally, international trade risks could weaken growth and slow export in Nordic countries with spillovers on Estonia's banking system. Domestically, labor shortages in the highly-skilled segment and continued wage pressures could affect medium-term

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<sup>1</sup> Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

(continued...)

competitiveness. Ongoing anti-money laundering and counter-terrorism financing (AML/CFT) concerns could be source of further reputational risks.

## **Executive Board Assessment<sup>2</sup>**

Executive Directors commended the authorities for their economic management and structural reforms that have delivered solid economic performance in recent years. Noting the risks arising from the global trade and financial outlook, as well as demographic developments within Estonia, Directors emphasized that policies and reforms should focus on raising productivity, boosting sustainable growth and reducing inequality.

Directors generally called for unwinding of the expansionary fiscal policies in the short term. A few Directors, however, advocated greater emphasis on efficient spending. Over the long term, Directors supported using the substantial fiscal space for more growth-friendly reforms, in particular, to promote productivity growth and enhance labor supply.

Noting that monetary policy is likely to remain expansionary, Directors underscored that macroprudential policies should contain financial sector risks that could arise from the low interest rate environment. They encouraged the authorities to continue to monitor broader macro-financial developments, especially real estate and housing related risks, while enhancing the macroprudential toolkit and standing ready to act, should risks materialize.

Directors emphasized that accelerating ongoing reforms aimed at increasing productivity growth and boosting labor supply are important to raise long-term output. They highlighted that expanding firms' innovation capacity through more investment in research and development would broaden the economy's innovation base and enhance productivity. Directors also called for active labor market policies to support labor supply, particularly among low-income households. To further address inequality, they called for preserving the gains in labor force participation and employment over the last few years. Directors commended the reforms undertaken to increase female labor force participation and agreed that continued efforts to reduce the gender pay gap and further support childcare arrangements would be helpful.

Directors noted that Estonia's pension system plays a critical role in reducing relative poverty and, therefore, encouraged the authorities to preserve its viability and sustainability. They advised caution with regard to the changes being planned to Pillar II of the system as these could complicate macroeconomic management and further slow capital market development, as well as entail longer-term fiscal costs.

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<sup>2</sup> At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.imf.org/external/np/sec/misc/qualifiers.htm>.

Directors welcomed the enhancements to the AML/CFT framework. They agreed that increasing the number of on-site AML/CFT inspections, raising the penalties for AML/CFT violations, and consolidation of supervision at the regional level would contribute to strengthening the AML/CFT regime.

It is expected that the next Article IV Consultation with the Republic of Estonia will be held on the standard 12-month cycle.

# Republic of Estonia: Selected Macroeconomic and Social Indicators, 2016–24

	2016	2017	2018	2019	2020	2021	2022	2023	2024
			Est.			Projections			
<b>National income, prices, and wages</b>									
GDP (billions of Euro)	21.7	23.8	26.0	27.8	29.6	31.3	33.2	35.0	36.9
Annual change (in percent)	4.4	9.6	9.5	6.9	6.2	6.0	5.8	5.5	5.5
Real GDP growth (year-on-year in percent) 1/	2.6	5.7	4.8	4.0	3.2	3.0	2.9	2.8	2.8
Private consumption	4.5	2.7	4.2	4.0	3.8	3.6	3.2	3.0	3.0
Gross fixed capital formation	0.8	12.5	1.7	9.5	9.0	8.5	8.0	7.5	7.5
Exports of goods and services	5.1	3.8	4.3	3.6	3.6	3.7	3.7	3.7	3.7
Imports of goods and services	6.0	4.2	5.7	5.3	5.0	4.9	4.9	4.8	4.8
Average HICP (year-on-year change in percent)	0.8	3.7	3.4	2.5	2.4	2.3	2.2	2.1	2.1
GDP deflator (year-on-year change in percent)	1.7	3.6	4.5	2.8	2.9	2.9	2.8	2.7	2.6
Average monthly wage (year-on-year growth in percent)	7.6	6.5	7.3	7.7	6.5	6.0	5.5	5.0	4.5
Unemployment rate (ILO definition, percent, pa)	6.8	5.8	5.4	4.7	4.7	4.8	4.8	5.0	5.0
Average nominal ULC (year-on-year growth in percent)	3.1	2.9	5.8	4.6	3.2	2.9	2.5	1.8	1.5
<b>General government (ESA10 basis; percent of GDP)</b>									
Revenue	39.1	38.6	38.5	39.6	40.2	40.0	40.0	39.7	39.6
Expenditure	39.4	39.0	39.0	39.7	40.2	40.0	40.1	39.8	39.7
Financial surplus (+) / deficit (-)	-0.3	-0.4	-0.5	-0.2	0.0	0.0	-0.1	-0.2	-0.2
Structural balance	0.5	-0.3	-1.1	-0.8	-0.6	-0.4	-0.3	-0.2	-0.2
Total general government debt	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
<b>External sector (percent of GDP)</b>									
Trade balance	-3.5	-3.4	-3.7	-4.7	-5.7	-6.4	-7.1	-7.8	-8.4
Service balance	7.6	8.0	7.1	7.2	7.3	7.3	7.3	7.3	7.3
Primary income balance	-2.1	-2.0	-1.9	-1.9	-1.3	-0.8	-0.3	0.0	0.5
Current account	2.0	3.2	1.7	0.9	0.5	0.4	0.1	-0.2	-0.4
Gross external debt/GDP (percent) 2/	88.3	82.1	76.2	75.2	74.7	74.2	73.9	73.6	73.4
Net external debt/GDP (percent) 3/	-11.3	-15.5	...	...	...	...	...	...	...
General government external debt/GDP (percent)									
Excluding government assets held abroad	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
Including government assets held abroad 4/	-2.6	-1.6	-1.8	0.2	0.2	0.2	0.3	0.4	0.6
Exchange rate (US\$/Euro - period averages)	1.11	1.13	1.18	...	...	...	...	...	...
Real effective exchange rate (annual changes in percent)	1.1	1.2	4.5	...	...	...	...	...	...
Nominal effective exchange rate (annual changes in percent)	2.6	-0.1	3.3	...	...	...	...	...	...
<b>Money and credit (year-on-year growth in percent)</b>									
Credit to the economy	7.2	2.0	6.3	...	...	...	...	...	...
Output gap (in percent of potential output)	-1.7	0.7	2.3	2.1	1.7	1.2	0.6	0.0	0.0
Growth rate of potential output (in percent)	2.5	3.2	3.2	4.2	3.6	3.5	3.5	3.5	2.8
<b>Social Indicators (reference year):</b>									
Population (2017, pa): 1.32 million; Per capita GDP (2017): \$17,500; Life expectancy at birth: 82.2 (female) and 73.3 (male);									
Poverty rate (share of the population below the established risk-of-poverty line): 21.7 percent; Main exports: machinery and appliances.									

Sources: Estonian authorities; Eurostat; and IMF staff estimates and projections.

1/ Statistics Estonia revised National Accounts series in August 2019 inter alia shifting reference year to 2015 and improving the methodology.

2/ Includes trade credits.

3/ Net of portfolio assets (including money market instruments, financial derivative assets, other investment assets, and reserve assets held by Estonian residents).

4/ Includes the Stabilization Reserve Fund (SRF).



# REPUBLIC OF ESTONIA

## STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION

December 19, 2019

### KEY ISSUES

The economy has performed well in recent years, supported by prudent management and effective structural reforms. Growth remains strong and unemployment is at a record low. Inflation is above the euro-area average, consistent with Estonia's convergence process. Wages are rising, reflecting a tight labor market and skill shortages at the high end of the labor market. Absent reforms to boost productivity and manage demographic challenges, however, growth will slow notably. The authorities need to guard against potential overheating in the near term while taking advantage of sizable fiscal buffers in the medium term to support innovation and labor supply and reduce inequality.

### Key Policy Recommendations

- Use the substantial fiscal space to enhance potential growth over the medium term by investing in productive physical infrastructure and human capital development. Over the near term, as the economy is operating above potential, wind down the positive fiscal impulse of recent years.
- Accelerate structural reforms that strengthen innovation and help labor supply, to boost productivity. Enhance labor participation by improving the work ability reforms, implementing active market labor policies, and raising the efficiency of social spending.
- Consider changes that preserve the pension system's viability and sustainability, while promoting policies that address inequality. This includes raising female labor participation through broader implementation of gender pay transparency and flexible childcare arrangements.
- Enhance macroprudential policies and the AML/CFT framework. Closely monitor macrofinancial and housing market developments and stand ready, with an enhanced toolkit, to act as needed. Strengthen AML/CFT banking supervision by increasing the number of on-site inspections, ensuring timely and dissuasive fines, and considering its consolidation at the regional level.

Approved By  
**P. Gerson (EUR) and**  
**J. Wiegand (SPR)**

Discussions were held in Tallinn during October 22–November 4, 2019. The team comprised Cheikh Gueye (head), Rodgers Chawani, Kodjovi Eklou (all EUR), Maksym Markevych and Jay Purcell (LEG). Mr. Thomas Ostros, Executive Director (OED), joined the policy discussions. Nhu Nguyen and Hannah Jung supported the mission from headquarters.

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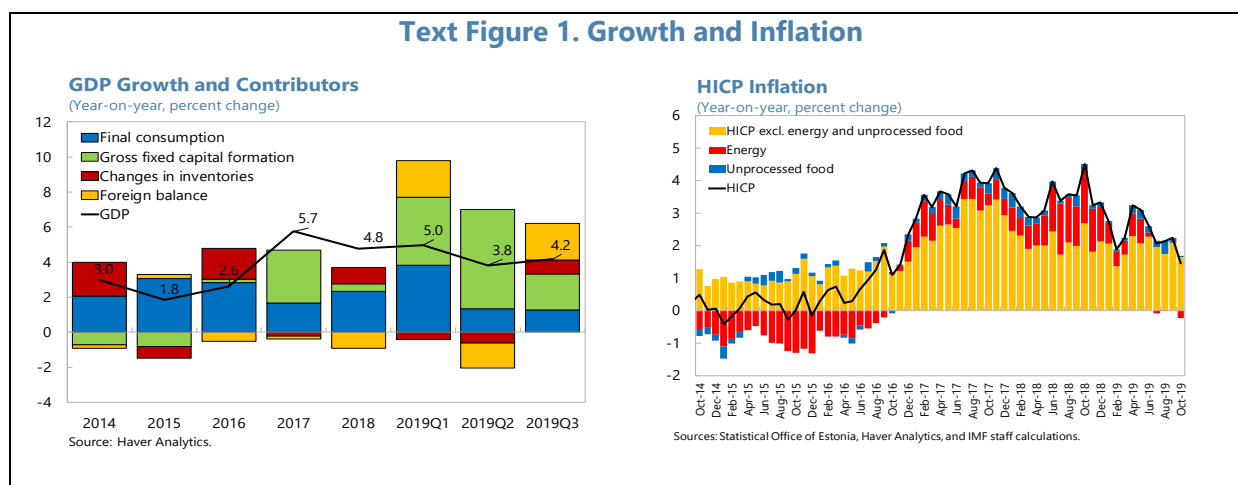
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## CONTEXT

**1. Macroeconomic performance remains solid.** GDP growth has exceeded potential over the last three years, supported by strong consumer confidence, with unemployment falling and wages rising. On the back of the strong economic activity, actual revenues have outperformed the budget. However, while the business environment remains favorable, recent AML/CFT allegations and problems with the insolvency framework need to be addressed. The authorities have undertaken several policy initiatives, including making the second pillar of the pension system voluntary. Since the last Article IV, the authorities have taken measures to enhance macroprudential policies, closely in line with staff's recommendations, but the expansionary fiscal stance of the last few years has yet to be unwound (Annex I).

## RECENT ECONOMIC DEVELOPMENTS

**2. Economic performance has been favorable, although growth is slowing modestly.** Real GDP growth eased in 2018 (Table 1, text figure 1),<sup>1</sup> but remained robust and above potential. The strong activity was driven by private consumption—supported by rising employment and wages—and growing investment. The contribution of net exports was negative owing to decelerating external demand in main trading partners following trade tensions; import growth continues to outpace that of exports.

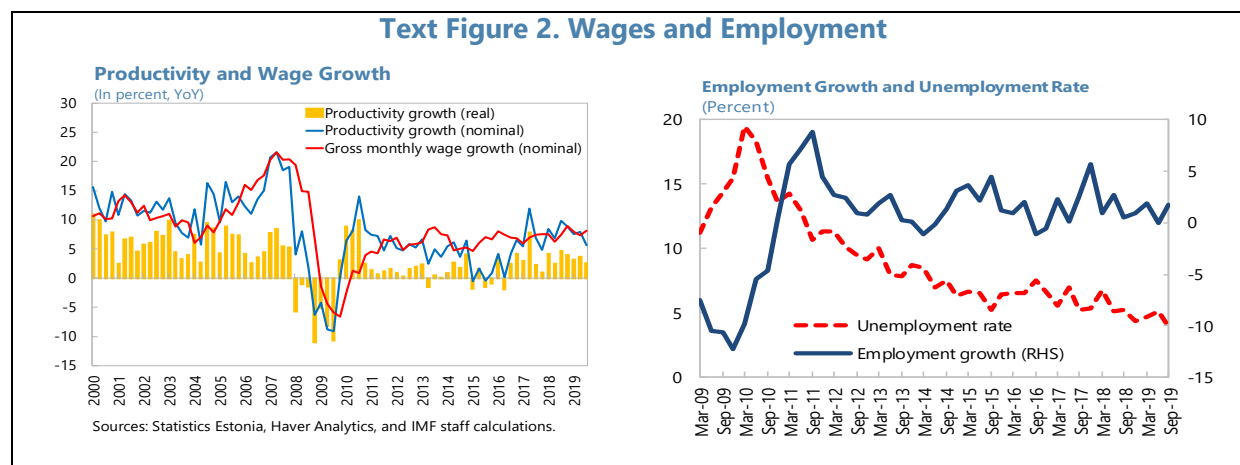


**3. Economic expansion has eased further in 2019.** The deceleration reflects a slowdown in the construction sector, one of the main drivers of growth over the previous years; the energy sector's disruptive transition toward carbon neutrality; and lower exports due to the impact of international trade tensions. The energy sector, representing a sizeable part of GDP, is undergoing significant transition from oil shale to renewable energy production. The recent rise in CO<sub>2</sub> prices has slowed significantly the performance of oil shale-based electricity production (Annex II). Inflation decelerated to an average of 2.4 percent during the ten months of 2019 from 3.4 percent in 2018

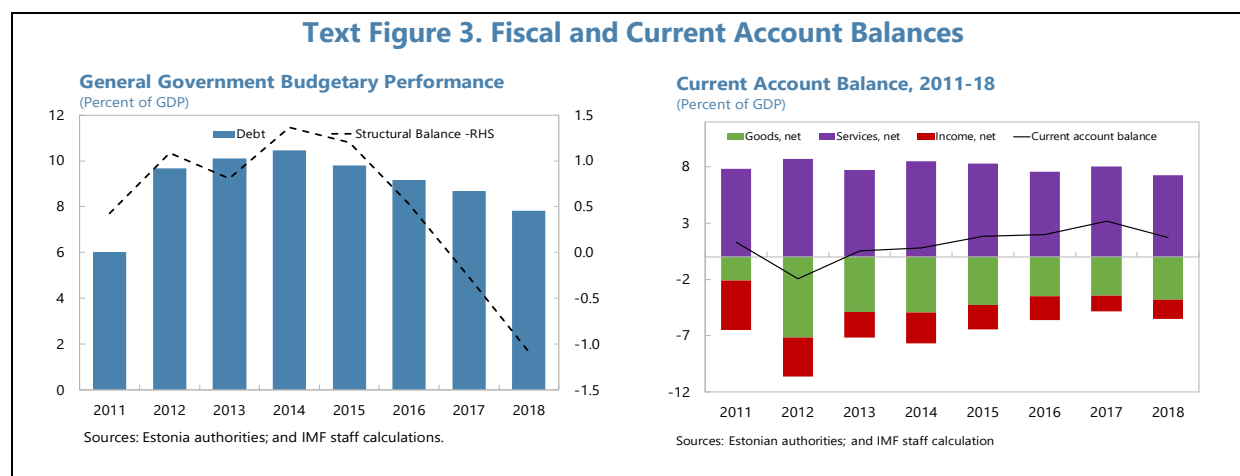
<sup>1</sup> National accounts series were revised in August 2019 following recommendations of the gross national income verification cycle to improve the methodology, shift the reference year to 2015 and expand the data coverage.

owing to lower energy prices (Table 1, text figure 1). Core inflation has averaged 2 percent over the first half of the year.

**4. The labor market remains tight.** The unemployment rate fell to 3.9 percent in 2019Q3, with a stronger labor force participation rate at 72 percent, helped by the work ability reform and integration of migrant workers. Gross wages were up by 8.9 percent in 2018 and their growth eased only to 8.1 percent on an annual basis during 2019Q3, as the labor market remains tight. But the wage growth continues to exceed productivity growth, constrained by limited investment in research and development (R&D) and other structural factors.



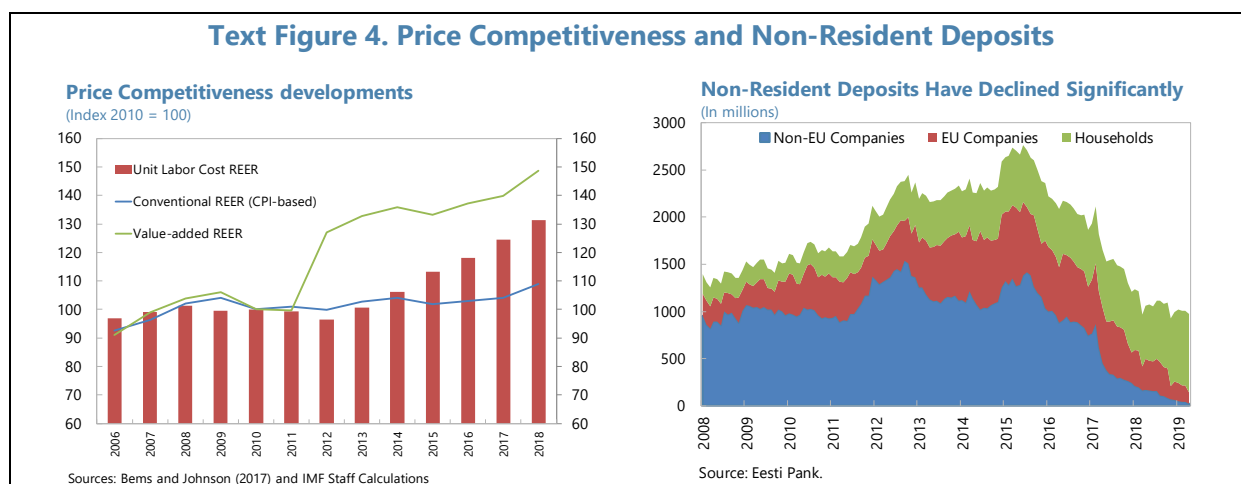
**5. The fiscal stance has been accommodative, but debt is low.** The budget shifted into a deficit during 2017–18 (Text figure 3) that exceeded the allowable limit of 0.5 percent of GDP under domestic fiscal rule. This outturn was driven by increased salaries for priority occupations,<sup>2</sup> higher-than-programmed public investments and transfers to households. Despite strong revenue collection, the general government recorded a deficit for 2019H1, owing to increases in health and education spending. Nevertheless, gross public debt stands at just 8 percent of GDP.



<sup>2</sup> Including teachers, health, internal security, and cultural workers.

## 6. The current account (CA) surplus narrowed, but the external position is assessed to be substantially stronger than justified by fundamentals:

- The CA surplus decreased to 1.7 percent of GDP in 2018, from 3.2 percent a year earlier (Text figure 3), mostly reflecting steady growth in domestic demand that outpaced strong export performance. The surplus continued to narrow in 2019H1 owing to sustained internal demand and moderating foreign demand on the back of an uncertain global environment marked by trade tensions. While there is no evidence of weakened competitiveness in the CPI-based REER, the value-added-based REER—which accounts for the fact that much of Estonia’s output comes as one stage in complex global value-added chains (GVCs)—suggests some loss of competitiveness over the last decade (Text figure 4, SIP: “Competitiveness and GVCs”).
- The external position is assessed to be substantially stronger than justified by medium-term fundamentals and desirable policies, with an estimated CA gap of 4.3 percent of GDP (Annex III). This assessment considers structural changes, but policies, notably Estonia’s strong fiscal position, have contributed as well. The policy gap is estimated at 2.2 percent of GDP, reflecting mostly the need for more cost-effective public health spending amid unfavorable demographics.



## 7. Financial soundness indicators suggest that the banking system remains strong, despite concerns about AML/CFT developments:

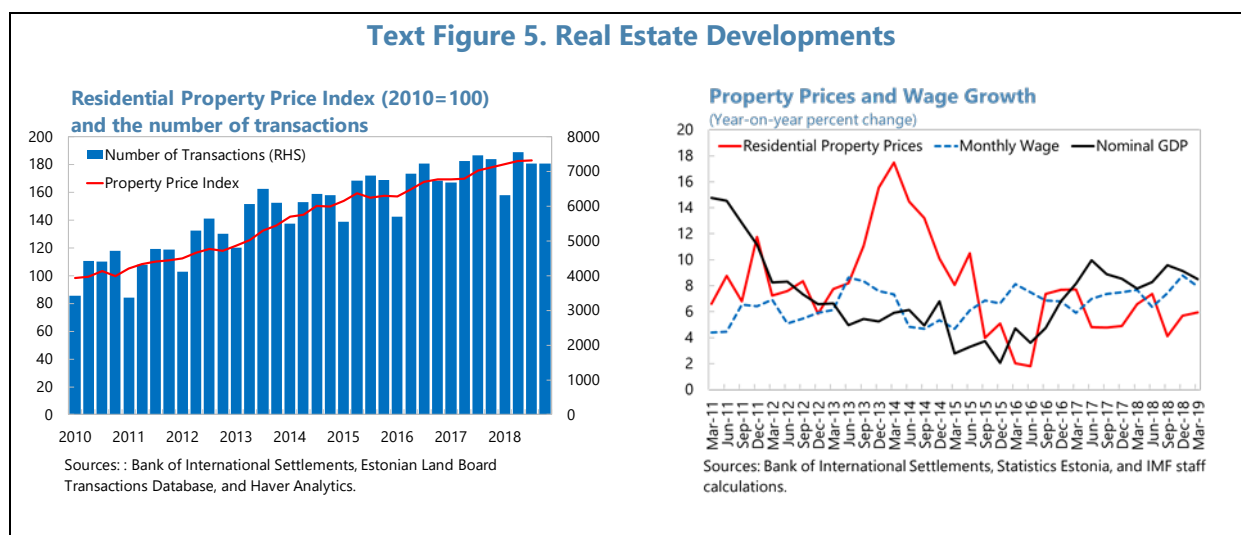
- Financial soundness indicators (Table 8) suggest that the banking system remains healthy. The growth of bank lending and leasing combined for non-financial corporations and households eased to 5 percent (y/y) in October 2019 from 7.1 percent in June 2019. Lending standards remain tight and may reflect on-going concerns about the insolvency regime’s problems.<sup>3</sup> The average interest rate, though low in absolute terms, is high compared to that of peers, as interest margins are wider due to official operations, but also low competition.
- Despite progress in implementing AML/CFT international standards, recent allegations of money laundering led the authorities to close the branch of Danske bank. However, the impact of this

<sup>3</sup> The insolvency regime is characterized by a longer time before starting another business, inability to initiate restructuring, lack of an early warning mechanism and special insolvency procedures for SMEs.

closure is expected to be minimal on the banking system's financial stability. Also the bank had sharply streamlined their non-resident operations (Text figure 4). Swedish and Estonian supervisors have recently launched an AML investigation of Swedbank, whose subsidiary is the second largest bank operating in Estonia (28.7 percent in asset share).

#### 8. Real estate market activity has moderated, and prices remained anchored to incomes.

Transactions in the housing market slowed by 1.6 percent (y/y) in 2018, compared to an increase of 8.2 percent the previous year. House prices increased by 5.7 percent in 2018, driven by the rising share of new houses (Text figure 5). Furthermore, the ratio of total liabilities to gross wages and salaries declined further from 114 percent in 2017 to 109 percent last year, suggesting a continued reduction in household leverage. Overall price trends remain strong, but aligned to income growth. During 2019H1, there were similar transactions overall compared to 2018H1, but fewer transactions for new apartments. The average price increased by 5.9 percent as new dwellings are being added at a slower pace.



## OUTLOOK AND RISKS

#### 9. The near-term outlook is favorable, but economic activity is expected to moderate in the medium-term.

- Real GDP growth is projected at 4 percent in 2019 (Table 1) supported by strong domestic demand on the back of a continued tight labor market. Inflation is expected to moderate due to lower energy prices. The tight labor market and wage pressures would continue to put upward pressure on inflation in the near term. Unfavorable global developments are expected to weigh on consumer confidence and the growth outlook.
- Over the medium term (2020–24) actual and potential GDP growth are projected to converge gradually to 2.8 percent, constrained by the level of productivity. The CA surplus would continue

to decline toward its norm, turning negative by 2024 due to strong import growth and weak foreign demand.

**10. External and domestic risks are tilted to the downside both from potential external shocks and domestic developments.**

- On the external side:
  - Escalating and unpredictable international trade barriers could prove more disruptive to global trade and growth than currently envisaged. Weaker growth in European partners could weigh on Estonian domestic investment, adversely affecting growth (SIP: “Competitiveness and GVCs”).<sup>4</sup>
  - Tightening financial conditions in Nordic economies and banking groups could pass through to the Estonian banking system, affecting lending volumes.
- On the domestic front, downside risks include the following : (i) continued labor shortages in the highly-skilled segment and potentially intensifying wage pressures, which could affect medium-term competitiveness; (ii) continued strong economic activity, which could accelerate the rise in housing prices and increase banks’ vulnerability to the real estate sector; (iii) continued AML/CFT concerns, which could increase market pressure on the banking system; and (iv) policy implementation risks, such as delays in key reforms, for example due to the need to achieve policy consensus.
- Against this backdrop of risks, Estonia’s substantial fiscal space, CA surplus, and strong macroprudential framework provide levers to opt for a more gradual adjustment path, if needed.

**Authorities’ Views**

**11. The authorities broadly concurred with staff’s views on the positive macroeconomic outlook and related risks.** They project the solid economic expansion to slow amid weak external demand. They agreed that productivity growth has lagged wage growth, and the gap could be even larger as current estimates do not consider the growing contribution of short-term foreign labor. They shared staff analysis that accounting for GVCs could lead to a faster appreciation of the real effective exchange rate, but considered that the CA surplus does not reflect domestic policy-related distortions. Instead, they believe it stems from the correction in the dynamics of the stock of net international investment from an initially largely negative position. They are concerned that if risks from trade tensions materialize into weaker growth in major trading partners, there could be adverse spillovers onto Estonian banks. They shared the view that domestic risks are to the downside given AML/CFT concerns.

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<sup>4</sup> Selected issues paper on Assessing Competitiveness and Exposure to Shocks Integrating Global Value Chains.

Box 1. Estonia: Risk Assessment Matrix<sup>1</sup>

Source of Risks, Likelihood, and Time Horizon	Impact on Estonia	Recommended Policy Response
<b>High</b> (short to medium term) <b>Rising protectionism and retreat from multilateralism.</b> Escalating and unpredictable trade actions and a WTO dispute settlement system under threat imperil the global trade system and international cooperation. Additional barriers, including investment and trade restrictions in technology sectors and the threat of new actions reduce growth directly and through adverse confidence effects and financial market volatility. Geopolitical competition, protracted tensions and fraying consensus about the benefits of globalization lead to economic fragmentation and undermine global rules-based order, with negative consequences for investment, growth and stability.	<b>High</b> As an open economy, that is highly integrated in global supply chains, Estonia would be affected, primarily through trade channels, including indirect ones, as well as confidence effects. Continued or escalating tensions with Russia could weigh on investment. Staff estimates that escalating trade tensions could reduce growth by up to 0.3 percentage points.	Participate in global and European policy responses.  Diversify risk by pushing ahead with export diversification.
<b>High</b> (medium term) <b>Weaker-than-expected global growth:</b> Weak foreign demand, Brexit or concerns about some high-debt countries makes some euro area business delay investment, while faltering confidence reduced private consumption. Inflation expectations drift lower and the region enters a prolonged period of anemic growth and low inflation.	<b>Medium</b> Estonia would be affected through trade, confidence, and FDI channels. Economic growth and employment would suffer.	Participate in coordinated policy response at the European level. Allow automatic fiscal stabilizers to operate. If shock is of sufficient magnitude, consider discretionary fiscal action.
<b>High</b> (short term) <b>Sharp rise in risk premia:</b> Abrupt deterioration in market sentiment due to policy surprises or renewed stress in emerging markets that could trigger underpricing risk. High risk premia cause higher debt service and refinancing risks.	<b>Low/ Medium</b> This could knock down spending and confidence more generally, especially in Nordic countries where bank funding conditions are strongly linked to global financial conditions.	Continue to enhance the macroprudential toolkit and draw down on the ample financial sector buffers including high capitalization and liquidity that are a good line of defense.
<b>Medium</b> (short to medium term) <b>Risks to competitiveness from a further tightening of the labor market.</b> Wage growth continues to significantly outstrip productivity growth for an extended period, starting to affect external competitiveness and to shift resources from the tradable to the nontradable sector.	<b>High</b> Exports are critical for Estonia's small open economy. Increased reliance on the nontradable sector could weaken economic dynamism and deteriorate the current account. Convergence with living standards in Western Europe could slow.	Contain wage growth, unlock additional labor resources, and boost productivity growth through policies to foster innovation. Increase public investment.
<b>Medium</b> (short to medium term) <b>Risks to vulnerable Nordic parent banks.</b> They could come under pressure from financial markets perceptions of risks to the Nordic economies, AML/CFT concerns or tighter global financial conditions with lower risk appetite.	<b>Medium</b> Curtailed credit supply, confidence loss, pressures on correspondent banking relationships, and liquidity pressures in local affiliates. Reduced economic activity in Nordic countries could slow Estonian exporters and undermine their ability to service loans.	Preserve high capitalization and liquidity. Ample financial sector buffers are a good line of defense. Strengthen cross-border supervision including cooperation with home-country authorities. Strengthen the effectiveness of the AML/CFT framework.

<sup>1</sup> The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

## POLICIES FOR BOOSTING AND SUSTAINING GROWTH

**12. Estonia faces a conflict between the contractionary policies that would address domestic imbalances and the expansionary policies that would resolve external ones, but the substantial fiscal space gives the authorities scope to adopt a longer-term approach.** With a positive output gap there is a clear case for unwinding the current expansionary fiscal policies. At the same time, an appreciation of the real effective exchange rate would be necessary to restore external balance. While the authorities have a clear preference for an upfront tightening of fiscal policy, with no net debt Estonia has scope to reorient fiscal policy in a more growth-friendly direction without the need for a sizable consolidation in the near term. The monetary policy stance is likely to remain expansionary for Estonia and could contribute to domestic demand pressures and the potential for financial imbalances. Against this backdrop, macroprudential policy should help contain financial sector risks that could arise from the low interest rate environment. Going forward, the challenges are threefold:

- gradually unwinding the positive fiscal impulse, while supporting productivity-enhancing investments;
- accelerating structural reforms to raise productivity and reduce inequality.
- strengthening the AML/CFT and macroprudential frameworks, along with cross-border supervision.

### A. Fiscal Policy: Moving to More Growth Friendly Reforms

**13. The government revised the medium-term budget strategy (MTBS).** The fiscal path is contingent on the implementation of the new financial requirement framework of the European Union (EU) from 2021 onwards. The MTBS (2020–23) aims to reach a balanced structural position by 2022. Additional revenue is being earmarked from high volumes of dividends incentivized by a lowering of the corporate income tax on regularly-distributed dividends from 20 percent to 14 percent. Expenditure increases are being envisaged mainly for infrastructure investment. The government debt burden is expected to reach 6 percent by the end of 2023.

**14. Under this strategy, the draft 2020 budget aimed at a slight headline deficit of 0.1 percent of GDP.** The budget has been presented under a performance-based budgeting framework aimed at improving accountability and transparency across ministries and agencies. The overall spending level is constrained by previous general government budget deficits. Against this backdrop the draft budget appropriately envisages a general government structural deficit of 0.7 percent of GDP, a half percentage point improvement over last year. Under the government's commitment not to introduce new taxes, a limited number of revenues and spending measures support the budget:

- The planned rise of tobacco excise duty by 10 percent was replaced by a more modest 5 percent increase per year for 2020–22.



- The anticipated expenditure measures include (i) additional wage increase of 2.5 percent for priority occupations (teachers, internal security, cultural and social workers); and (ii) an increase of the old age pension by €45 of which €7 is an extraordinary increase.
- Staff projects a structural deficit of 0.6 percent of GDP in 2020, close to that of the authorities. But staff expect wages to be higher compared to the budget (0.3 percent of GDP), but will be offset by higher personal income, social contribution, and VAT taxes (0.2 percent, 0.1 percent, and 0.1 percent of GDP respectively). In line with the authorities, public investments increase in nominal terms, but decline relative to income.

**15. Prudent public finance policy and low debt have resulted in substantial fiscal space.**

Gross debt remains the lowest in the EU—8 percent of GDP—and is fully matched by fiscal reserves, meaning that net debt is zero. Debt is projected to decline further under the baseline and stress scenarios and debt burden indicators remain below corresponding benchmarks. If negative shocks materialize, the authorities should let automatic stabilizers operate fully. Also, in a case of a severe economic downturn, policymakers could consider an expansionary fiscal policy, without jeopardizing debt sustainability. There are no major external debt sustainability concerns (annex IV).

**16. Fiscal policy should unwind, in the short term, the positive fiscal stance.** With the economy operating above potential in a low interest rate environment, staff advises to unwind some of the fiscal impulse estimated at an aggregated 1.3 percent of GDP during 2017–19. This should be achieved by accelerating savings from recurrent expenditure rather than by deferring public investment projects, as the government now plans. Some of the anticipated savings could be earmarked for enhancing innovation policies by more spending on R&D in the short term—currently below the target of 1 percent of GDP—education and health.

**17. Over the medium-to-long term, fiscal policy should support growth with productivity-enhancement investments.** With the fiscal position above the medium-term objective of a deficit limit of 0.5 percent of GDP, there will be sizeable scope for using the substantial fiscal space over the medium and long term. On the spending side, despite progress in recent years, staff recommends more productivity-enhancing investments, high-quality structural policies (work ability reforms, active labor market policies (ALMPs), pensions and health) that would increase potential output. In addition, more investment in R&D that would bolster incentives for innovation. On the tax side, staff urges for further enhancement to support labor supply, particularly among low-income households, and to reduce inequality significantly. In this context, staff's medium-term projections, compared to the authorities' MTBS, anticipate a slightly more expansionary fiscal stance that takes advantage of the strong fiscal and external positions to support productivity growth and external rebalancing. This medium-term fiscal stance would not pose sustainability concerns, but would allow the authorities to comfortably support on-going reforms.

**18. Public sector wage developments should be anchored by fundamentals.** A general wage increase is approved in the budget, but line ministries have the leeway to reallocate resources to wages by saving from other lines. This has led to public wage growth exceeding consistently the budgeted increase (as well as private sector wage growth). The need to realign wages for priority

occupations has also been a large contributing factor to wage growth. Staff acknowledges that there should be enough room for an adequate wage adjustment for income convergence with Western Europe. However, persistent divergence<sup>5</sup> between wage growth and productivity growth could over time impact adversely competitiveness. While private sector minimum wages are the outcome of negotiations between trade unions and employers, public sector wages have an important demonstration effect. It is therefore important that public sector wage growth remain anchored to productivity growth in the broader economy.

**19. The government's agenda to improve public investment management (PIM) is welcome and should be strengthened.** The PIM framework is strong, but the assessment exercise done in 2018 noted scope to improve on planning and allocation of resources. However limited progress has been made in implementing the PIMA recommendations (Annex V). Improving PIM has become more urgent as budgetary constraints are calling for efforts to tap into alternative sources of financing, including public private partnerships. In that context, staff recommended broadening the terms of reference of the new working group on PPPs to include following up of the PIMA recommendations, while ensuring that the committee be adequately staffed. To improve fiscal management and accountability, the authorities and staff discussed the possibility of conducting a fiscal transparency exercise.

### ***Authorities' Views***

**20. There was broad agreement on the policy mix and the need to follow up on the PIMA recommendations.** The authorities noted that their policy priorities entail more cost-effective spending on infrastructure and pensions. They however highlighted that meeting these priorities is being complicated by the recently accumulated fiscal deficit. They concurred with staff that the current monetary policy environment is expansionary for Estonia. In this context, with a positive output gap, there was consensus for unwinding the expansionary fiscal stance. Over the medium term, it was agreed that part of the substantial fiscal space should be used to contribute to raising potential growth, by spending more efficiently and effectively on R&D, health, education, and infrastructure. The central bank however cautioned against the risk of drawing on the fiscal space for short-term and poorly evaluated and vetted projects. On PIMA implementation the ministry of finance welcomed the proposal to broaden the TORs of the PPP committee to cover PIMA implementation.

## **B. Long-Term Fiscal Costs and Pension Policy: Preserving Viability and Sustainability**

**21. Projected demographic changes would entail additional fiscal costs.** The total population is expected to decline by 5 percent by 2030 and 13 percent by 2050 (Text figure 6). Under current policies, fiscal costs related to pensions and healthcare are accordingly projected to

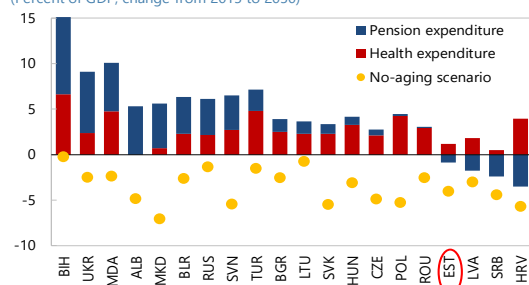
<sup>5</sup> During the last three years, public wage grew at about 10 percent on average and 11 percent in 2019H1, while nominal productivity grew only by 6.4 percent in 2016–18 and 8.6 percent in 2019H1, respectively.

rise by nearly 3.2 percentage points of GDP on average for 2015–50 (Annex VI). While the current pension system is fiscally sustainable, this largely reflects its relatively low replacement rates, which in turn generate concerns about its social viability: poverty among the elderly is already quite high, and will grow along with the aged population in absolute terms under current policies. Bringing the replacement rate from its current average of nearly 24 percent to the minimum level of 40 percent recommended by international standards would increase fiscal costs, on annual average, by 4.8 percentage points during 2019–50.

**Text Figure 6. Macroeconomic Impact of Demographic Changes**

**Projected Change in Age-related Spending:  
Mid-Fertility Scenario**

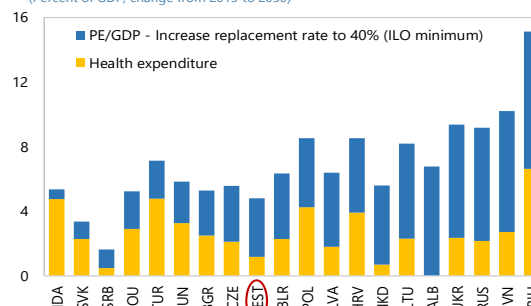
(Percent of GDP, change from 2015 to 2050)



Source: IMF staff calculations.

**Projected Age-Related Spending Increases**

(Percent of GDP, change from 2015 to 2050)



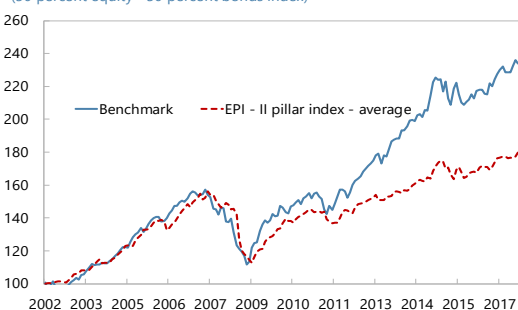
Source: IMF staff calculations.

**22. The situation is further complicated by prospective changes to the second pillar of the pension system.** Introduced in 2002, the mandatory pillar II acts as a supplement to the publicly managed and compulsory pillar I system. Currently the system has about €5 billion (15 percent of GDP) in savings, and 83 percent of the funds are invested abroad. However, reflecting partly the global interest rate environment net returns have been relatively low, with relatively high (though declining) management fees (Text figure 7). Against the backdrop of public discontent about low returns, the proposed changes to the pillar II system aim at providing greater individual choice in investment options and making participation voluntary. The changes also introduce an option for lumpsum withdrawal of benefits or receiving an annuity from the pension fund or an insurance company.

**Text Figure 7. Developments in the Second Pillar Pension System**

**Second Pillar Pension Fund Performance**

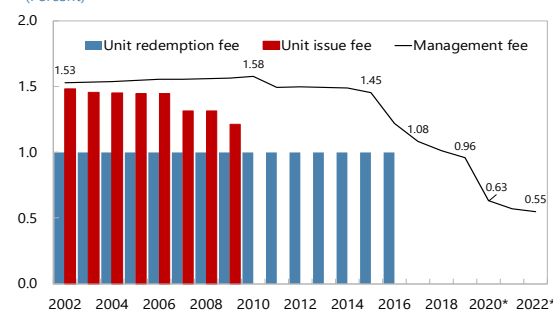
(50 percent equity - 50 percent bonds Index)



Source: Estonia Authorities

**Evolution of Second Pillar System Fees**

(Percent)



Source: Estonia Authorities

**23. Staff see more scope to maintain the pillar II pension system as mandatory while tackling its perceived shortcomings.** Allowing individuals to opt out of the system or to withdraw their investment earlier would lead to lower retirement incomes and higher old-age poverty, with an increased burden for the budget. During a 1-Day Workshop jointly organized by the central bank and the Fund<sup>6</sup>, staff also highlighted other considerations to be factored into the review process: (i) given the size of the pillar II savings, injecting into the economy a sizeable amount of cash from pensions could potentially support activity in the short term, but also could be source of macroeconomic volatility; (ii) the still-developing saving culture makes it critical to safeguard the complementary role played by pillar II in capital market formation; and (iii) a significant decline of the participation rate in pillar II could lead to an erosion of the funded pension business and possibly translate into higher costs for those retaining their accounts. In that context, staff recommended to keep the pillar II mandatory. It also suggested that the authorities explore options to boost net returns for savers by better leveraging technology to reduce administrative costs.

### **Authorities' Views**

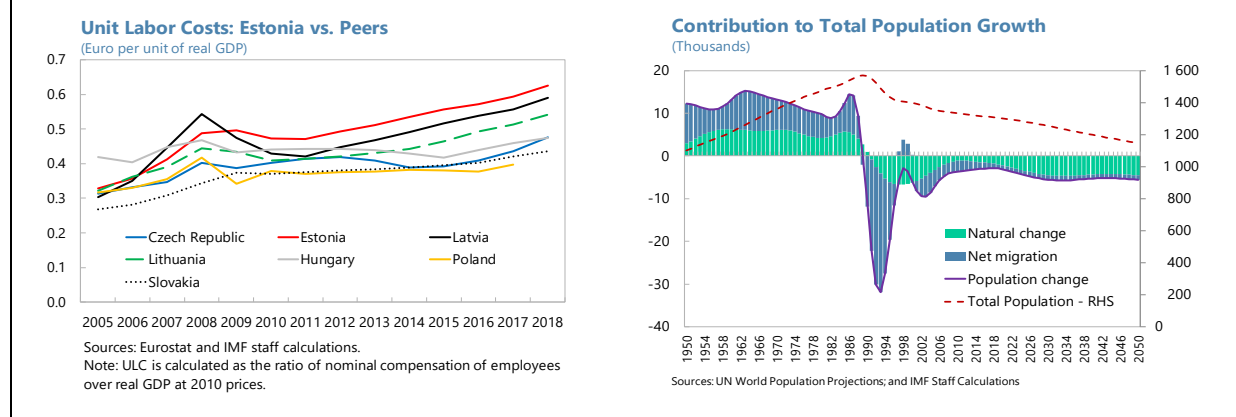
**24. There was consensus on the need to review the pension system, but views were mixed on making pillar II voluntary.** On the one hand, the ministry of finance indicated that government would continue to support the process for making pillar II voluntary as this feature is central to the political mandate of the current coalition. It was reiterated that it was important to increase freedom of choice when making pension-related decisions. On the other hand, the central bank is of the view that pillar II savings will grow satisfactorily in line with the need for a sustainable pension system, but allowing participants to withdraw cash for consumption purposes could lead to destabilizing macroeconomic effects.

## **C. Structural Reforms: Accelerating Productivity Growth**

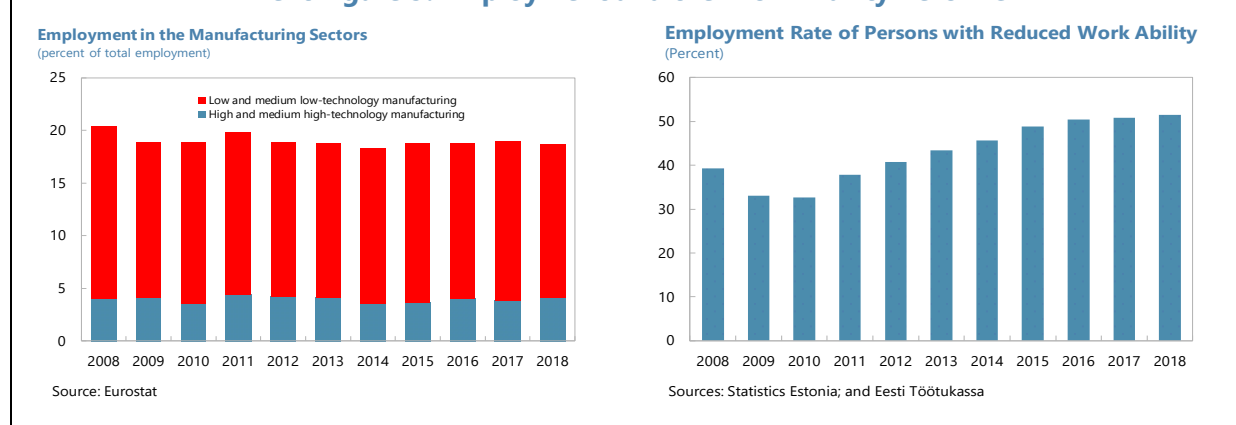
*With ample fiscal reserves, there is still opportunity to accelerate ongoing reforms.*

**25. Demographic challenges call for a sustained policy focus on raising productivity.** Thanks to reforms and strong economic activity, employment and labor force participation rates have increased, while unemployment has dropped to record-low levels. However, unit labor costs increased by 9.5 percent in 2018 and are much higher than in EU peers, raising concerns about medium-term competitiveness (Text figure 8). Productivity growth has remained weak since the global financial crisis. Moreover, population ageing, through a decline in the workforce and productivity, is projected to cut long-term growth in half by 2050 and further constrain labor supply. These adverse demographics make increasing labor supply critical for long-term growth. A simulation of projected changes in the composition of the work force confirms that ageing could potentially lower productivity annually by 0.1 percentage points on average over 2019–50 (Annex VI).

<sup>6</sup> The Eesti Pank and the IMF organized a workshop that took place on September 30, 2019 in Tallinn that drew various stakeholders including pension experts to discuss experiences from Poland, Hungary, Sweden, and Estonia.

**Text Figure 8. Unit Labor Costs and Population Trends**

**26. Improved integration of innovation programs and enhanced oversight could contribute to improve productivity.** Estonia has made progress in the design of programs aimed at enhancing productivity and innovation. Among others, the “Estonia 2020” reform strategy helped to strengthen the alignment of education system outcomes with needed skills, and to better articulate life-long learning and vocational education. However, the economy continues to be dominated by low and medium technology sectors which yield low productivity (Text figure 9). Despite closer oversight by the Research and Development Council (RDC) in the Prime Minister’s Office, public spending on R&D remains constrained. The combined public and private investment in R&D is short of the Europe 2020 strategy target of 3 percent of GDP that was adopted by Estonia. Further, human capital needs and innovation have yet to be fully integrated into the R&D strategy. Enterprise Estonia has made progress in promoting startups, but its activity could better encompass the intensification of innovative programs. Therefore, there is a need to assess the effectiveness of the RDC and to take corrective measures, if needed.

**Text Figure 9. Employment and the Work Ability Reforms**

**27. Other policies to boost labor supply could also help to raise long-term output:**

- *Work ability reforms.* Since coming on stream in 2016, these reforms are bringing a significant number of inactive individuals into the labor market with employment rates increasing among

them from 33.1 percent in 2010 to 51.5 percent in 2019 (text figure 9). Participation in training remains to be strengthened and more investment is called for skill enhancements.

- *Streamlining unemployment benefits.* The social protection system<sup>7</sup> has relatively low coverage—only 33 percent of newly registered unemployed people receive unemployment insurance benefits and 26 percent receive unemployment allowance—and replacement rates of unemployment benefits are equally low—benefits are guaranteed up to only 360 days. Against this backdrop, staff strongly supports on-going work reviewing eligibility, enhancing flexibility of the system by allowing temporal employment, and making the duration of benefits shorter in good times and prolonging access during recessions.
- *Integrating more foreigners into the labor market by further reducing constraints to migration.* The Aliens Acts was amended in 2018 to exempt top specialists<sup>8</sup> from the immigration quota. Further, short-term employment of foreign employees is now permissible for 12 months compared to 9 months previously. But the immigration quota, which applies to nationals of non-EU and non-EEA countries, remains at 0.1 percent of the population per year.

## **28. Modernizing the insolvency framework by updating the legislation will be key.**

According to estimates, insolvency proceedings take around three years (1.7 years for OECD) and the recovery rate is barely 36.1 percent for fully secured credit (versus 70.2 percent on average for the OECD).<sup>9</sup> Similarly, the debt restructuring framework is weakened by the inability of creditors to take action and by the lack of priority to new financing (text figure 10). The slow restructuring process traps real and financial capital that could have been released for productive purposes. In line with the European Directive on Restructuring and Insolvency,<sup>10</sup> the authorities are drafting a new bankruptcy law that incorporates several innovations: proposing specialized judiciary accords; creating an insolvency service; discharging debt within a reasonable time; and transposition of the EU directive to align with both bankruptcy and pre-insolvency procedures.

### **Authorities' Views**

**29. The authorities agreed on the importance of boosting productivity.** They concurred that more could be done in terms of R&D expenditure, but noted that while it has stagnated relative to GDP (owing to the rise in GDP), absolute levels of R&D spending have increased. They took note of the recommendation to strengthen the oversight of the RDC and their view was that budgetary constraints were slowing progress to achieve the target of upscaling spending on R&D to 1 percent of GDP. They see potential advantages in investing more in training and upskilling of inactive

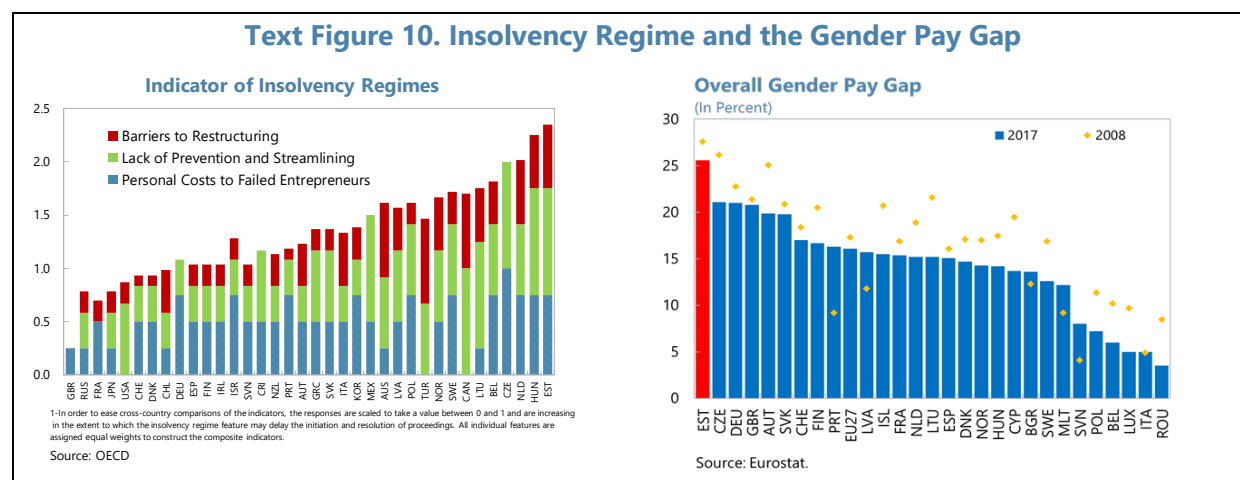
<sup>7</sup> Social protection comprises unemployment insurance benefits—function of previous earnings and financed from statutory unemployment insurance contributions—and unemployment allowance—a flat rate that is financed from the budget.

<sup>8</sup> Non-Estonian citizens with professional qualifications in any area, paid by their registered employer, at least double the annual Estonian average gross salary for working in their field of specialization in Estonia.

<sup>9</sup> World Bank Ease of Doing Business Report.

<sup>10</sup> The new EU directive aims at harmonizing the framework for preventive restructurings and to ensure that all jurisdictions can discharge debt within a reasonable time.

workers and remain on course to streamline unemployment insurance benefits. They agreed with the need to modernize the insolvency framework and see no major hurdles to adopt the EU directive.



## D. Inequality and Relative Poverty: Supporting Inclusive Growth

**30. Despite progress over the last decade, income inequality and relative poverty remain elevated.** (SIP: “The Dimension of Inequality in Estonia”). During the last five years, income inequality has been declining, although it is still above the EU average.<sup>11</sup> The relative poverty rate<sup>12</sup> was also among the highest in Europe in 2017. A pervasive and elevated gender pay gap (GPG) puts women at a high degree of vulnerability (text figure 10) and elderly poverty is also relatively high.<sup>13</sup> Real median equivalized disposable income has increased over the last decade for all age groups, but the proportion of the elderly that are at risk of poverty, doubled between 2007 and 2017, reaching 32 percent. Differences in economic sector, economic status, age cohorts, education, the county of residence and gender have been important drivers of income inequality in Estonia.<sup>14</sup>

**31. Policies to address inequality should seek to preserve the strong gains in labor force participation and employment of the past few years.** Continued reductions of the labor tax wedge on low-income households and secondary earners, like in the 2018 labor tax reform (Annex VII), would bring stronger incentives for labor force participation. Estonia’s female labor participation is estimated at 78.9 percent in 2019Q2, among the highest rates in Europe. Staff pushed for

<sup>11</sup> The acceleration of inequality around the year 2013 and 2014 could be due to a slow-down in GDP and wage growth respectively. Real GDP growth was 1.3 percent in 2013 and wage growth has slowed down to 5.9 in 2014 (from 7 percent a year earlier).

<sup>12</sup> Relative poverty is defined as the proportion of the population with a disposable income lower than 60 percent of the median disposable equivalized income. The median equivalized disposable income is the total income of a household that is available for spending or saving, divided by the number of household members weighted by age.

<sup>13</sup> Women vulnerability could also be explained by their relatively high life expectancy relative to men (82.4 compared to 72.9 years for men) as the at-risk of poverty is particularly high for persons living alone in this age group.

<sup>14</sup> See Selected Issue Papers on Dimensions of Inequality in Estonia.



extending the availability of child care, specifically for children up to 3 years, which would provide greater opportunities for women to pursue full-time employment and help reduce the GPG. Further extending the pay transparency to other sectors in addition to the public sector would also be a significant step in GPG reduction. A stronger social safety net for the older population would also reduce income inequality. Raising property taxes would also provide scope to reduce inequality.

### Authorities' Views

**32. Authorities broadly agreed with the staff's assessment of inequality and relative poverty.** While absolute poverty has fallen since the crisis thanks to increases in family benefits and the minimum wage, the relative weight of the elderly among the poor has grown as pensions have failed to keep pace with wages. They also highlighted the regional aspect of inequality and further indicated that more unemployed people are also at a high risk of poverty because of a less generous unemployment benefit system. Regarding the GPG, authorities stressed that national data with a broader coverage suggest that significant progress has been made toward the 2023 target, but agreed that more work needs to be done to reduce GPG.

## E. Macrofinancial and AML/CFT Developments: Safeguarding Stability

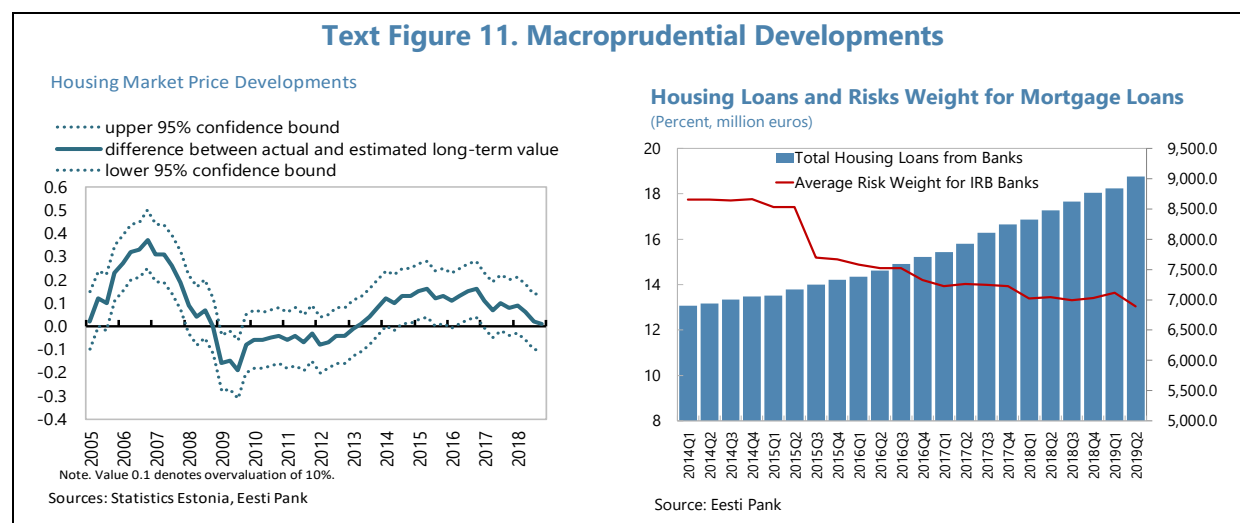
**33. The banking system is profitable, liquid, and solvent.** Banks have remained profitable, reflecting cost efficiency and market concentration. Non-performing loans have been low. Liquidity coverage ratios are above the regulatory minimum requirements and banks have ample capital buffers. Strong wage growth is supporting demand for household loans, which despite strong output growth have remained steady at just below 40 percent of GDP. A crisis management simulation for eight Nordic-Baltic countries conducted in January 2019 underscored the need for enhanced coordination among agencies and for improved communication among home and host authorities.

**34. Macroprudential policies are appropriate and risks are contained, but continued monitoring is warranted.** Mortgage lending activity remains conservative—the average loan-to-value ratio is 74 percent, below the limit of 85 percent; the average debt-service ratio is 10 percentage points below the ceiling of 50 percent; and maturity rates average 25 years, below the limit of 30 years<sup>15</sup>. Housing prices levels are anchored with fundamentals (text figure 11). More recently however risk weights used in the computation of capital requirements for two systemic banks that use internal ratings-based models—and which account for 80 percent of housing loans—have declined from 18 percent in 2014 to 13 percent in 2019. The decline in risk weights does not seem to be mirrored in a decline in the risks associated with housing loans (Text figure 11). In response, the central bank introduced an average risk weight of 15 percent for mortgage loans that

<sup>15</sup> The LTV refers to the sum of all loans or loan tranches secured by the borrower on a property at the reporting date relative to the current value of the property, while the DSTI is the annual total debt service relative to the borrower's total annual disposable income at the moment of loan origination. Maturity at origination' means the duration of the residential real estate loan contract expressed in years at the moment of loan origination.



applies to these two banks. In line with credit and nominal output developments, and the credit gap, the countercyclical capital buffer is appropriately set at zero.



**35. The AML/CFT regime has improved, amid increased international scrutiny** (SIP: “AML/CFT Supervision”). Cases involving banks operating in Estonia have drawn scrutiny and affected the reputation of the financial sector. In this context, the Estonian Financial Supervisory Authority (EFSA) has continued to refine its extensive off-site supervision, conduct full-scope on-site inspections, and actively employ its powers, including precepts and license withdrawals, to enforce financial institutions’ compliance with their AML/CFT-related obligations. More broadly, the AML/CFT maximum fine has been increased, and additional resources devoted to countering illicit finance. Also, the EFSA issued extensive guidelines to supervised entities, conducted an in-depth review of bank risk profiles and initiated preparation of a new ML/TF national risk assessment.

**36. Continued reform, including of AML/CFT supervision, will be critical to mitigate evolving risks.** The process to impose monetary penalties for AML/CFT violations should be streamlined, and the maximum penalty further increased. The number of financial institutions that may be covered by inspections each year should be increased by introducing risk-based targeted and thematic AML/CFT inspections and/or further increasing supervisory resources. The recently-approved Center for Strategic Analysis should be created expeditiously and fully operationalized, with adequate capacity. Finally, government should hold internal discussions on consolidating AML/CFT supervision at the EU or Nordic-Baltic levels and arrive at a formal position. The AML/CFT regime is scheduled to undergo an assessment by MONEYVAL<sup>16</sup> in 2021. Potential impact of AML/CFT risks on the macroeconomy is yet to be quantified.

<sup>16</sup> The Council of Europe’s Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism.

**Authorities' Views**

**37. The authorities broadly agreed with staff's recommendations that there is room for strengthening the AML/CFT supervision of financial sector.** The authorities noted the reduction in ML/TF risks facing the Estonian financial sector, particularly from non-resident activity. The authorities stressed that the current staffing level is generally enough for EFSA's robust supervision going forward and agreed on the benefits of developing targeted and thematic on-site inspections. Discussions about the optimal process for imposing fines on financial institutions are ongoing. They observed that some of the recommendations, such as on development of formalized procedures for addressing identified violations, are already part of the EFSA 2019–22 Strategy.

## STAFF APPRAISAL

**38. The economy remains strong.** Growth eased further in 2019, but is projected to remain solid on the back of strong private consumption. With a positive output gap, wages are growing, and unemployment is at historic lows, reflecting tight market conditions. House prices remain in line with fundamentals. Headline and core inflation are above the euro area averages. The external position remains substantially stronger than implied by medium-term fundamentals.

**39. The medium-term outlook is for slower growth.** Looking ahead, growth is expected to revert toward its long-term potential, which is limited by Estonia's unfavorable demographics and still-low productivity growth. Risks arise mainly from escalating and unpredictable international trade barriers, a growth slowdown in the main trading partners, and tightening financial conditions in Nordic countries. Domestically, continued wage pressures could hurt competitiveness.

**40. The policy mix needs to address imbalances, while supporting economic activity.** With the economy currently operating above potential, the current expansionary fiscal policy should be unwound. Over the medium term an appreciation of the real effective exchange rate is needed to restore external balance. In that context, the substantial fiscal space should be used to reorient fiscal policy to a more growth-friendly path. With monetary policy likely to remain expansionary for Estonia, macroprudential policies should aim to help contain financial sector risks that could arise from the low interest rate environment.

**41. The substantial fiscal space should be used to raise productivity-enhancing investments, speed up work ability reforms and ALMPs, and enhance social spending to prepare for long-term demographic challenges.** More investment in R&D would bolster incentives for broadening the economy's innovation base. On the tax side, further enhancements would be welcome to support labor supply, particularly among low-income households, and to further reduce inequality. Over the medium term, such a policy stance would also help address Estonia's external imbalance.

**42. Changes to the pension system should preserve its viability and sustainability.** The current pension system is fiscally sustainable owing to its low replacement rate, but its social viability could be enhanced. Proposed changes to the voluntary pillar II system risk moving in the opposite

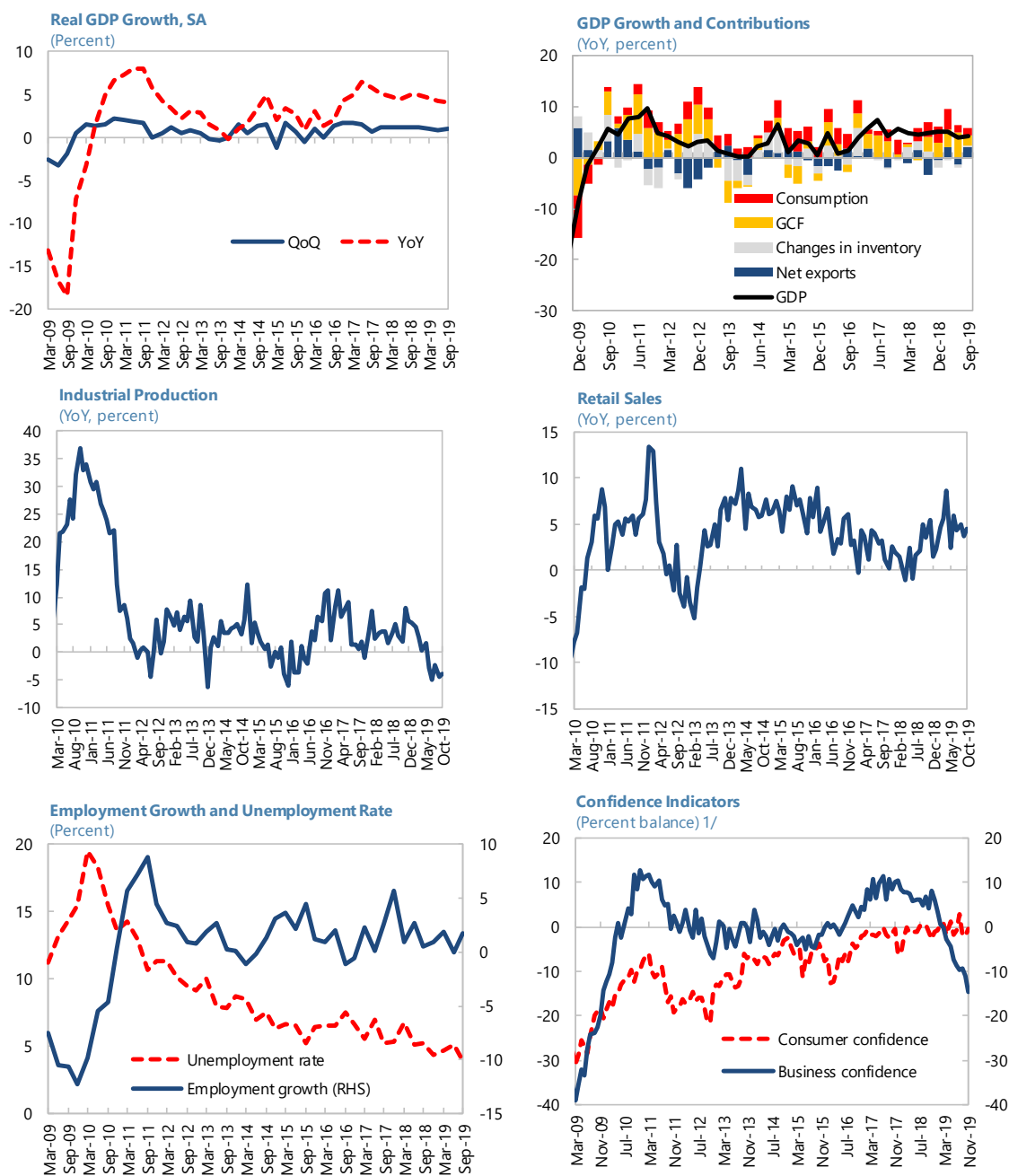
direction, however, and could also complicate macroeconomic management and slow capital market development. Staff urges the authorities to adopt a cautious approach in the review of the pension system, and to support the development of technological infrastructure to address concerns with the current system, including its high overhead costs.

**43. Implementation of structural reforms needs to be accelerated, including to address inequality.** The 2018 tax reform has helped to reduce the labor tax wedge for low-income earners, but more needs to be done to raise incentives for labor participation. In this context, the substantial fiscal space could be used for measures to increase public investment and labor supply to lift long-term growth. Structural reforms and other policy efforts should focus on further expanding firms' innovation capacity, upscaling public and private investment in R&D. Also, it is important to accelerate labor market reforms by spending more on training to bridge skills gaps, enhance support services, and boost rehabilitation measures. Improving economic opportunities for women by closing the gender pay gap and further supporting childcare arrangements would promote growth potential.

**44. The authorities should continue to monitor closely macrofinancial developments and there is room to enhance cross-border supervision.** Staff welcomes the introduction of an average risk weight of 15 percent for mortgage loans, to be applied to the two systemic banks. In line with credit and macroeconomic developments, the level of the countercyclical capital buffer is appropriate. However, staff urges continued monitoring of macrofinancial and housing developments and related risks, while standing ready to activate macroprudential tools should cyclical risks intensify. The authorities should also seek to enhance cross-border supervision in line with the conclusion of the recent simulation exercise.

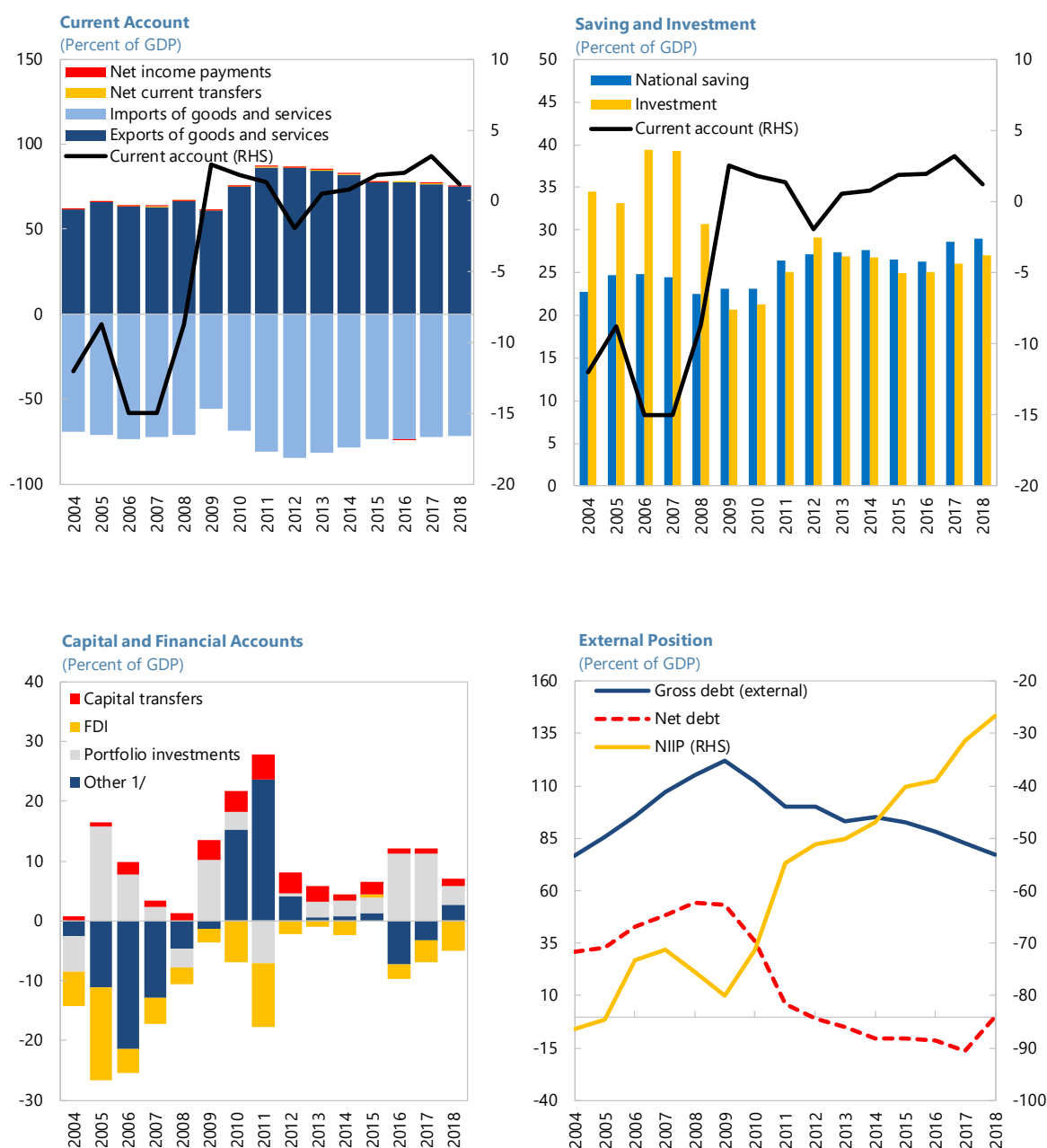
**45. Continued reform in the AML/CFT regime is warranted.** The notable improvements in the AML/CFT regime indicate a strong will to deal with related risks. Efforts to conduct an in-depth review of bank risk profiles and conduct a new ML/FT national risk assessment are welcome. Going forward, increasing the number of on-site AML/CFT inspections, ensuring the timely and dissuasive fines and considering regional consolidation of supervision at the regional level would contribute to strengthening the AML/CFT regime.

**46. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.**

**Figure 1. Estonia: Real Sector Developments, 2009–19**

Sources: Haver; and national authorities.

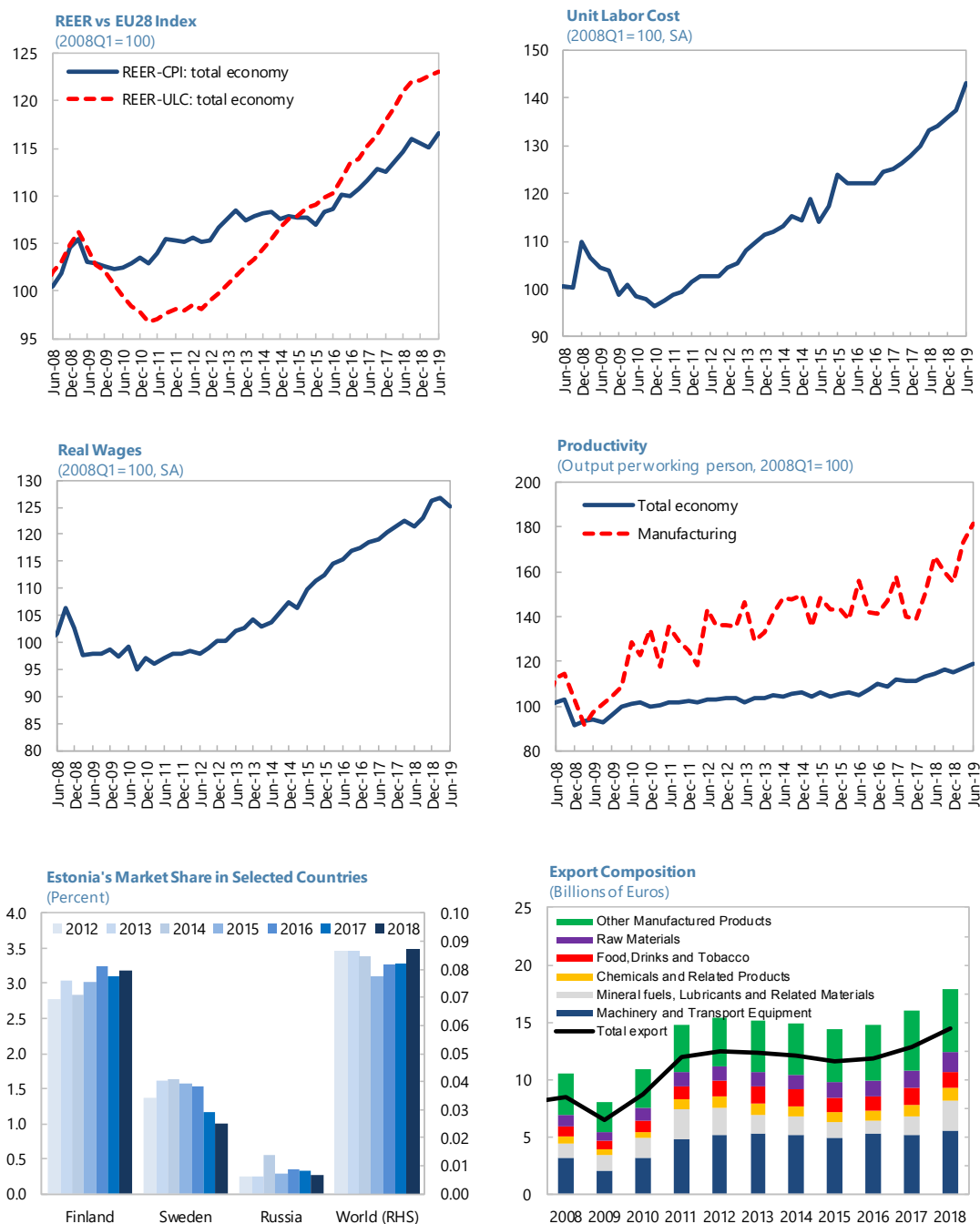
1/ Balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

**Figure 2. Estonia: External Developments, 2004–18**

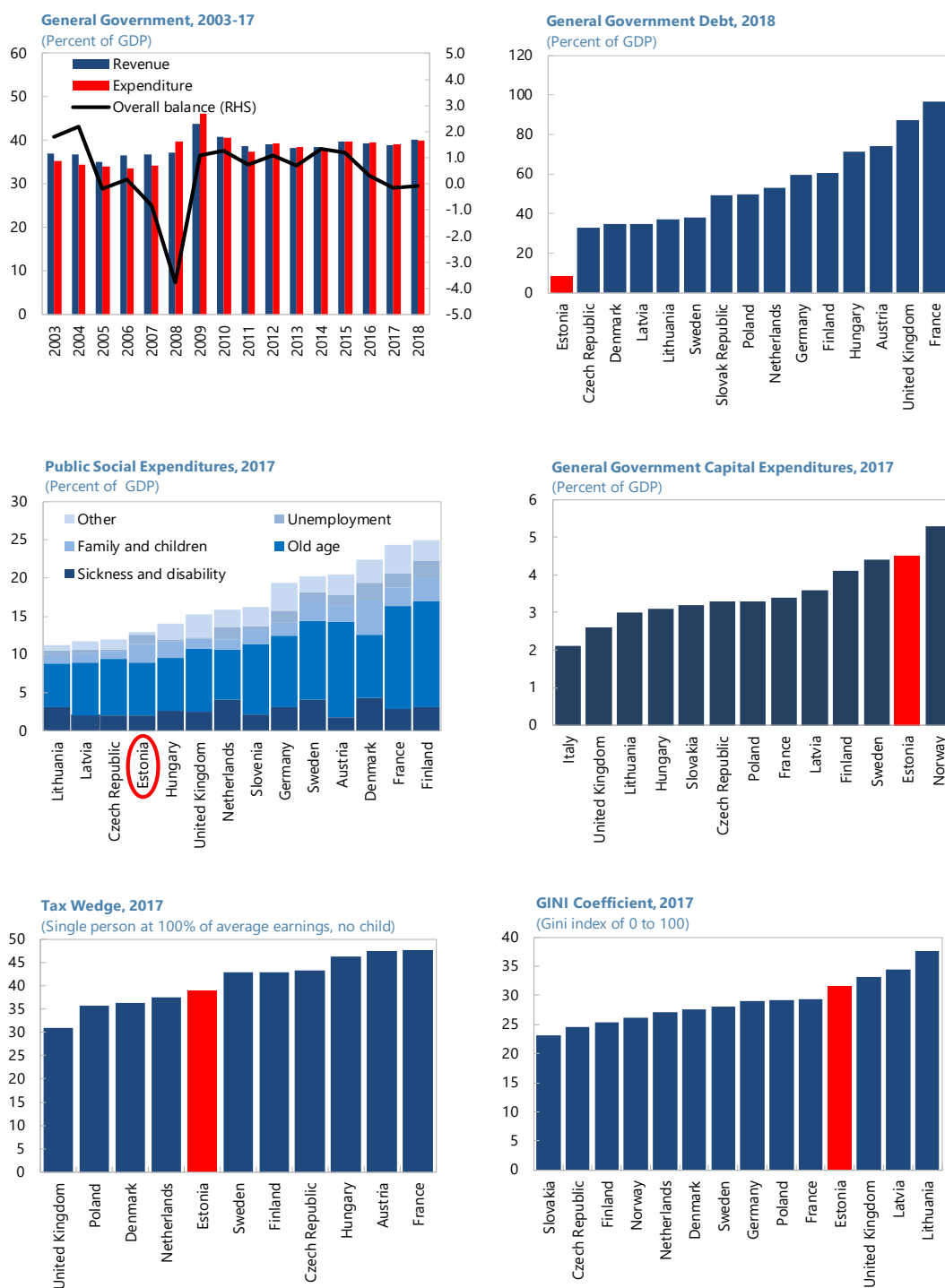
Sources: Haver; Statistics Estonia; and IMF staff calculations.

1/ Other is defined as the sum of financial derivatives, and other investments.

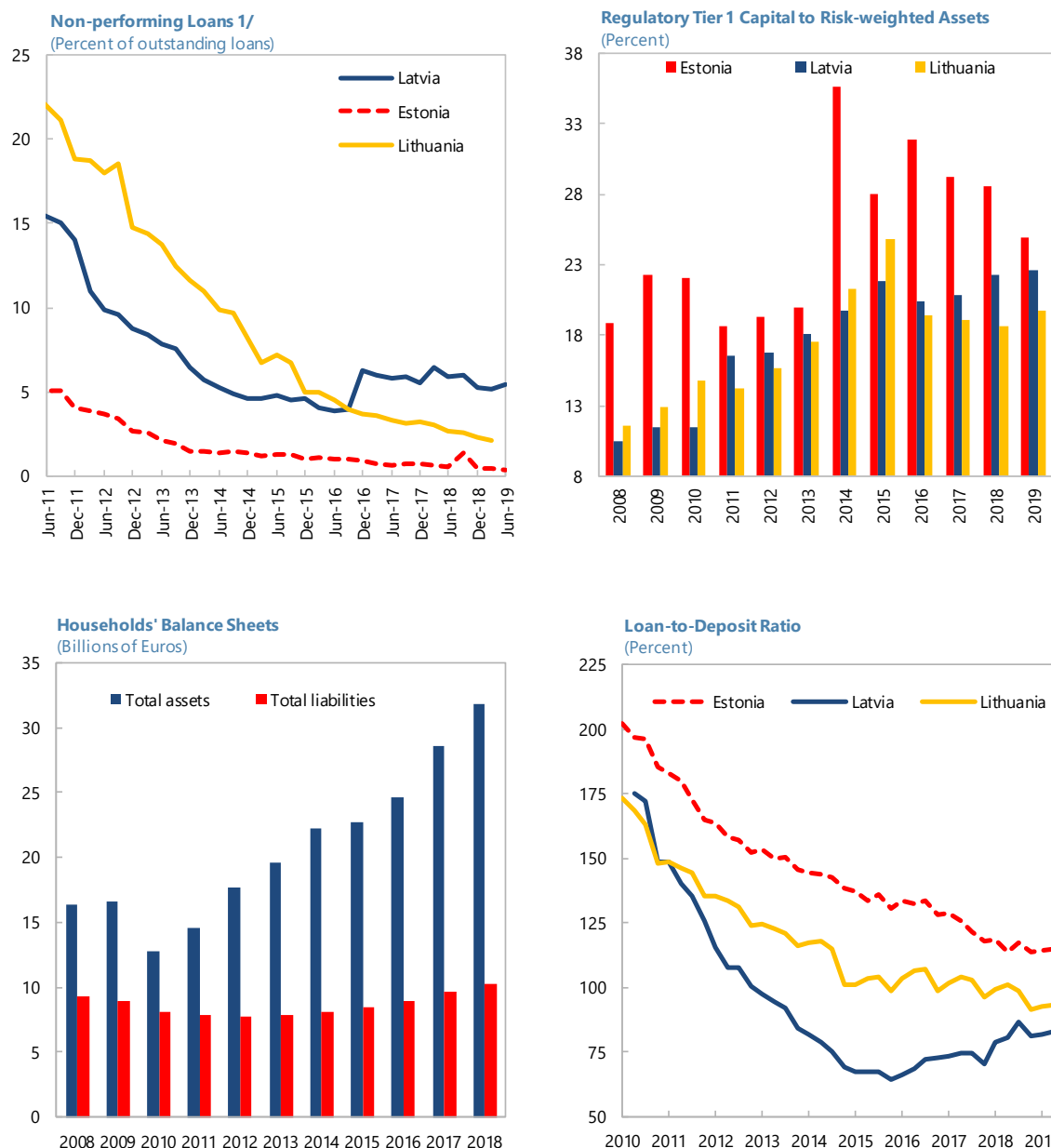
Figure 3. Estonia: External Competitiveness, 2008–19



Sources: DOTS; Haver; WEO; and EU Commission.

**Figure 4. Estonia: Fiscal Developments and Structure, 2003–18**

Sources: WEO; Eurostat; and OECD.

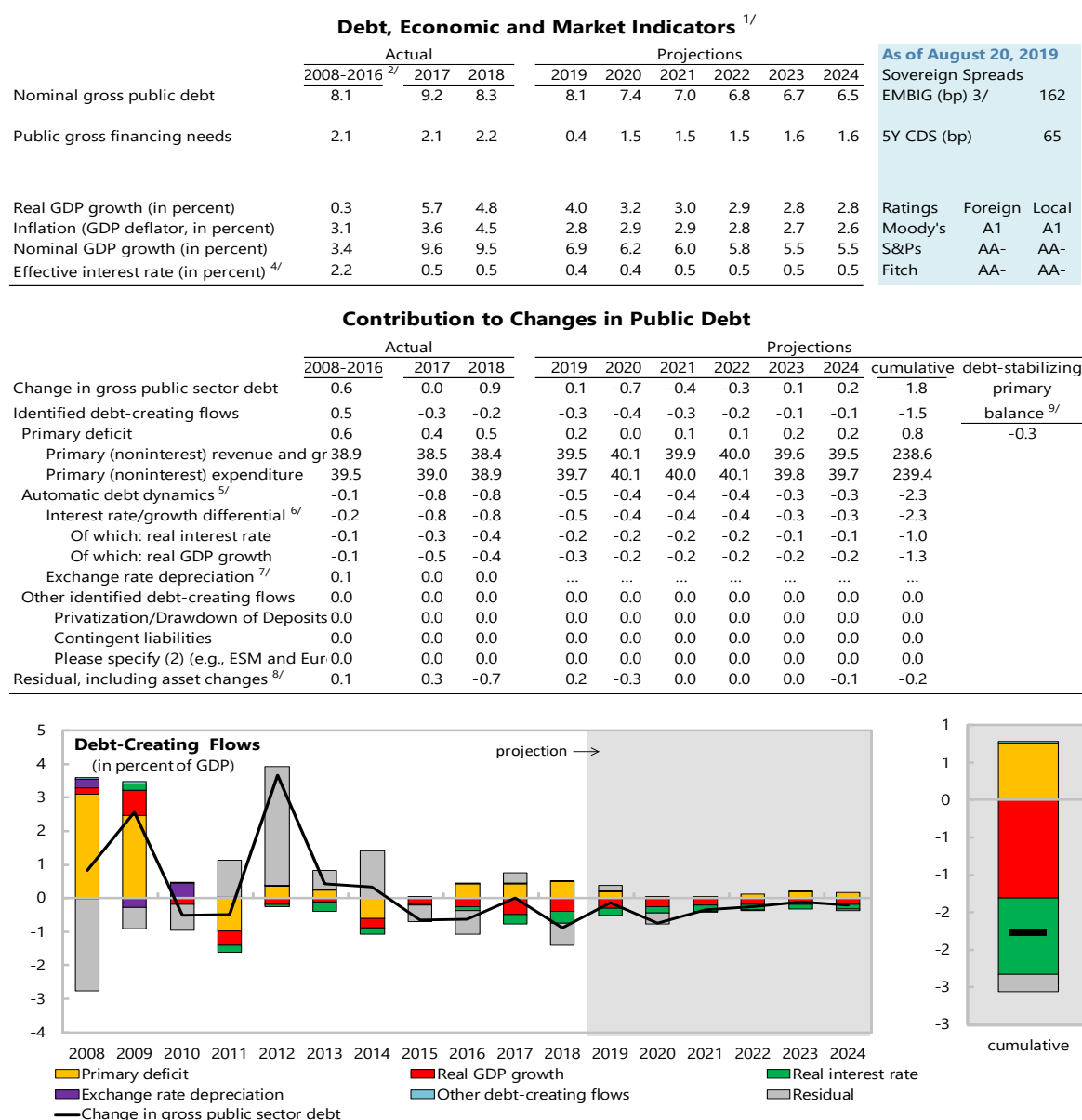
**Figure 5. Estonia: Financial Sector Developments, 2008–19**

Sources: Haver; national authorities; and IMF staff calculations.

1/ In Lithuania, NPLs include impaired loans and loans past due by 60 days but not impaired; in Latvia, NPLs are loans overdue by more than 90 days; in Estonia, they are loans overdue by more than 60 days.



**Figure 6. Estonia: Public Sector Debt Sustainability Analysis (DSA)—Baseline Scenario**  
(In percent of GDP unless otherwise indicated)



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over German bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as  $[(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+\pi g)]$  times previous period debt ratio, with  $r$  = interest rate;  $\pi$  = growth rate of GDP deflator;  $g$  = real GDP growth rate;  $a$  = share of foreign-currency denominated debt; and  $e$  = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

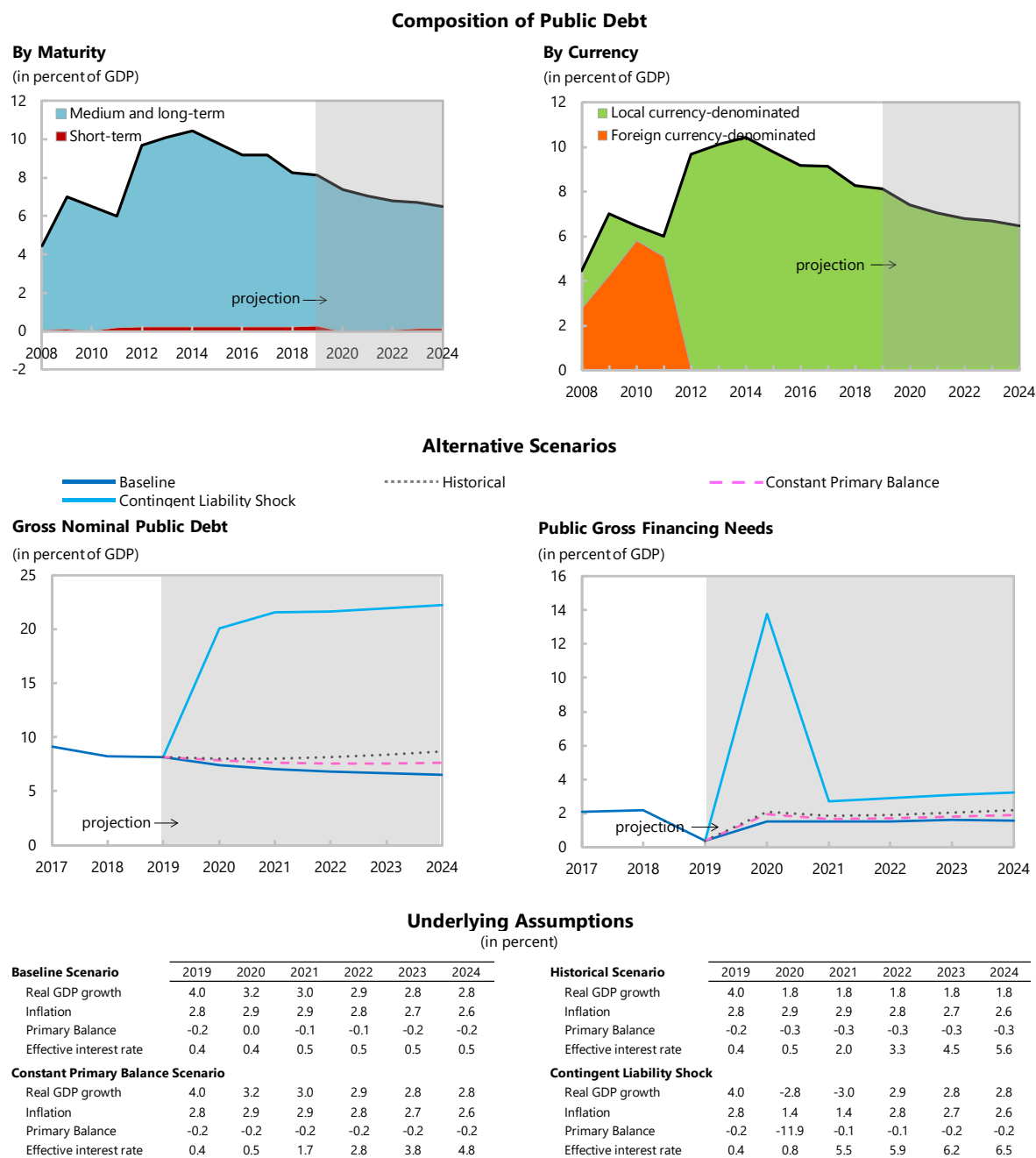
6/ The real interest rate contribution is derived from the numerator in footnote 5 as  $r - \pi(1+g)$  and the real growth contribution as  $-g$ .

7/ The exchange rate contribution is derived from the numerator in footnote 5 as  $ae(1+r)$ .

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

**Figure 7. Estonia: Public DSA—Composition of Public Debt and Alternative Scenarios**  
(In percent of GDP unless otherwise indicated)



**Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2016–24**  
(Units as indicated)

	2016	2017	2018	2019	2020	2021	2022	2023	2024
			Est.	Projections					
<b>National income, prices, and wages</b>									
GDP (nominal; billions of Euro)	21.7	23.8	26.0	27.8	29.6	31.3	33.2	35.0	36.9
Annual change (in percent)	4.4	9.6	9.5	6.9	6.2	6.0	5.8	5.5	5.5
Real GDP growth (year-on-year in percent) 1/	2.6	5.7	4.8	4.0	3.2	3.0	2.9	2.8	2.8
Private consumption	4.5	2.7	4.2	4.0	3.8	3.6	3.2	3.0	3.0
Gross fixed capital formation	0.8	12.5	1.7	9.5	9.0	8.5	8.0	7.5	7.5
Exports of goods and services	5.1	3.8	4.3	3.6	3.6	3.7	3.7	3.7	3.7
Imports of goods and services	6.0	4.2	5.7	5.3	5.0	4.9	4.9	4.8	4.8
Average HICP (year-on-year change in percent)	0.8	3.7	3.4	2.5	2.4	2.3	2.2	2.1	2.1
GDP deflator (year-on-year change in percent)	1.7	3.6	4.5	2.8	2.9	2.9	2.8	2.7	2.6
Average monthly wage (year-on-year growth in percent)	7.6	6.5	7.3	7.7	6.5	6.0	5.5	5.0	4.5
Unemployment rate (ILO definition, percent, pa)	6.8	5.8	5.4	4.7	4.7	4.8	4.8	5.0	5.0
Average nominal ULC (year-on-year growth in percent)	3.1	2.9	5.8	4.6	3.2	2.9	2.5	1.8	1.5
General government (ESA10 basis; percent of GDP)									
Revenue	39.1	38.6	38.5	39.6	40.2	40.0	40.0	39.7	39.6
Expenditure	39.4	39.0	39.0	39.7	40.2	40.0	40.1	39.8	39.7
Financial surplus (+) / deficit (-)	-0.3	-0.4	-0.5	-0.2	0.0	0.0	-0.1	-0.2	-0.2
Structural balance	0.5	-0.3	-1.1	-0.8	-0.6	-0.4	-0.3	-0.2	-0.2
Total general government debt	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
External sector (percent of GDP)									
Trade balance	-3.5	-3.4	-3.7	-4.7	-5.7	-6.4	-7.1	-7.8	-8.4
Service balance	7.6	8.0	7.1	7.2	7.3	7.3	7.3	7.3	7.3
Primary income balance	-2.1	-2.0	-1.9	-1.9	-1.3	-0.8	-0.3	0.0	0.5
Current account	2.0	3.2	1.7	0.9	0.5	0.4	0.1	-0.2	-0.4
Gross external debt/GDP (percent) 2/	88.3	82.1	76.2	75.2	74.7	74.2	73.9	73.6	73.4
Net external debt/GDP (percent) 3/	-11.3	-15.5	...	...	...	...	...	...	...
General government debt/GDP (percent)									
Excluding government assets held abroad	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
Including government assets held abroad 4/	-2.6	-1.6	-1.8	0.2	0.2	0.2	0.3	0.4	0.6
Exchange rate (US\$/Euro - period averages)	1.11	1.13	1.18	...	...	...	...	...	...
Real effective exchange rate (annual changes in percent)	1.1	1.2	4.5	...	...	...	...	...	...
Nominal effective exchange rate (annual changes in percent)	2.6	-0.1	3.3	...	...	...	...	...	...
Money and credit (year-on-year growth in percent)									
Credit to the economy	7.2	2.0	6.3	...	...	...	...	...	...
Output gap (in percent of potential output)	-1.7	0.7	2.3	2.1	1.7	1.2	0.6	0.0	0.0
Growth rate of potential output (in percent)	2.5	3.2	3.2	4.2	3.6	3.5	3.5	3.5	2.8
Social Indicators (reference year):									
Population (2019, pa): 1.32 million; Per capita GDP (2017): \$32,998; Life expectancy at birth: 82.2 (female) and 73.3 (male);									
Poverty rate (share of the population below the established risk-of-poverty line): 22.2 percent; Main exports: machinery and appliances.									
Sources: Estonian authorities; Eurostat; and IMF staff estimates and projections.									
1/ Statistics Estonia revised National Accounts series in August 2019 inter alia shifting reference year to 2015 and improving the methodology.									
2/ Includes trade credits.									
3/ Net of portfolio assets (including money market instruments, financial derivative assets,									
4/ Includes the Stabilization Reserve Fund (SRF).									

**Table 2. Estonia: Summary of General Government Operations, 2016–24**  
(In percent of GDP)

	2016	2017	2018	2019	2020	2021	2022	2023	2024
			Est.	Projections					
<b>Revenue and Grants</b>	39.1	38.6	38.5	39.6	40.2	40.0	40.0	39.7	39.6
<b>Revenue</b>	37.4	36.5	36.5	37.2	37.8	37.8	37.8	37.8	37.8
<b>Tax revenue</b>	22.1	21.3	21.1	21.6	21.8	21.8	21.8	21.8	21.8
Direct taxes	7.5	7.2	7.4	7.4	7.6	7.6	7.6	7.7	7.7
Personal income tax	5.8	5.7	5.4	5.6	5.8	5.8	5.9	6.0	6.0
Corporate profits tax	1.7	1.5	2.0	1.8	1.8	1.8	1.7	1.7	1.7
Indirect taxes	14.6	14.1	13.7	14.2	14.2	14.2	14.2	14.1	14.1
VAT	9.1	9.0	8.9	9.1	9.1	9.1	9.1	9.0	9.0
Excises	4.6	4.2	3.9	4.2	4.2	4.2	4.3	4.3	4.3
Other taxes (incl. land tax)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
<b>Social contributions</b>	11.4	11.3	11.7	12.0	12.3	12.3	12.3	12.3	12.3
Pension insurance (net)	5.7	5.6	6.0	6.1	6.3	6.3	6.3	6.3	6.3
Health insurance	4.7	4.6	4.6	4.8	4.9	4.9	4.9	4.9	4.9
Unemployment insurance tax	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Other (incl. self employed)	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
<b>Nontax revenue</b>	3.8	3.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7
O/w: Interest income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Grants</b>	1.8	2.1	2.0	2.3	2.4	2.2	2.2	1.8	1.8
O/w: EU	1.4	1.7	1.8	1.8	2.0	1.9	1.9	1.6	1.5
<b>Expenditure</b>	39.4	39.0	39.0	39.7	40.2	40.0	40.1	39.8	39.7
<b>Expense (current expenditure)</b>	35.0	33.7	33.6	34.0	34.4	34.5	34.6	34.3	34.2
Compensation of employees	11.4	11.2	11.2	11.4	11.6	11.6	11.6	11.4	11.3
Wages and salaries	7.9	7.7	7.7	8.0	8.2	8.2	8.2	8.0	7.9
Employers' social contributions	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3
Other goods and services	6.8	6.6	6.4	6.3	6.3	6.3	6.3	6.3	6.3
Transfers and subsidies	16.7	15.9	16.1	16.3	16.5	16.6	16.7	16.7	16.7
Subsidies	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Transfers to households	13.5	13.2	13.3	13.6	13.8	13.9	14.0	14.0	14.0
Social benefits	11.6	11.3	11.4	11.6	11.8	11.9	12.0	12.0	12.0
Social transfers in kind	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
Other transfers	2.7	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Property income	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
O/w: Interest	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International cooperation	2.0	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Capital transfers	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4
<b>Net acquisition of NFA (capital expenditure)</b>	4.5	5.3	5.4	5.7	5.7	5.5	5.5	5.5	5.5
Acquisition	4.6	5.4	...	...	...	...	...	...	...
Disposal	-0.1	-0.2	...	...	...	...	...	...	...
<b>Financial surplus (+) / deficit (-)</b>	-0.3	-0.4	-0.5	-0.2	0.0	0.0	-0.1	-0.2	-0.2
One-off items	-0.3	-0.3	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Cyclical adjustment	-0.6	0.2	0.7	0.7	0.6	0.4	0.2	0.0	0.0
Structural balance	0.5	-0.3	-1.1	-0.8	-0.6	-0.4	-0.3	-0.2	-0.2
<b>Financing (accrual basis)</b>	0.3	0.3	-0.7	0.2	0.0	0.0	0.1	0.2	0.2
Net incurrence of liabilities	0.6	0.5	1.4	0.4	0.0	0.0	0.1	0.2	0.2
Net acquisition of financial assets	0.3	0.3	2.1	0.2	0.0	0.0	0.0	0.0	0.0
Other financial assets	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0
<b>Other and Errors and Omissions</b>	-0.1	-0.1	-1.2	0.0	0.0	0.0	0.0	0.0	0.0

Sources: Eurostat; Statistics Estonia; and IMF staff calculations.

**Table 3. Estonia: General Government Financial Assets and Liabilities, 2012–19:Q2**  
(In millions of euros)

	2012	2013	2014	2015	2016	2017	2018	2019Q2
<b>Total Assets</b>	<b>7,908</b>	<b>8,452</b>	<b>8,848</b>	<b>11,121</b>	<b>11,264</b>	<b>11,931</b>	<b>10,136</b>	<b>10,613</b>
Fiscal reserves	2,196	2,190	2,371	2,068	2,149	2,175	2,200	2,650
Currency and deposits	1,107	1,289	1,300	1,002	1,085	1,390	1,270	1,753
Securities other than shares, excl. financial derivatives	912	738	879	825	825	527	645	632
Short-term securities, excl. financial derivatives	492	501	552	342	470	270	256	323
Long-term securities, excl. financial derivatives	421	236	327	483	356	257	389	309
Financial derivatives	1	1	0	0	0	0	0	0
Other	176	162	192	240	239	258	285	265
Loans	600	733	709	664	650	636	695	695
Short-term	10	7	6	6	5	5	4	2
Long-term	591	727	703	658	645	631	691	693
Equity	4,407	4,881	5,000	7,428	7,509	8,086	6,102	6,209
Other	704	648	768	961	957	1,034	1,139	1,059
<b>Total Liabilities 1/</b>	<b>834</b>	<b>916</b>	<b>2,782</b>	<b>2,635</b>	<b>2,761</b>	<b>2,905</b>	<b>3,299</b>	<b>3,707</b>
Securities other than shares, excl. financial derivatives	247	279	271	228	221	264	194	389
O/W: Long-term securities, excl. financial derivatives	247	279	271	228	221	264	194	188
Loans	1,471	1,613	1,802	1,767	1,722	1,753	1,897	2,040
Short-term	9	10	7	7	5	9	5	5
Long-term	1,462	1,603	1,795	1,760	1,717	1,744	1,891	2,034
Other accounts receivable/payable	576	626	662	591	765	824	1,109	1,171

Source: Statistics Estonia.

1/ Including commitments under the European Financial Stability Fund.

**Table 4. Estonia: Summary Balance of Payments, 2016–24**

	2016	2017	2018	2019	2020	2021	2022	2023	2024
				Est.	Projections				
(Millions of Euros)									
Current Account	425	750	445	239	143	118	37	-81	-164
Primary Current Account 1/	2,112	2,442	2,262	2,183	2,108	2,108	2,052	1,958	1,899
Trade Balance	883	1,076	885	699	467	292	77	-155	-416
Exports of goods	11,294	12,022	12,746	13,508	14,262	15,061	15,931	16,867	17,857
Imports of goods	12,055	12,839	13,718	14,809	15,939	17,070	18,282	19,580	20,970
Services Balance	1,644	1,892	1,857	2,000	2,144	2,301	2,428	2,559	2,697
Exports of services	5,532	6,054	6,550	7,145	7,675	8,197	8,712	9,251	9,824
Imports of services	3,888	4,162	4,694	5,145	5,532	5,896	6,285	6,692	7,127
Primary Income	-447	-471	-502	-524	-391	-245	-112	0	176
Receipts	1,240	1,221	1,314	1,419	1,574	1,745	1,902	2,038	2,239
Payments	1,687	1,692	1,816	1,943	1,965	1,990	2,015	2,038	2,063
Secondary Income	-11	146	63	64	67	71	73	74	76
Capital Account	226	230	309	312	331	351	371	392	413
Non-produced non-financial assets	229	386	...	...	...	...	...	...	...
Capital transfers	3	156	...	...	...	...	...	...	...
Of which: General Government	126	198	...	...	...	...	...	...	...
Net lending (+) / borrowing (-) balance	651	981	754	551	473	469	408	311	249
Financial Account	281	1,008	846	551	473	469	408	311	249
Direct investment	-504	-860	-1,137	-792	-820	-850	-884	-919	-956
Assets	341	543	-277	-282	-285	-288	-294	-300	-306
Liabilities	845	1,403	860	510	535	562	590	619	650
Portfolio investment	2,422	2,649	878	603	551	485	420	378	338
Financial derivatives	-6	37	48	55	52	32	32	32	32
Loans and other investments (net) 2/	-1,583	-795	699	400	392	417	419	468	421
Change in reserves	-48	-24	357	285	299	385	422	353	414
Errors and Omissions	-370	28	92	0	0	0	0	0	0
(In percent of GDP, unless otherwise specified)									
Current Account	2.0	3.2	1.7	0.9	0.5	0.4	0.1	-0.2	-0.4
Trade balance	4.1	4.5	3.4	2.5	1.6	0.9	0.2	-0.4	-1.1
Service balance	7.6	8.0	7.1	7.2	7.3	7.3	7.3	7.3	7.3
Primary income balance	-2.1	-2.0	-1.9	-1.9	-1.3	-0.8	-0.3	0.0	0.5
Secondary income balance	0.0	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Net lending (+) / borrowing (-) balance	3.0	4.1	2.9	2.0	1.6	1.5	1.2	0.9	0.7
Exports of goods and services (growth in percent)	5.3	7.4	6.8	7.0	6.2	6.0	6.0	6.0	6.0
Imports of goods and services (growth in percent)	5.3	6.6	8.3	8.4	7.6	7.0	7.0	6.9	6.9
Net FDI from abroad	2.3	3.6	4.4	2.8	2.8	2.7	2.7	2.6	2.6
Total external debt 3/									
Gross	88.3	82.1	76.2	75.2	74.7	74.2	73.9	73.6	73.4
Net 4/	-11.3	-15.5	...	...	...	...	...	...	...
NIIP	-38.9	-31.2	-26.3	-22.6	-19.7	-17.1	-14.9	-13.2	-11.9
General government external debt 5/									
Excluding Govt. assets held abroad	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
Including Govt. assets held abroad	-2.6	-1.6	-1.8	0.2	0.2	0.2	0.3	0.4	0.6
Debt Service/Exports of GNFS (percent)	69.0	60.5	50.4	43.9	43.5	43.3	43.0	42.7	42.4

Sources: Bank of Estonia; and IMF staff estimates and projections.

1/ Excluding interest payments and reinvested earnings.

2/ Includes operations in debt securities.

3/ Starting in 2000, the definition of external debt was widened to include money market instruments and financial derivatives.

4/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets, other investment assets, and reserve assets held by Estonian residents.

5/ Includes government guaranteed debt.

**Table 5. Estonia: Macroeconomic Framework, 2016–24**  
(Percent of GDP, unless otherwise indicated)

	2016	2017	2018	2019	2020	2021	2022	2023	2024
				Est.	Projections				
Real GDP growth (percent)	2.6	5.7	4.8	4.0	3.2	3.0	2.9	2.8	2.8
Domestic demand real growth (percent)	5.0	4.5	3.8	5.4	4.3	3.9	3.9	3.8	3.8
Final consumption real growth (percent)	4.0	2.3	3.3	4.0	3.5	2.9	2.6	2.0	2.5
Capital formation real growth (percent)	7.9	10.6	5.0	8.9	6.3	6.3	6.8	7.6	6.5
Fixed capital formation real growth (percent)	0.8	12.5	1.7	9.5	9.0	8.5	8.0	7.5	7.5
Net exports contribution to real GDP (ppts)	-0.5	-0.1	-0.9	-1.2	-1.0	-0.9	-1.0	-1.0	-1.0
Exports real growth (percent)	5.1	3.8	4.3	3.6	3.6	3.7	3.7	3.7	3.7
Imports real growth (percent)	6.0	4.2	5.7	5.3	5.0	4.9	4.9	4.8	4.8
Statistical discrepancy contribution to real GDP (ppts) 1/	-1.6	1.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross saving	27.3	29.7	27.9	28.1	28.3	28.9	29.5	30.4	31.1
Private	23.2	24.8	23.0	22.5	22.6	23.5	24.1	25.0	25.7
Public	4.1	4.9	4.9	5.6	5.7	5.4	5.4	5.3	5.4
Investment	25.4	26.6	26.2	27.2	27.9	28.5	29.4	30.6	31.5
O/w: Fixed investment	23.3	24.8	23.9	24.9	26.1	27.2	28.4	29.5	30.6
Private	18.7	19.4	18.5	19.2	20.4	21.8	22.9	24.0	25.1
Public	4.6	5.4	5.4	5.7	5.7	5.5	5.5	5.5	5.5
Current account	3.4	3.2	1.7	0.9	0.5	0.4	0.1	-0.2	-0.4
Memorandum items:									
Fiscal balance 2/	-0.3	-0.4	-0.5	-0.2	0.0	0.0	-0.1	-0.2	-0.2
Revenues	39.1	38.6	38.5	39.6	40.2	40.0	40.0	39.7	39.6
Expenditure	39.4	39.0	39.0	39.7	40.2	40.0	40.1	39.8	39.7
Structural balance	0.5	-0.3	-1.1	-0.8	-0.6	-0.4	-0.3	-0.2	-0.2
Total general government debt	9.2	9.2	8.3	8.1	7.6	7.2	6.9	6.7	6.5
Net non-debt creating capital inflows ("+" inflow)	16.1	18.0	7.9	5.1	4.8	4.5	4.2	4.0	3.8
Capital transfers 3/	1.0	1.0	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Portfolio investment (net)	11.2	11.1	3.4	2.2	1.9	1.5	1.3	1.1	0.9
FDI liabilities	3.9	5.9	3.3	1.8	1.8	1.8	1.8	1.8	1.8
Unemployment rate (percent)	0.8	3.7	3.4	2.5	2.4	2.3	2.2	2.1	2.1
Average wage growth (percent)	6.8	5.8	5.4	4.7	4.7	4.8	4.8	5.0	5.0
Average wage growth (percent)	7.6	6.5	7.3	7.7	6.5	6.0	5.5	5.0	4.5
Labor compensation share of GDP	48.2	47.9	48.5	49.3	49.5	49.5	49.3	48.9	48.4
Output gap (in percent of potential output)	-1.7	0.7	2.3	2.1	1.7	1.2	0.6	0.0	0.0
Growth rate of potential output (in percent)	2.5	3.2	3.2	4.2	3.6	3.5	3.5	3.5	2.8

Sources: Estonian authorities; and IMF staff estimates and projections.

1/ Staff will follow-up on the progress related to the improvement in GDP data.

2/ Public savings minus public investment differs from the fiscal balance by the amount of capital transfers received from abroad.

3/ Mainly EU capital grants, all of which are channelled through the budget.

**Table 6. Estonia: Indicators of External Vulnerability, 2011–18**  
(Percent of GDP, unless otherwise indicated)

	2011	2012	2013	2014	2015	2016	2017	2018
<b>Financial Indicators</b>								
Public sector external debt 1/	6.1	9.8	10.2	10.4	9.8	9.2	9.2	8.3
Private sector credit (year-on-year, percent) 2/	-4.7	1.0	1.1	3.4	4.8	7.2	2.0	6.3
<b>External Indicators</b>								
Exports of goods and services (year-on-year, percent)	30.5	6.9	3.5	2.8	-2.7	5.3	7.4	6.8
Imports of goods and services (year-on-year, percent)	33.2	12.4	1.9	1.7	-3.5	5.3	6.6	8.3
Current account balance	1.3	-1.9	0.5	0.8	1.8	2.0	3.2	1.7
Capital and financial account balance	5.3	1.4	3.1	1.9	3.9	3.0	4.1	2.9
Total external debt 3/	99.4	99.5	92.6	94.4	92.2	88.3	82.1	76.2
of which: Public sector debt 1/	6.1	9.8	10.2	10.4	9.8	9.2	9.2	8.3
Net external debt 4/	6.0	-1.1	-4.8	-10.4	-10.2	-11.3	-15.5	...
Debt service to exports of GNFS	62.6	66.3	65.7	65.7	70.7	69.0	60.5	50.4
External interest payments to exports of GNFS (percent)	3.0	2.4	2.1	2.1	1.8	1.7	1.7	1.6
External amortization payments to exports of GNFS (percent)	59.6	63.9	63.7	63.6	69.0	67.2	58.8	48.5
Exchange rate (per US\$, period average) 5/	1.39	1.29	1.33	1.33	1.11	1.11	1.13	1.18
<b>Financial Market Indicators</b>								
Stock market index 6/	531	734	818	755	899	1076	1242	1163
Foreign currency debt rating 7/	AA-	AA-	AA-	AA-	AA-	AA-	AA-	AA-

Sources: Estonian authorities; Bloomberg; Standard & Poor's; and IMF staff estimates.

1/ Total general government and government-guaranteed debt excluding government assets held abroad.

2/ Loans and leases to households and non-financial corporations.

3/ External debt includes money market instruments and financial derivatives.

4/ Net of portfolio assets (including money market instruments), financial derivative assets, other investment assets, and reserve assets held by residents.

5/ For 2008–10, EEKs per US\$; starting in 2011, Euros per US\$.

6/ Tallinn stock exchange index (OMX Tallinn), end of period.

7/ Standard & Poor's long-term foreign exchange sovereign rating.



**Table 7. Estonia: Households, Financial Assets, and Liabilities, 2011–18**  
(In millions of euros)

	2011	2012	2013	2014	2015	2016	2017	2018
<b>Total Assets</b>	<b>14,514</b>	<b>17,637</b>	<b>19,652</b>	<b>22,228</b>	<b>22,702</b>	<b>24,646</b>	<b>28,587</b>	<b>31,816</b>
Currency and deposits	4,452	5,176	5,229	5,875	6,502	7,054	7,925	8,876
Securities other than shares	36	32	31	31	58	65	68	82
Shares and other equity	7,915	9,940	11,555	12,896	12,474	13,330	15,840	17,714
Insurance technical reserves	1,604	1,984	2,327	2,821	3,143	3,586	4,146	4,458
Other	507	505	510	605	525	611	608	686
<b>Total Liabilities</b>	<b>7,816</b>	<b>7,742</b>	<b>7,825</b>	<b>8,098</b>	<b>8,485</b>	<b>8,994</b>	<b>9,630</b>	<b>10,310</b>
Loans	7,316	7,256	7,312	7,527	7,931	8,402	8,996	9,591
Short-term	128	147	146	170	193	143	151	252
Long-term	7,189	7,108	7,166	7,357	7,738	8,258	8,845	9,339
Other	500	486	513	571	554	592	634	719
<b>Net Financial Assets</b>	<b>6,698</b>	<b>9,895</b>	<b>11,827</b>	<b>14,130</b>	<b>14,217</b>	<b>15,652</b>	<b>18,957</b>	<b>21,506</b>
Memorandum item								
Total liabilities as a ratio of total gross wages and salaries	140.9	127.2	121.8	117.4	116.2	115.9	114.0	109.9

Sources: Eesti Pank; and Statistics Estonia.

**Table 8. Estonia: Financial Soundness Indicators, 2011–19:Q2**  
(Percent of GDP)

	2011	2012	2013	2014	2015	2016	2017	2018	2019Q2
<b>Capital adequacy</b>									
Regulatory capital to risk-weighted assets	18.6	19.3	20.0	35.7	28.0	31.8	29.2	28.5	24.9
Regulatory Tier I capital to risk-weighted assets	17.8	19.3	21.0	35.2	27.7	31.4	28.8	28.1	24.5
NPLs net of provisions to capital	22.4	14.5	8.3	7.0	5.7	4.6	3.5	1.9	1.2
Capital adequacy ratio	18.6	19.3	20.0	35.7	28.0	31.8	29.2	28.5	24.9
<b>Asset composition and quality</b>									
NPLs to gross loans (non-financial sector)	4.0	2.6	1.5	1.4	1.0	0.9	0.7	0.5	0.4
Sectoral distribution of loans to non-financial sector:									
Loans to households	47.3	46.1	44.8	46.1	44.3	42.5	44.4	44.9	44.6
Loans to non-financial corporations	40.2	41.4	40.9	42.3	41.4	40.8	37.7	37.5	37.0
<b>Earnings and profitability</b>									
Return on assets	2.6	2.1	2.2	1.8	3.7	1.9	1.7	1.8	1.2
Return on equity	23.5	15.0	16.5	11.4	29.9	15.6	13.0	14.0	9.8
Interest margin to gross income	55.0	57.8	41.2	55.5	47.5	56.8	46.0	43.6	46.0
Noninterest expenses to gross income	47.8	53.2	50.0	59.3	53.1	56.2	68.3	47.5	47.9
<b>Liquidity</b>									
Liquid assets to total short-term liabilities	25.7	25.8	21.6	28.7	32.1	29.1	32.5	33.3	29.8
Loans to deposits	132.5	121.4	117.4	102.0	105.4	109.9	107.6	109.1	107.4

Sources: Eesti Pank; and Financial Supervisory Authority.

## Annex I. Implementation Status of Fund Advice

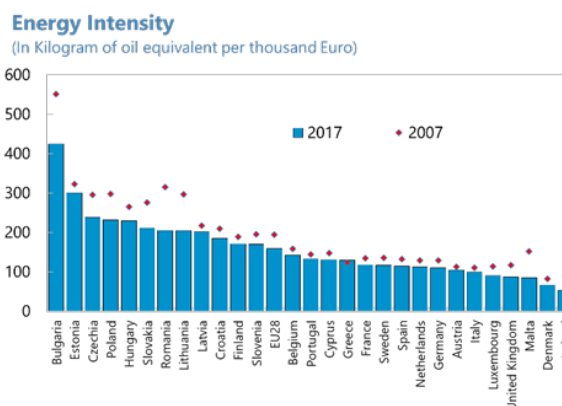
2018 Article IV Recommendations	Authorities' Action
<b>Fiscal Policy</b>	
<ul style="list-style-type: none"> <li>• A broadly neutral fiscal stance that protects structural reforms-related spending would be appropriate.</li> <li>• Improve the efficiency of public spending and promote stronger public investment management framework.</li> <li>• Public sector wages should be anchored by fundamentals including productivity growth.</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal policy has been accommodative for the past three successive years. Current proposal would amend the fiscal rule to waive the requirement to compensate for past cumulative deficits.</li> <li>• Progress in implementing the PIMA recommendations has been slow. The authorities have created a committee on the framework for public private partnership (PPP). This committee will also follow up on the recommendation of the PIMA.</li> <li>• Public sector wages continued to outpace the growth in productivity and much of the pace was attributed to a catch-up process for priority occupations.</li> </ul>
<b>Financial Sector Policy</b>	
<ul style="list-style-type: none"> <li>• Monitor developments carefully and be prepared to tighten policies if necessary.</li> <li>• Strengthen cross-border banking supervision through the Nordic-Baltic Cooperation.</li> </ul>	<ul style="list-style-type: none"> <li>• The Eesti Pank introduced an average risk weight floor of 15 percent for mortgage loan portfolios of banks that use the internal ratings method for calculating risk-weighted assets effective on September 30, 2019.</li> <li>• A crisis simulation for eight Nordic-Baltic countries and involving the European Single Resolution Board and the European Commission was conducted in January that underscored the need for enhanced cooperation.</li> </ul>
<b>Structural Reforms</b>	
<ul style="list-style-type: none"> <li>• Continued improvement of labor taxation and social contributions.</li> <li>• Boost research and development spending and promote private-sector innovation to raise productivity.</li> </ul>	<ul style="list-style-type: none"> <li>• The 2018 tax reform increased the basic exemption from 180-500 euros per month that decreases to zero between the income of 1201–2100 euros per month.</li> <li>• The coalition has listed among its core principles the objective to increase the state financing for R&amp;D to at least 1 percent of GDP. This notwithstanding the allocation in the 2020 budget was modest, only 0.03 percentage points.</li> </ul>

## Annex II. Energy Sector Developments

**1. The energy sector plays a central role in Estonian economy.** The energy sector represents a sizeable part of GDP and provides a significant job opportunity especially in the Ida-Virumaa county where the largest oil shale deposit is located. However, given its carbon-intensity, the recent increase in CO<sub>2</sub> prices had a detrimental effect on the sector's level of activity. The largest player in the energy sector, and the largest employer in the economy, Eesti Energia, a state-owned company, has laid off over 300 employees and has posted a net loss in this year third quarter.

**2. Estonia is one of the most energy-intensive economy in Europe and the energy sector accounts for a large portion of CO<sub>2</sub> emission.**

Estonian economy's energy intensity has been declining since 2007, but it remains elevated, and is almost twice as large as the EU28 average. Thanks to its large oil shale reserves, Estonia covers around 70 percent of its energy consumption. Oil shale-based electricity production is highly carbon-intensive, but since the transition to market economy, greenhouse emissions have fallen in Estonia. However, the energy sector still accounts for 88.7 percent of these emissions in 2017.<sup>1</sup>



Sources: Eurostat

**3. The government is planning to diversify electricity supply by investing in renewables and cleaner oil shale technology.** Under the European directive above 25 percent target by 2020, Estonia has increased significantly the renewable energy share in its gross final energy consumption.<sup>2</sup> Given the importance of the energy sector, the European Union 2020 strategy for building a competitive low carbon Europe by 2050 would have sizable implications for Estonia. To sustain the progress made in renewable energy production (wind farming, biomass and solar power plant), R&D investment in the energy sector would play a crucial role in facilitating the transition by improving the technology in power generation, energy storage (hydrogen) and transportation of electricity.

<sup>1</sup> Ministry of Environment (Greenhouse Gas Emissions in Estonia 1990-2017, National Inventory Report).

<sup>2</sup> The share of renewable energy in gross final energy consumption has reached 29.2 percent in 2017 (source: Eurostat).

## Annex III. External Sector Assessments

*Estonia's external position in 2018 was substantially stronger than implied by medium-term fundamentals and desirable policies. Over the medium term, Estonia's current account balance is expected to decline toward the norm.*

**1. Estonia's external current account (CA) surplus was 1.7 percent of GDP in 2018.** Strong domestic demand contributed to high import growth (8.3 percent (y/y)), outpacing the still-buoyant export growth (6.8 percent (y/y)) in 2018. Meanwhile, the surplus in services declined by 0.8 percent of GDP. In 2018, the nominal effective exchange rate appreciated by 1.9 percent, while the real effective exchange rate (REER) appreciated by 3.6 percent. The appreciation can be explained by the strengthening of the euro against the currencies of major trading partners, while Estonia's relatively high inflation also contributed.

**2. The CA surplus in 2018 was substantially stronger than implied by medium-term fundamentals and desirable policies.** The EBA-lite CA methodology suggests that Estonia is expected to run a cyclically adjusted CA deficit of 2.6 percent of GDP, consistent with its income convergence to the EU average and declining and ageing population. This leads to a CA gap of 4.3 percent of GDP (Text table), which implies a real effective exchange rate (REER) undervaluation of about 8 percent. The estimated policy gap is 2.2 percent of GDP, mainly explained by the need to achieve structural balance while increasing public health spending to address the rising public spending needs from ageing. The residual could be explained largely by rising private saving associated with ageing and one-off factors, including the temporary increase in EU funds disbursement and natural disasters and conflicts. Underpinned by strong domestic demand and moderating external demand, Estonia's CA surplus is projected to gradually decline towards the estimated norm in the medium term.

**Table. Summary of External Sector Assessment**

	2018AIV	2019AIV
Current account "actual"	3.2	1.7
Current account "norm"	-3.2	-2.6
Current account "gap"	6.4	4.3
Of which: policy gap	1.5%	2.2%
Implied REER gap	-11.3%	-8.0%
REER "Actual"	4.65	4.69
REER "norm"	4.57	4.65
REER "gap"	7.8%	3.81%
Of which: policy gap	-0.8%	3%

**3. In line with the previous article IV assessment, the EBA-lite REER method finds a different result.** It still suggests an overvaluation that leads to a narrowing REER gap of only 3.8 percent (Text table), compared to the 2018AIV, but contrasts an undervaluation of 8 percent implied by the CA model. This outturn is aligned with recent data on unit labor cost and productivity measures that indicate that Estonia is lagging the EU average (Figure 3). However, on balance, this does not suggest a need for exchange rate adjustment. Going forward, structural reforms that improve these indicators would help safeguard Estonia's external competitiveness and help boost investment to further support the CA rebalancing.

**4. Estonia's net international investment position (NIIP) continued to improve, but remains negative at -26.3 percent of GDP in 2018.** The NIIP increased by about 7 percent of GDP from 2017. The current account surplus contributed to this increase, which corresponds to a reduction in external vulnerability. The negative position largely reflects net inflow of FDI. Meanwhile, gross external debt has declined from 82.6 percent of GDP in 2017 to 76.2 percent of GDP in 2018, while net external debt remains negative at about -16 percent of GDP. Government fiscal reserves remain large (8.1 percent of GDP) and exceed gross government debt of 8.3 percent of GDP. While Estonia's NIIP compares favorably with CEE peers, further improvement can enhance its resilience against shocks given ageing-related pressures and the volatility of portfolio flows.

## Annex IV. External Debt Sustainability Assessment

1. **Estonia's external debt declined markedly in 2018 to 76.2 percent of GDP**, from 82.1 percent of GDP in 2017, reflecting a decline in foreign deposits. Foreign deposits have declined by 3.2 percent of GDP in 2018.
2. **Under the baseline, gross external debt is projected remain to below its historical average over the medium term.** External debt is projected to stabilize at 73.4 percent of GDP in 2024. The current account deficit excluding interest payments is projected to improve and reach 0.4 percent of GDP by 2024, well above the debt-stabilizing non-interest current account balance of 5.6 percent of GDP. Gross external financing needs are projected to decline to 19.7 percent of GDP in 2024 from 27.2 percent of GDP in 2018.
3. **External debt appears to be resilient to various shocks.** Under all shocks and the historical scenario, including the combined shock scenario Estonia's external debt-to-GDP ratio would be below its historical average of the last five years of 86.6 percent of GDP.

**Table 1. Estonia: External Debt Sustainability Framework, 2014–24**  
(In percent of GDP, unless otherwise indicated)

	Actual					Projections						Debt-stabilizing non-interest current account 6/ -5.6	
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Baseline: External debt	94.4	92.2	88.3	82.1	76.2	75.2	74.7	74.2	73.9	73.6	73.4		
Change in external debt	1.8	-2.1	-3.9	-6.3	-5.9	-1.0	-0.5	-0.5	-0.3	-0.3	-0.1		
Identified external debt-creating flows (4+8+9)	-9.0	14.4	-8.4	-17.0	-17.0	-6.8	-5.6	-5.2	-4.8	-4.4	-4.2		
Current account deficit, excluding interest payments	-2.5	-3.2	-3.3	-4.4	-2.9	-2.0	-1.6	-1.4	-1.1	-0.7	-0.4		
Deficit in balance of goods and services	22.0	4.0	3.8	4.7	9.4	6.1	6.8	8.5	10.1	11.7	13.5		
Exports	81.3	76.9	77.6	76.0	74.1	74.2	74.2	74.2	74.3	74.6	75.0		
Imports	103.4	80.9	81.3	80.7	83.6	80.3	81.0	82.7	84.4	86.3	88.5		
Net non-debt creating capital inflows (negative)	-2.9	0.9	-2.8	-4.5	-4.9	-2.9	-2.8	-2.8	-2.7	-2.7	-2.7		
Automatic debt dynamics 1/	-3.6	16.7	-2.3	-8.1	-9.2	-1.8	-1.2	-1.0	-1.0	-1.0	-1.0		
Contribution from nominal interest rate	1.7	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	0.9	0.9		
Contribution from real GDP growth	-2.6	-2.0	-2.3	-4.5	-3.4	-3.0	-2.3	-2.1	-2.0	-1.9	-1.9		
Contribution from price and exchange rate changes 2/	-2.7	17.4	-1.3	-4.8	-7.0	...	...	...	...	...	...		
Residual, incl. change in gross foreign assets (2-3) 3/	10.8	-16.6	4.5	10.8	11.1	5.8	5.0	4.8	4.5	4.1	4.0		
External debt-to-exports ratio (in percent)	116.0	120.0	113.9	107.9	102.8	101.4	100.6	100.0	99.4	98.6	98.0		
Gross external financing need (in billions of US dollars) 4/	10.9	10.2	9.9	8.6	8.4	6.0	6.3	6.7	7.3	7.9	8.4		
in percent of GDP	40.5	44.3	41.4	32.0	27.2	10-Year	10-Year	19.2	19.0	19.0	19.2	19.5	19.7
Scenario with key variables at their historical averages 5/						75.2	74.0	73.9	73.7	73.1	72.7	-4.4	
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation						
Real GDP growth (in percent)	3.0	1.8	2.6	5.7	4.8	1.8	6.0	4.0	3.2	3.0	2.9	2.8	
GDP deflator in US dollars (change in percent)	3.0	-15.6	1.4	5.8	9.4	1.0	8.1	-2.6	2.5	4.1	3.9	3.6	
Nominal external interest rate (in percent)	1.9	1.3	1.5	1.6	1.7	1.8	0.4	1.6	1.6	1.5	1.4	1.4	
Growth of exports (US dollar terms, in percent)	2.9	-18.7	5.0	9.6	11.7	4.9	18.1	1.4	5.8	7.2	7.0	7.1	
Growth of imports (US dollar terms, in percent)	1.9	-32.7	4.7	11.0	18.5	3.1	24.7	-2.6	6.8	9.3	9.1	8.9	
Current account balance, excluding interest payments	2.5	3.2	3.3	4.4	2.9	3.1	1.3	2.0	1.6	1.4	1.1	0.7	
Net non-debt creating capital inflows	2.9	-0.9	2.8	4.5	4.9	4.5	4.5	2.9	2.8	2.8	2.7	2.7	

1/ Derived as  $[r - g - r(1+g) + ea(1+r)] / (1+g+r+gr)$  times previous period debt stock, with  $r$  = nominal effective interest rate on external debt;  $r$  = change in domestic GDP deflator in US dollar terms,  $g$  = real GDP growth rate,  $e$  = nominal appreciation (increase in dollar value of domestic currency), and  $a$  = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as  $[-r(1+g) + ea(1+r)] / (1+g+r+gr)$  times previous period debt stock.  $r$  increases with an appreciating domestic currency ( $e > 0$ ) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

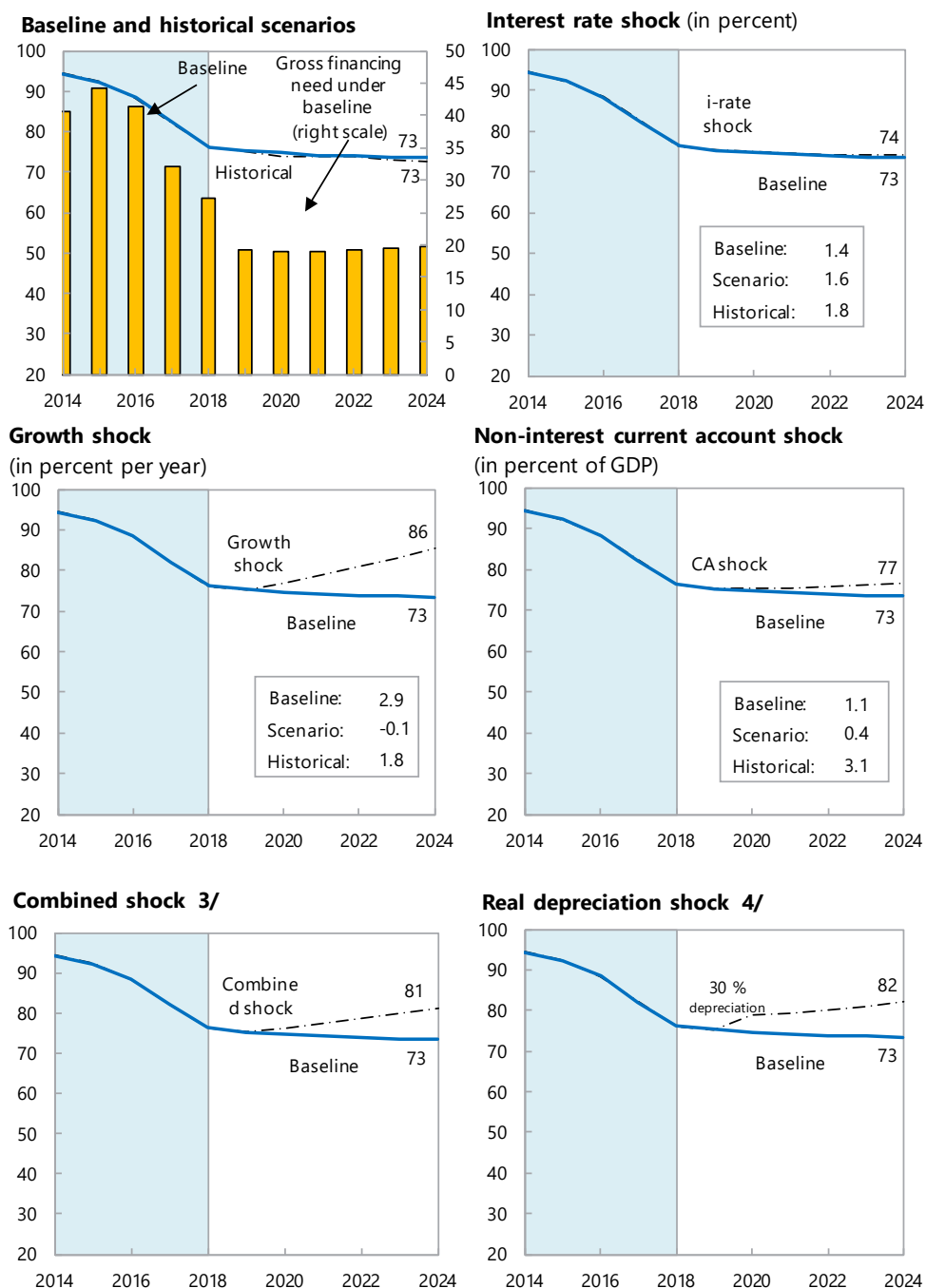
4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.



**Table 2. Estonia: External Debt Sustainability: Bound Test<sup>1,2</sup>**  
(In percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.

3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

4/ One-time real depreciation of 30 percent occurs in 2010.

## Annex V. Making the Most of Public Investment Management

**1. Estonia's public investment management (PIM) is stronger relative to its EU peers.** It ranks high on access to public infrastructure such as health, electricity, roads and water among 148 countries. PIM institutions generally perform well, and strong investment implementation is underpinned by: a robust legal framework for PIM; strong medium-term budgeting orientation; advanced e-procurement system; effective Treasury Single Account; and active project management by line ministries. Perceptions of Estonia's infrastructure quality have already converged towards the EU average although it lags advanced peers.

**2. There is scope however to strengthen planning, allocation and implementation of investments, in line with IMF FAD TA recommendations.**<sup>1</sup> Long-term strategic plans do not identify major investment projects in line with available fiscal space. Nationally funded projects are not appraised through a similar methodology applied to EU funded projects. Fiscal risks stemming from SOEs, local governments and PPPs are currently not systemically identified, monitored, nor reported, potentially undermining debt sustainability assessments. There is no formal protection of on-going projects. Lack of a consolidated project pipeline across sectors, comprehensive selection criteria, and centralized oversight of projects weakens implementation. Against this backdrop, the PIMA made recommendations including to:

- *Strengthen the realism of long-term strategic plans* by identifying key investment projects, with indicative costing and reconciliation aligned with available fiscal space.
- *Establish 10-year public investment plans* to consolidate medium-term capital planning and safeguard consistent treatment of all investment projects.
- *Develop a framework for monitoring and reporting of key fiscal risks*, including for SOEs, and PPPs to strengthen the monitoring and accounting of contingent liabilities.
- *Adopt a standard methodology for project appraisal* to ensure that all projects are appraised to a similar standard and subject appraisal documents to independent external review as a quality control measure.
- *Reinforce capital budget's planning, appropriation and implementation* by introducing additional disclosures on investment projects in the budget process.
- *Set up a unified pipeline of appraised projects* for ease of comparison within and across sectors to foster transparency and competition.
- *Establish a centralized portal for project oversight* to enhance monitoring and to minimize risks including cost and time overruns.

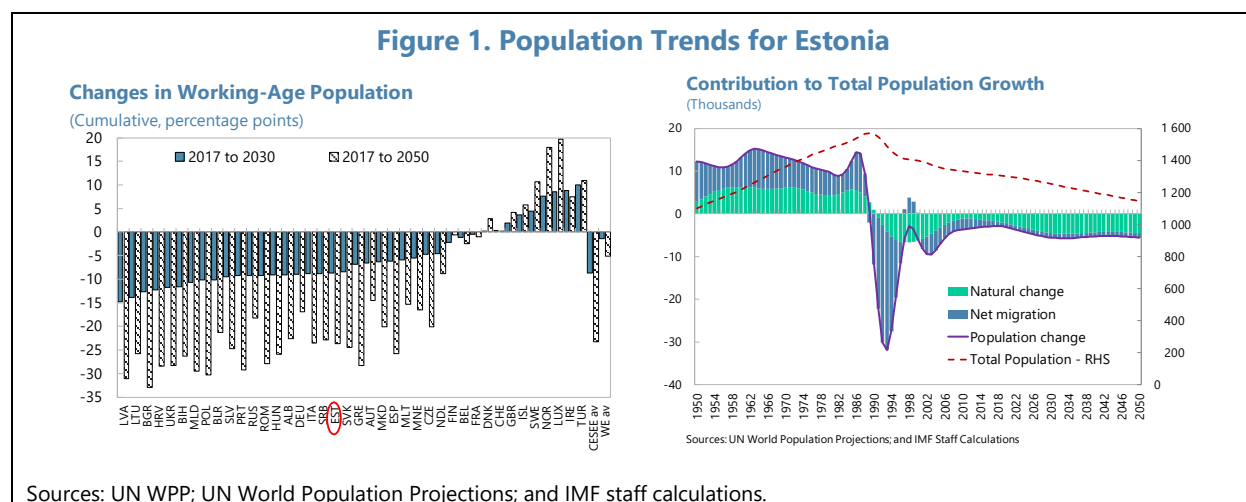
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<sup>1</sup> FAD mission visited Tallinn, Estonia during November 28–December 12, 2018, to undertake a Public Investment Management Assessment (PIMA).

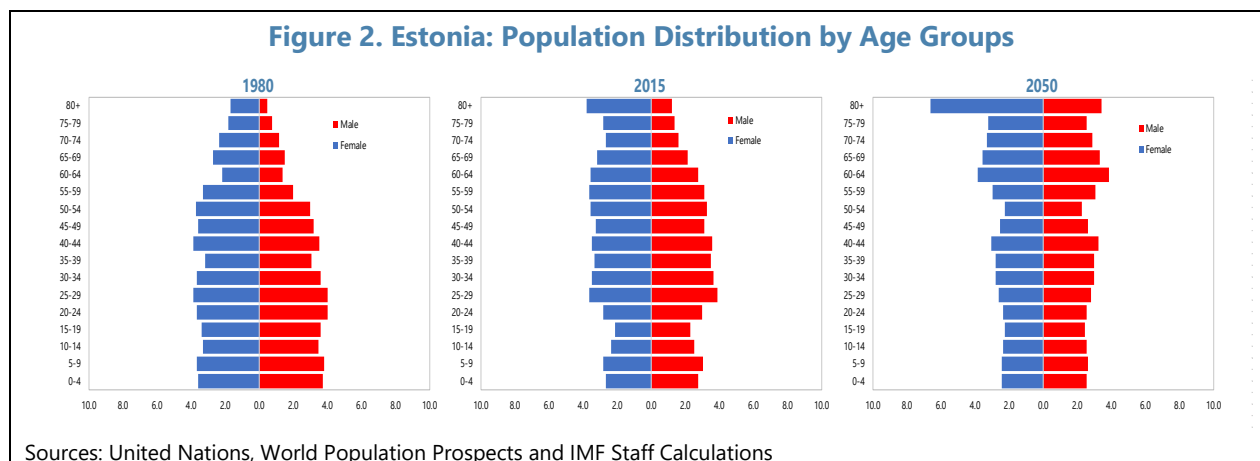
## Annex VI. The Macroeconomic Implications of Changing Demographics

Over the next few decades, Estonia will experience significant demographic shifts. The analysis suggest that the expected population rebalancing will reduce labor supply, undermine productivity, and lead to a surge in age-related spending.

**1. Population growth has trended downwards since the mid-1990s in Estonia.** After the restoration of independence in 1991, the country has lost about 15 percent of its population. The declining path is largely driven by migration and low fertility rates, with over 60 percent explained by net migration. The contribution of net outward migration is expected to be outpaced by natural changes in the population. Total population is expected to decline by 5 percent by 2030 and 13 percent by 2050.



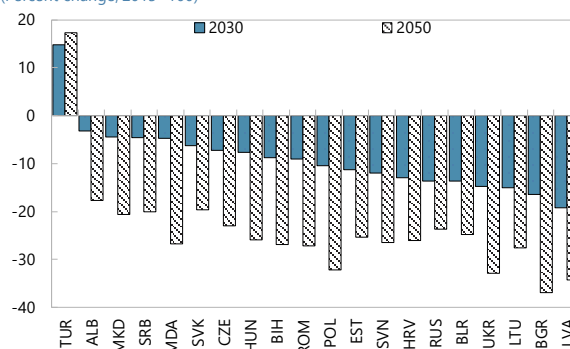
**2. Speed of ageing has progressed apace.** The dependency ratio—defined as the ratio of people 65 and older to people between 15 and 64—has risen from 19 percent in 1980 to 29 percent in 2015. This reflects a growing number of older people spending more years in retirement relative to the working-age population. Old-age dependency ratio is projected to reach 52 percent by 2050 under unchanged policies.



**3. The unfavorable demographic changes raise several challenges.** The falling population is expected to result into a shrinking and ageing labor force. The labor force constituted 66 percent of the total population in 1980, but is now projected at 56 percent in 2050. The share of old-age workers, defined as workers aged 55 years or older, is expected to increase to 14 percent in 2050 from 9 percent in 1980. Over the same horizon, the share of prime-age workers (45–54 years) is expected to decline from 13 percent in 1980 to 10 percent in 2050. The share of the youngest cohort (15–24) is expected to decrease from 15 percent in 1980 to 10 percent in 2050, owing to the population bulge passing through to the older cohorts.

**4. Changing demographics will have significant macroeconomic implications.<sup>1</sup>** The shrinking population will constrain labor supply, an important determinant of potential growth. A rising dependency ratio implies a reduction in the output per capita which would likely put pressure on public finances and likely affect incentives to save and invest. A recent IMF analysis<sup>2</sup> suggests that between now and 2050, absent policy changes and reforms, outlays for pension and health care could increase to around 7 and 6 percentage points of GDP in advanced and emerging G20 countries, respectively. For Estonia, spending on healthcare and social protection is currently low.<sup>3</sup> Health expenditure is about  $\frac{3}{4}$  of a percentage point of GDP lower than the EU average, but on par with the CESEE average. In PPP-adjusted terms, Estonia spent about USD 1,670 while the EU average was about USD3,100 in 2014. Expenditure is also particularly lower than the EU average for social protection by about 3.9 percentage points of GDP. Financing such increases in spending could lead to increased debt levels, or would require sharp cuts in spending, or necessitate large tax increases, unless revenue performance increases substantially.

**Labor Force Projections Under Baseline Scenario**  
(Percent change, 2015=100)



Sources: UN population projections and IMF staff calculations.

**5. In the particular case of Estonia, we examined the implications of declining working age population for labor supply, based on different scenarios.** Under a baseline scenario, the total labor force for each country is estimated by projecting the population of 5-year age cohorts and participation rates for each cohort, per the labor force decomposition.

$$\text{Labor force} = \sum_j \text{Population}_j * \text{Participation rate}_j,$$

where  $j$  is a 5-year cohort of men or women from 16 to 80 years old. We use the United Nations population projections (2017 vintage, medium fertility scenario) for population projections. For

<sup>1</sup> Staff Discussion Paper on Demographic Headwinds in the CESEE Countries by the European Department.

<sup>2</sup> Note prepared by IMF Staff for the G20 on the Macroeconomics of Aging and Policy Implications.

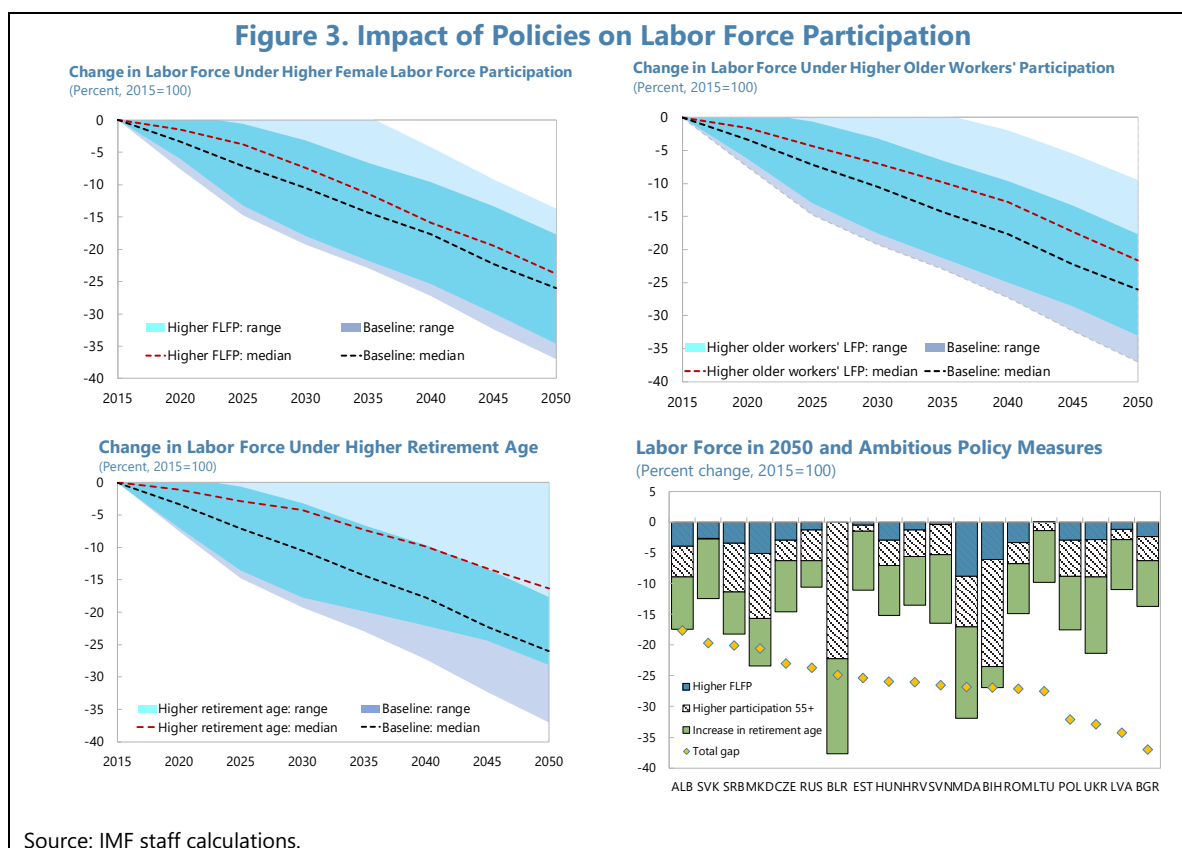
<sup>3</sup> Selected Issues Paper on Public Expenditure Efficiency in Estonia.

future participation rates, current labor force participation rates for each cohort (from ILO data) are used. In cases where there are planned increases in statutory retirement ages, the participation rates of the older cohorts (those aged 55 to 70 years) are increased to match the rates in countries that have similar statutory retirement ages. Under current policies, the labor force in Estonia is still projected to decline by 11 percent by 2030 and 25 percent by 2050. The projection already factored into account legislated changes in the retirement ages.

## 6. We also investigate the potential for policies to offset the expected labor force decline.

We employ three policy scenarios that are calibrated by changing participation rates for older workers and women, with same population projections as in the baseline scenario. The three scenarios include: (i) increasing the female labor force participation to the highest EU levels of the corresponding age cohort (for 25–45 years old); (ii) increasing the participation rates for older men and women (55 years and older) to the maximum achieved in EU countries; and (iii) raising the statutory retirement package to changes in life expectancy until reaching a ceiling of 67 years. To consider the reforms:

- A *moderate* scenario assumes an average annual FLFP rate of 0.5 percentage points, corresponding to the average annual increase in the EU15 countries over the period 1995–2016; and an increase in the statutory retirement age linked to changes in life expectancy, but not higher than 67 years for both men and women.



- An *ambitious* scenario assumes an average increase of annual FLFP of 1.3 percentage points, equivalent to the highest average FLFP increase achieved in an EU country (Spain) over the

period 1995–2016; and the statutory retirement age increases to 67 by 2030 for both men and women and links further increases in the retirement age to increases in country-and-gender specific life expectancy in subsequent years (2030–50).

**7. The contribution of policies to reduce the decline in labor force is broad based** (See Figure 3). Measures to increase the participation of women in the labor force could increase the available labor force compared to the baseline. Boosting participation of older workers without lifting the retirement ages would have a larger impact that increases over time as the share of older cohorts grows. In the long run, raising the statutory retirement age would bring the most significant impact, which could reduce the median decline in the labor force by nearly 10 percentage points.

**8. Reforms, however, could only reduce, but not reverse the decline in labor supply.** Under a moderate scenario, Estonia would close only 4.7 percentage points of the 25.4 percent gap, facing a high labor force decline of above 20 percent. With ambitious reforms, Estonia would close 11.1 percentage points of the gap, 86 percent driven mainly by raising the retirement age.

### Box 1. Empirical Method

The standard Cobb-Douglas production function with constant returns to scale, can be expressed as:

$$y_{it} = \left(\frac{K}{Y}\right)_{it}^{\frac{\alpha}{1-\alpha}} A_{it} h_{it} \quad (1)$$

where  $y_{it}$  is output per worker,  $K$  is capital per worker,  $Y$  is output,  $A_{it}$  is Total Factor Productivity,  $h_{it}$  is human capital per worker, and  $\alpha$  is the share of capital in output. We assume that the age structure of the workforce may have an impact on productivity growth:

$$\Delta \log y_{it} = f(\sum_s \beta_s w_{sit}) \quad (2)$$

where  $w_{sit}$  is the share of each age cohort  $s$  in the workforce, and  $\beta_s$  is the contribution of this age cohort to productivity growth.

The workforce age structure could affect labor productivity through several channels. Labor productivity can be determined by a combination of several drivers (equation 1)—capital intensity, human capital, and TFP—that could act as transmission channels from workforce aging to labor productivity. In the analysis below, we examine the relative importance of each.

The empirical analysis of the impact of workforce aging on labor productivity growth and its main drivers follows Feyrer (2007), Aiyar et al. (2016), and Adler et al. (2017), with a regression specification taking the form

$$\Delta \log YL_{it} = \alpha_i + \gamma_t + \sum_s \beta_s w_{sit} + \delta yadr_{it} + \phi oadr_{it} + \varepsilon_{it},$$

where  $YL_{it}$  denotes output per worker,  $\alpha_i$  is a country fixed effect,  $\gamma_t$  are time dummies for several periods (1990–95, 1998–99, and 2008–09),  $oadr_{it}$  is the old-age dependency ratio, and  $yadr_{it}$  is the young-age dependency ratio.

We further decompose labor productivity to understand the relative importance of the channels through which workforce aging operates, thus estimating four equations, one for each of labor productivity, (physical) capital, human capital, and TFP. Regressing each component of the production function on the workforce age composition measures will therefore gauge whether workforce aging affects worker productivity through factor accumulation or TFP.

**9. Since demographic changes could lead to a decline in labor supply, we examine the potential implications on productivity and growth.** Using a production function approach can inform channels through which demographics affect growth (see Box). The estimation uses a panel data set with 167 countries over 1990–2014. Population data are taken from the United Nations World Population Prospects (2017) database and are available from 1950 onwards. The workforce data are from ILOSTAT. The young and old-age dependency ratios are calculated as the share of the population aged 0 to 14 and 65+ to the active population aged 15 to 64, respectively. The output per worker, capital stock, human capital and TFP data, which end in 2014, are taken from the Penn World Table 9.0.

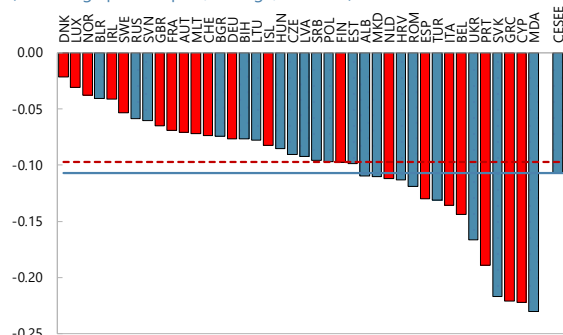
Figure 4. Regression Results

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	D.InYL	D.InKY	D.Inhc	D.Inrtfpna	D.InYL	D.InKY	D.Inhc	D.Inrtfpna
w5599_ratio	-0.731*** (-4.006)	0.291*** (3.931)	-0.0142 (-0.461)	-0.608*** (-3.563)	-0.810*** (-4.254)	0.335*** (4.457)	-0.00477 (-0.170)	-0.687*** (-4.115)
Oadr	0.224 (0.670)	-0.209 (-1.605)	-0.0162 (-0.390)	0.149 (0.441)	0.309 (0.923)	-0.258** (-2.020)	-0.0260 (-0.664)	0.239 (0.740)
Yard	0.0337 (0.924)	-0.0364*** (-2.847)	-0.00437 (-0.425)	-0.00976 (-0.227)	0.0680* (1.709)	-0.0551*** (-4.175)	-0.00791 (-0.672)	0.0334 (0.756)
Observations	4,150	4,152	3,585	2,883	4,150	4,152	3,585	2,883
Number of id	167	167	144	116	167	167	144	116
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*	Yes*
Anderson	0	0	0	0	0	0	0	0
correlations LR test								
p-value								

**10. The results (Table 2) show that an ageing labor force can significantly slow TFP and growth.** A 1 percentage point increase in the share of older workers (ages 55+) in the workforce is associated with a decrease in growth of output per worker of 0.7–0.8 percentage points. Lower TFP growth, which decreases by about 0.6 percentage points for every point increase in the older worker share, has the most effect. The results seem to suggest that human capital is not an important channel. However, workforce aging is associated with a statistically significant increase in the capital-output ratio, suggesting that there may be some capital intensification to compensate for an older and less productive workforce.

**11. A simulation of projected changes in the composition of the work force confirms that ageing would lower productivity.** The [Impact of Workforce Aging on TEP Growth](#)

projections of the UN WPP medium fertility scenario are multiplied by the labor force participation rates from the baseline scenario for each country and size of the labor force for each five-year cohort. The TFP impact is calculated by multiplying the projected differences in the share of workers aged 55+ in the total workforce for each five-year period from 2015 to 2050 by 0.6 (the estimated effect of the changes on TFP growth). The calculation implies that workforce ageing could lead to a 0.1 percentage point decrease in TFP growth for Estonia on average over the period 2015–50.

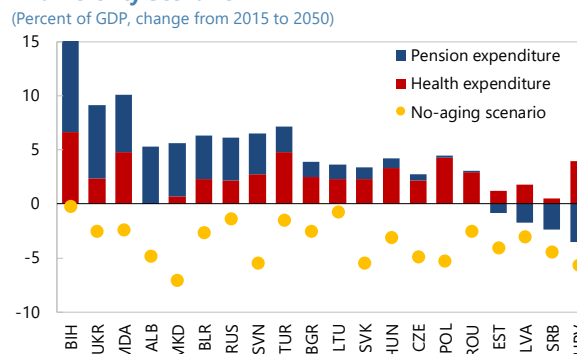


Sources: UN WPP; ILO; PWT 9.0; and IMF staff calculations.

**12. The impact of demographic changes on pensions and health care expenditure is assessed using projections developed by Clements and others (2015).** These projections are used to derive on benefit and coverage ratios for each country based on the expected evolution of age dependency ratios and labor force participations rates. Estimates of labor force participation rates and output per worker are assumed endogenous. Potential cumulative liabilities associated with age-related expenditure are calculated as the net present value of pensions and health care spending.

**13. The expected population changes will impose fiscal costs especially for public health care and pensions.** Since pensions are

paid to retirees, total pension spending should rise with the expected rise in the old-age population, while revenues will decline as the working-age population shrinks. In addition, as per capita health spending tends to rise with age, aging requires higher public health spending as well. On current policies, fiscal costs related to pensions and health care are expected to increase by nearly 3.2 percentage points of GDP, on average, between 2015–50 for Estonia (see chart). Most of the increase relate to pension expenditure that is expected to increase by 4.1 percentage points. In contrast, the fiscal costs for health expenditure only increase by 2.3 percentage points during a comparable period.



Source: IMF staff calculations.



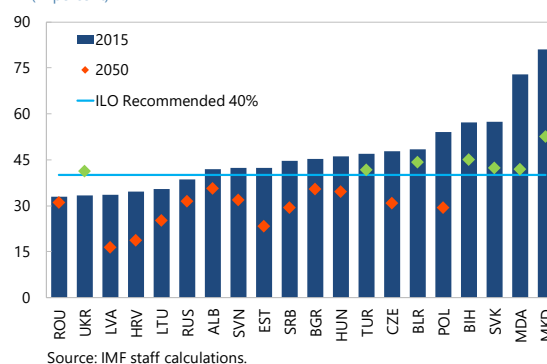
**14. Absent supportive policies, the increased pension spending could lead to socially unsustainable outcomes.**

The evolution of replacement rates—defined as pension payments as a percentage of pre-retirement earnings—remains a concern. The rates are below the minimum level of 40 percent recommended by the International Labor Organization by 2050. Recently adopted reforms could not completely reverse the decline in replacement rates. On average, a pensioner would receive nearly 24 percent of his or her pre-retirement earnings.

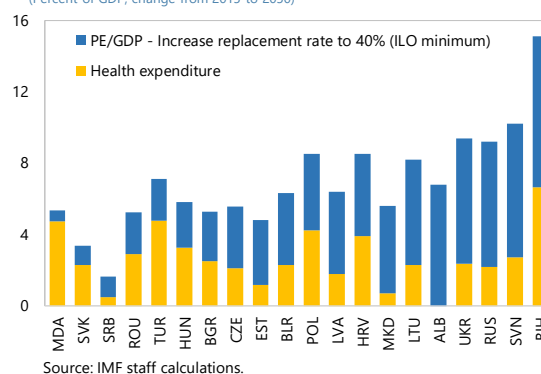
**15. Efforts to improve replacement rates would substantially increase pension costs.**

Bringing replacement rates to the recommended minimum level of 40 percent would increase estimated fiscal costs of pensions by 4.8 percentage points, on average for Estonia, between 2015–50. This would raise age-related spending from an average of 5.9 percent of GDP to about 10.7 percent of GDP.

**Pension Replacement Rate, 2015-2050**  
(In percent)



**Projected Age-Related Spending Increases**  
(Percent of GDP, change from 2015 to 2050)



## Annex VII. The Impact of the 2018 Personal Income Tax Reform

**1. There are noticeable efforts to shift the tax burden away from labor.** In 2017, the tax wedge for low-income earners at 36.8 percent for an employee earning 50 percent of the average wage was higher than the EU average of 32.5 percent. Against this backdrop, the government undertook to reduce the tax wedge for low-income earners by raising the tax-free allowance to 500 euros per month in 2018. The tax-free allowance for people earning more than the average salary decreases gradually and reaches zero once a person's salary exceeds 2,100 euros per month.

**2. The PIT reform has lowered the tax wedge, but contributed marginally to reducing inequality.** Preliminary estimates indicate that the tax wedge for low-income earners at 29.7 percent for an employee earning 50 percent of the average wage was lower by 2.1 percentage points compared to the EU average of 31.8 percent. But for the poorest households that earn about 33 percent of the average wage, the tax wedge at 28 percent remained higher than the EU average of 27.6 percent. In order to gauge the impact of the reforms on income inequality, an approach using the microsimulation of a tax-benefit model EUROMOD developed jointly by the University of Essex and the European commission was invoked. Overall, the tax reforms appears to have a limited effect on income inequality as measured by the Gini coefficient (see table). The rate of at poverty risk, which is more relevant for inequality also marginally declined while disposable income increased in nominal terms.

### EUROMOD Results on the Impact of Tax Reforms

	Pre-Reform	After Reform
Gini Coefficient	0.391	0.382
Mean Household Disposable Income	1574	1607
Poverty Risk (60 percent)	22.5%	20.7%

Source: Estonia Authorities

**3. The distributive impact of the reform was favorable, with some fiscal costs.** About 63 percent of all earners paid less PIT while net earnings remained stagnant for about 23 percent of earners. Among the pensioners, PIT payments were lower for a majority 58 percent, but net earnings remained the same for 35 percent of the group. Yet the fiscal costs of the reforms were not negligible. Preliminary estimates indicate that government will spend a cumulative 1.5 percent of GDP during 2018–20, slightly lower compared to earlier projections of 1.6 percent of GDP. This development reflect less use of the free allowance in 2018, tapping on the possibility to use half of the allowance and settle in PIT the rest. Overall, the changes imply that the marginal tax rate for low and medium earnings decreased providing stronger incentives to work more hours; however, at high earnings work incentives weakened because gradual withdrawal of the tax allowance increased the effective marginal income tax rate.



# REPUBLIC OF ESTONIA

## STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION— INFORMATIONAL ANNEX

December 19, 2019

Prepared By

European Department

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## FUND RELATIONS

(As of October 31, 2019)

**Membership Status:** Joined: May 26, 1992; Article VIII

### General Resources Account

	SDR Million	Percent Quota
Quota	243.6	100.00
Fund holdings of currency	201.04	85.53
Reserve Tranche Position	42.58	17.48

### SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	61.97	100.00
Holdings	24.60	39.70

**Outstanding Purchases and Loans:** None

### Latest Financial Arrangements

#### In millions of SDR

Type	Approval Date	Expiration Date	Amount Approved	Amount Drawn
Stand-by	03/01/2000	08/31/2001	29.34	0.00
Stand-By	12/17/1997	03/16/1999	16.10	0.00
EFF	07/29/1996	08/28/1997	13.95	0.00

**Projected Payments to Fund:** None

**Implementation of HIPC Initiative:** Not applicable.

**Implementation of MDRI Assistance:** Not applicable.

**Implementation of CCR Assistance:** Not applicable.

**Exchange Arrangements:** As of January 1, 2011, Estonia's currency is the euro, which floats freely and independently against other currencies.

Estonia has accepted the obligations under Article VIII, Sections 2(a), 3 and 4 of the Fund's Articles of Agreement, and maintains an exchange system free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions, except for those measures imposed for security reasons in accordance with Regulations of the Council of the European Union, as notified to the Executive Board in accordance with Decision No. 144-(52/51). An updated and comprehensive list of all EU restrictions can be found at:

[http://ec.europa.eu/external\\_relations/cfsp/sanctions/measures.htm](http://ec.europa.eu/external_relations/cfsp/sanctions/measures.htm)

**Article IV Consultation:** Estonia is on the 12-month consultation cycle. The last Article IV consultation was concluded on May 7, 2018. The Executive Board assessment is available at:

<http://www.imf.org/external/country/EST/index.htm>

**FSAP Participation and ROSCs:** A review under the Financial Sector Assessment Program (FSAP) was completed at the time of the 2000 Article IV Consultation. Further Reports on Observance of Standards and Codes (ROSC) modules were discussed in the 2001 Article IV Consultations and updated during the 2002 Consultation. A FAD mission concluded a fiscal transparency ROSC in January 2009 and an FSAP update was completed in February 2009.

**Anti-Money Laundering (AML) and Combating Financing of Terrorism (CFT):** MONEYVAL's report on the 4<sup>th</sup> round assessment of Estonia adopted in September 2014, which is a follow-up round on the 2003 Financial Action Task Force (FATF) standard, highlighted the authorities' progress in strengthening the AML/CFT legal and supervisory frameworks, specifically development of a risk-based approach to determine priorities for AML/CFT activities, amendments to the financing of terrorism offence, and the establishment of the Economic Crime Bureau. The report notes some remaining deficiencies, in particular with respect to the sanctioning regime for AML/CFT breaches and the beneficial ownership identification of legal persons. The authorities are addressing these issues, including by preparing amendments to the penal code to allow for "administrative sanctions." They are also working on ensuring compatibility of the widespread use of information technology and AML/CFT requirements. Regulation has been issued with respect to the e-Residency program, namely with regards to customers' identification for non-face-to-face opening of bank accounts. As the e-residency program is in its early stages, it will be important to follow up on appropriate safeguards that should be put in place to ensure integrity of the program and limit the potential for abuse. Estonia issued its first regular follow-up report to MONEYVAL in September 2016 and was invited to seek removal from the follow-up process not later than September 2018. The next MONEYVAL's assessment is expected in early 2022.

**Technical Assistance:** The following table summarizes the technical assistance missions provided by the Fund to Estonia since 2000.

Republic of Estonia: Technical Assistance from the Fund, 2000–19				
Department	Issue	Action	Date	Counterpart
FAD	Pension reform	Mission	April 2000	Ministries of Finance and Social Affairs
MAE	Banking Supervision	Staff Visit	December 2000	Bank of Estonia
FAD	Tax Policy	Mission	March 2001	Ministry of Finance
INS	Financial Markets	Training	September 2002	Bank of Estonia
FAD	Medium-term Budget	Technical Assistance	December 2003	Ministry of Finance
FAD	Tax Reform	Technical Assistance	February 2005	Ministry of Finance
FAD	Revenue Administration	Technical Assistance	December 2013	Ministry of Finance
FAD	Public Investment Management	Technical Assistance	December 2018	Ministry of Finance

## STATISTICAL ISSUES

**General:** Estonia's data provision to the Fund is adequate for surveillance purposes. A May 2001 data ROSC mission found that the quality of macroeconomic statistics was generally good. The 2009 fiscal transparency ROSC indicated that Estonia now meets nearly all of the requirements of the transparency code and approached best international practice in some areas. Estonia subscribed to the SDDS on September 30, 1998, with metadata posted on the DSSB on January 27, 1999, and met SDDS specifications on March 30, 2000. The latest (2016) annual observance report for Estonia for the SDDS is available on the Fund's website:

([http://dsbb.imf.org/images/pdfs/AnnualReports/2016/EST\\_SDDS\\_AR2016.pdf](http://dsbb.imf.org/images/pdfs/AnnualReports/2016/EST_SDDS_AR2016.pdf))

SDDS webpage for EST: <http://dsbb.imf.org/Pages/SDDS/CtyCtgList.aspx?ctycode=EST>

**National Accounts:** The national accounts are compiled by Statistics Estonia (SE) in accordance with the guidelines of the European System of Accounts 2010 (ESA 2010). Quarterly GDP estimates at current and at constant prices are compiled using the production, income and expenditure approaches. The annual and the quarterly national accounts are compiled at previous year prices and chain-linked to 2010, using double deflation. As of September 2011, data are compiled on the basis of the new version of classification of activities EMTAK 2008.

However, there is room to improve the quality of national account statistics. Early releases are often subject to large subsequent revisions, statistical discrepancies between headline GDP and its expenditure components tend to be sizable, and indirect taxes minus subsidies in the production accounts sometimes make implausibly large growth contributions. All this complicates economic analysis.

The authorities have started addressing these issues and will be implementing a number of methodological upgrades suggested by the 2016 Article IV Consultation mission. These include: (i) more timely compilation of supply-and-use tables; (ii) use of volume indexes as the primary source for all real indirect taxes minus subsidies rather than partly deriving them by deflating nominal values; (iii) relying more on direct measures of volumes in estimating real gross value added generated by real estate activities; (iv) carrying forward input-output ratios in volume terms rather than in value terms when calculating value added by economic activity for non-financial corporations; and (v) integrating the estimation of gross fixed capital formation with the production and imports of capital goods and services. The authorities had initially planned to finalize the methodological upgrades by September 2017. However, agreement among EU members to undertake major historical revisions to national accounts statistics in 2019 means that upgrades will not be implemented until 2020.

Against this backdrop, the authorities revised the national accounts time series from 1995 onwards in August 2019. The revision took place in the context of recommendations made during the Eurostat's gross national income (GNI) verification cycle. It constituted reviewing previous calculations, introducing new data sets, and improving the methodology in some instances. Further, the methodology for disaggregation from annual to quarterly data was changed and the reference year was shifted from 2010–15 as part of the chain linking the GDP figures.

**Public Finance:** Fiscal data are published by the Ministry of Finance (MoF), while historical data are also available on Statistics Estonia's website. Monthly central government data are disseminated with a lag of up to 25 days after the end of the month. This data provides detailed revenue breakdown, but expenditure breakdown is not available. Quarterly data on foreign loans and guarantees by the central government are published in Estonian with a monthly lag. The Ministry is using one of its two allowed SDDS flexibility options on the timeliness of monthly central government operations data and disseminate these data on the National Summary Data page. Comprehensive annual data on central and general government operations (accrual basis) are compiled according to the ESA2010 methodology. They are also reported in the *GFS Yearbook*. These data include a statement of operations and the government balance sheet, including data on financial assets and liabilities, both domestic and foreign. Quarterly data for the general government are included in the *International Finance Statistics*.

**Monetary and Financial Statistics:** The Bank of Estonia (BoE) compiles and reports monetary and financial statistics consistent with the IMF's *Monetary and Financial Statistics Manual*. Aggregate financial data are compiled by the BoE and reported on a monthly basis. The majority of statistics are disseminated on the Bank of Estonia's webpage on the 17<sup>th</sup> banking day after the end of the reporting period. Data for individual banks are also available on a quarterly basis since 2008Q1 on the Financial Supervision Authority's webpage. Estonia also regularly provides requested Financial Soundness Indicators.

**External Sector:** Quarterly balance of payments, external debt, and international investment position (IIP) data are compiled by the BoE consistent with the *Balance of Payments Manual* sixth edition (BMP6). Daily exchange rate data are available with a one working day lag. Monthly import/export data are available with a two-month lag. The Data Template on International Reserves and Foreign Currency Liquidity is disseminated monthly according to the operational guidelines and is hyperlinked to the Fund's DSBB.

**Dissemination of Statistics:** The Estonian authorities disseminate a range of economic statistics, with a significant amount of data are available on the Internet:

- metadata for data categories defined by the Special Data Dissemination Standard are posted on the IMF's DSBB (<http://dsbb.imf.org>);
- the Bank of Estonia website (<http://www.eestipank.info/frontpage/en/>) provides data on monetary statistics, balance of payments, IIP, external debt and other main economic indicators;
- the Statistics Estonia website (<http://www.stat.ee/en>) provides information on economic and social development indicators;
- the Ministry of Finance homepage (<http://www.fin.ee/?lang=ee>) includes information on the government's annual multi-year State Budget Strategy, as well as information and data on the national budget, and government finance statistics (deficit, debt, financial assets).

**Estonia. Table of Common Indicators Required for Surveillance**

As of December 4, 2019

	Date of latest observation	Date received	Frequency of Data <sup>6</sup>	Frequency of Reporting <sup>6</sup>	Frequency of publication <sup>6</sup>	Memo Items:	
						Data Quality—Methodological soundness <sup>7</sup>	Data Quality—Accuracy and reliability <sup>8</sup>
Exchange Rates	December 4, 2019	December 4, 2019	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities <sup>1</sup>	October 2019	November 2019	M	M	M		
Reserve/Base Money	October 2019	November 2019	M	M	M	O, LO, LO, LO	O, O, O, NA
Broad Money	October 2019	November 2019	M	M	M		
Central Bank Balance Sheet	October 2019	November 2019	M	M	M		
Consolidated Balance Sheet of the Banking System	October 2019	November 2019	M	M	M		
Interest Rates <sup>2</sup>	October 2019	November 2019	M	M	M		
Consumer Price Index	October 2019	November 2019	M	M	M	O, O, O, O	LO, LO, O, LO
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> —General Government <sup>4</sup>	Q2/2019	October 2019	Q	Q	Q	LO, LO, O, O	LO, LO, O, NO
Revenue, Expenditure, Balance and Composition of Financing <sup>3</sup> —Central Government	Q2/2019	October 2019	M	M	M		
Stocks of Central Government and Central Government-Guaranteed Debt <sup>5</sup>	Q2/2019	October 2019	Q	Q	Q		
External Current Account Balance	Q2/2019	October 2019	Q	Q	Q	O, O, LO, O	O, O, O, O, O
Exports and Imports of Goods and Services	October 2019	November 2019	M	M	M		
GDP/GNP	Q2/2019	October 2019	Q	Q	Q	O, O, O, LO	LO, LO, LO, LNO
Gross External Debt	Q2/2019	October 2019	Q	Q	Q		
International Investment Position <sup>9</sup>	Q2/2019	October 2019	Q	Q	Q		

<sup>1</sup> Any reserve assets that are pledged of otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

<sup>2</sup> Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

<sup>3</sup> Foreign, domestic bank and domestic nonbank financing.

<sup>4</sup> The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

<sup>5</sup> Including currency and maturity composition.

<sup>6</sup> Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A); Not Available (NA).

<sup>7</sup> Reflects the assessment provided in the data ROSC published on November 6, 2001, and based on the findings of the respective missions that took place during May 10–18, 2001 for the dataset corresponding to the variable in each row. For fiscal data, also takes account of the 2009 Fiscal Transparency ROSC. The assessment indicates whether international standards concerning concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O), largely observed (LO), largely not observed (LNO), or not observed (NO).

<sup>8</sup> Same as footnote 7, except referring to international standards concerning (respectively) source data, statistical techniques, assessment and validation, and revision studies.

<sup>9</sup> Includes external gross financial asset and liability positions vis-à-vis nonresidents.



**Statement by Thomas Ostros, Executive Director for the Republic of Estonia  
and Nils Vaikla, Advisor to Executive Director  
January 17, 2020**

**Macroeconomic performance and outlook**

Estonia has witnessed solid economic growth in recent years as the economy has operated above its potential. The GDP growth in 2019 was around 3.5 percent driven by investments and strong private consumption, fueled by rapid growth in wages, and low unemployment. The manufacturing, information technology, and business services sectors had the most impact to the GDP increase, while construction and the energy sector contributed negatively to growth. The economic growth of 4.2 percent in the third quarter was surprisingly good but was lifted by one-off factors related to the agricultural sector and changes in consumption taxes.

Going forward, the Estonian economy will witness a gentle deceleration as the weaker outlook for foreign markets weighs on the manufacturing sector and exports. These developments, coupled with the stabilization of employment and a more modest growth of incomes, will somewhat ease consumption growth going forward. As a result, growth in the economy is expected to pull down close to 2 percent in the years ahead, while inflation will continue to rise slowly at a rate of around 2 percent.

The labor market is tight as the unemployment rate has declined to a record low level of 3.9 percent, while the labor force participation rate remains one of the highest in the EU. The limited labor supply has been somewhat eased by immigration, which has exceeded emigration for the past four years now. There has especially been an increase in recent years in temporary migration from outside the EU, which has significantly eased labor shortage pressures in certain sectors. The first signs of cooling are apparent in the labor market, as the more recent rise in registered unemployment and increasingly pessimistic employment expectations in the manufacturing sector indicate that the unemployment rate is expected to rise. The tight labor market conditions have resulted in rapid wage growth averaging 7-8 percent annually in recent years. With the economic climate cooling, the authorities expect that wage growth will ease somewhat, while wage pressures will probably remain relatively high in the future.

The authorities agree that risks to the growth outlook are skewed to the downside. Estonia's small and very open economy is particularly vulnerable to the external environment. Therefore, weaker economic prospects for its immediate trading partners, trade tensions, and Brexit concerns could significantly hamper Estonia's economic activity through the exporting sector. Domestically, risks could stem from the overheating of economy as limited labor has imposed strong cost pressures on companies thereby posing a risk to Estonia's competitiveness and productivity.

## **Fiscal policy**

Estonia is committed to pursue a sound and sustainable fiscal policy, which has served the country well and provided macroeconomic stability. Fiscal policy is aimed to preserve neutral or countercyclical budgetary policy, while maintaining the low level of government debt. Estonia's gross public debt is currently at around 9 percent of GDP and net debt is close to zero due to sizable liquid reserves. The Ministry of Finance expects that the general government's 2019 nominal budgetary position was close to balance (-0.1 percent of GDP), while the structural position improved to -1.2 percent of GDP. The authorities concur with staff that with the economy operating above its potential, the current expansionary fiscal stance needs to be gradually unwound. The State Budget envisages that in 2020 the budget will be in nominal balance and the structural position further improves to -0.7 percent of GDP.

The Government's fiscal policy aims to improve social cohesion and reduce inequality, while maintaining prudent public finances. To set the fiscal policy towards more growth-friendly direction and to simplify the fiscal rule, the government is considering amending the current rule by waiving the requirement to compensate for the cumulative deficit that has arisen, and to restore the annual structural balance requirement. To improve the social safety net and meet the Government's goal of reducing relative poverty to 15 percent by 2023, pensions will continue to grow in 2020 supported by extraordinary increase, while further investments are made to health care, social security, and education. The 2018 income tax reform, which raised the non-taxable income threshold and made the system more progressive, considerably improved inclusiveness and inequality. Last year, additional one-time benefits were paid to pensioners living alone, while family allowances were raised. According to OECD estimates, the combined effect of these measures reduced the Gini index of disposable incomes by roughly one percentage point. However, the authorities agree with staff that there is further scope to address wealth inequality.

The authorities agree that fiscal policy should be geared towards raising potential growth over the medium to long term by implementing productivity-enhancing investments, while fiscal space should be used to ensure positive returns for the entire economy without causing labor market distortions. The Government plans to implement multi-decade investment projects to upgrade infrastructure. The construction of Rail Baltica, a rail transport infrastructure project to integrate Baltic economies in the European rail network, is already in progress, while large-scale PPP infrastructure projects are considered to further improve transport connectivity. The authorities concur with staff that higher investment expenditures should be supported by improved efficiency of public spending and are committed to strengthening public investment management and a partnership framework for public-private investment, in-line with the PIMA recommendations.

The Government also prioritizes the development of a competitive economic environment and is taking steps to reduce excessive administrative burdens. On this regard, the

Government has approved the initial state reform action plan for 2019-2023 aimed toward increasing the effectiveness of state tasks, lowering the administrative burden, and decreasing expenditures in the government sector.

## **Structural Policies**

Given the already high employment rates and demographic challenges in the economy, the authorities acknowledge that there is a growing need to implement structural policies geared toward accelerating productivity and reducing skill gaps.

### *Productivity*

The authorities agree with staff that scaling up public and private investment in R&D would broaden the economy's innovation base and significantly enhance productivity. The Government has set the long-term target of increasing the private sector's R&D expenditure to 2 percent and the public sector's R&D expenditure to 1 percent of GDP. Additional resources in the 2020 budget are devoted to R&D with the aim of boosting productivity, which will further raise the share of science funding to 0.74 percent of GDP. A formation of joint strategy for R&D, innovation and entrepreneurship is currently being developed to reach the set targets with emphasis on significantly increasing the share of private sector investments. As a new measure, there are plans to set up a support fund for research and development intensive start-ups. While R&D spending has risen over the years in absolute terms, the authorities share staff's view that there is scope to step up R&D expenditure to raise productivity and support convergence to EU income levels.

### *Labor market reforms*

The Work Ability Reform has overhauled the disability pension system and unlocked resources for lower paid sectors. To further ease the tight labor market, the authorities have loosened restrictions in certain branches of the economy on hiring foreign labor outside of EU. The rapid wage increase, which has been consistently above productivity growth in recent years, is a concern and the authorities agree that high quality labor market policies aimed toward reducing skill gaps is important going forward. To alleviate skill shortages, the authorities are implementing measures to improve adults' access to formal education, expand opportunities of in-service training and retraining. Higher and vocational education and retraining programs are being amended to ensure that the education system meets the needs of the labor market.

While the female employment participation rate is one of the highest in the EU, the relatively high gender pay gap, albeit on the downward trend over the years, is a concern for the authorities. To reduce the high gender pay gap in the private sector, a comprehensive evaluation of enterprises work and pay systems is planned and will be made available to employers to support them both in fulfilling legal requirements and taking voluntary measures to promote gender equality in their organization. Additional activities are being

implemented to improve economic opportunities for women by providing adequate and flexible childcare arrangements and to increase paternity leave.

### *Pension reforms*

In 2018, Estonia adopted the first pillar pension reform changing the pension formula and linking the pensionable age with life expectancy starting from 2027. These measures will support labor supply and increase average pensions in the future, especially for low-income earners.

The Government has announced plans to implement changes to the second pillar of the pension system in 2020 with the aim of making the pension system more flexible. The proposal, yet to be approved by the Parliament, allows individuals to opt-out from the mandatory privately-managed second pillar and gives them an opportunity to withdraw the accumulated funds before the retirement age. The planned changes also provide option to receive the second pillar pension as a lump sum or as an annuity from the pension fund or an insurance company.

The Bank of Estonia fully agrees with staff that the planned changes to the pension system will endanger macroeconomic stability as temporary boost fueled by increased consumption due to withdrawal of assets from pension accounts would be followed by slower growth or even a recession. In the long run, there is considerable risk that the planned reform would lower retirement incomes and raise old-age poverty, which ultimately results in higher fiscal costs. Risks to financial stability could stem from sell-off of investment assets, as pension funds need to liquidate their investments, including less-liquid investments made in the domestic financial market.

## **Financial policy**

### *Financial stability*

The Estonian financial system continues to be sound with a well-capitalized, profitable, and liquid banking system. The bank's loan portfolio has shown strong growth, mainly driven by households, while borrowing by companies has been moderate. However, the households' ability to service their loans has remained good and their indebtedness has not increased as incomes have risen fast as well. Given the recent moderate rise in housing prices and the current state of the economy, imbalances in the housing market are not significant. The authorities monitor the developments in the housing market closely.

Risks to the financial sector are low and mainly external. The risks could result from weaker than expected global growth and volatile financial market conditions. The Estonian banking sector has strong interlinkages with the Swedish financial system, as subsidiaries of Swedish banks account for two thirds of the banking market in Estonia. While loan portfolios of the subsidiaries are funded almost entirely from domestic deposits, the funding risks of parent banks also affect the Estonian financial sector. Domestic risks stem mainly from the build-up

of vulnerabilities related to strong growth in household borrowing and real estate development activity.

The Bank of Estonia has introduced various capital buffer requirements and requirements for issuing housing loans to reduce the risks to the financial sector. A systemic risk buffer requirement of 1 percent applies to all banks in Estonia, with additional capital buffers between 1-2 percent required for the four systemically important credit institutions. As a new macroprudential measure, an average risk weight floor of 15 percent for mortgage loans was introduced for banks that use the internal ratings method for calculating risk-weighted assets. While the level of systemic risk coming from the housing market is not currently high, the aim of the measure is to ensure the resilience of the banks to the risks associated with housing loans.

#### *AML/CFT developments*

The authorities are concerned that the Estonian banking sector has been used for money laundering and are strongly committed to further strengthening the AML/CFT regime. The authorities have recently closed two banks that have breached the requirements of AML/CFT laws. As a result, the share of deposits held by non-residents in the Estonian banking sector have fallen dramatically in the past three years thereby substantially reducing the risks to the banking system. The authorities have recently reviewed the functioning of the AML institutional set up and related proceedings to ensure its effectiveness and to strengthen its AML/CFT regime more generally. The Estonian FSA has notably increased the number of staff to counter illicit finance, issued extensive guidelines to supervised entities, and conducted an in-depth review of bank risk profiles.

As a top priority for the Government, the authorities are taking forceful steps in the fight against money laundering by improving prevention and enhancing domestic and international cooperation regarding AML/CFT policies. Further funds have been allocated to the FIU and Prosecutor's Office in this year's budget and a Center for Strategic Analysis was established under the FIU, which will significantly improve the scope of preventing money laundering. On the legislative front, the Government approved the draft legislation, which improves the state's possibilities to combat money laundering and transposes the EU Anti-Money Laundering Directive (AMLD V) into Estonian law. The legislation will significantly increase the fines for money laundering offences, as well as to expand the circle of persons who must comply with the requirements of the Money Laundering Prevention Act. The Estonian AML/CFT regime is scheduled to undergo an assessment by MONEYVAL in 2021.

#### *Nordic-Baltic cooperation*

The Estonian banking sector is closely interconnected with the Nordic-Baltic countries, therefore close cooperation within the region is essential. In January 2019, the Nordic and Baltic financial stability authorities conducted a joint financial crisis management exercise to strengthen the financial crisis preparedness. Based on the test results, follow-up work is

planned for the coming years with the aim to enhance communication and collaboration between the Nordic-Baltic authorities. In addition, the authorities agree on the need for broader regional cooperation to strengthen AML/CFT supervision. In August 2019, the Nordic and Baltic financial supervisors agreed to establish a permanent working group to exchange experiences and information with the goal of being more effective in the prevention of money laundering.