INTERNATIONAL MONETARY FUND

IMF Country Report No. 23/275

REPUBLIC OF ESTONIA

2023 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

July 2023

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 2023 Article IV consultation with the Republic of Estonia the following documents have been released and are included in this package:

- A **Press Release.**
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on a lapse of time basis, following discussions that ended on May 23, 2023, with the officials of the Republic of Estonia on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on July 10, 2023.
- An **Informational Annex** prepared by the IMF staff.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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International Monetary Fund
Washington, D.C.

PRESS RELEASE

PR23/275

IMF Executive Board Concludes 2023 Article IV Consultation with the Republic of Estonia

FOR IMMEDIATE RELEASE

Washington, DC – **July 28, 2023:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Republic of Estonia and endorsed the staff appraisal on a lapse-of-time basis without a meeting.

After a swift rebound from the pandemic in 2021, Russia's war on Ukraine has triggered a sharp and broad-based downturn for Estonia. Exports have been the main driver, reflecting weaker external demand but private consumption has also weakened considerably as high inflation has weighed on real disposable income. Despite the contraction in output, labor market conditions remain tight.

Inflation has declined from a peak of 25 percent in August 2022 to 11.2 percent in May 2023, but it remains among the highest in the euro area. Over time, inflation has become increasingly broad-based, with core inflation also rising rapidly, despite the widening negative output gap.

During 2023, growth is expected to recover alongside only gradual disinflation. Driven by consumption and exports, growth is expected to improve during the second half of the year, but earlier weakness will leave 2023 GDP 1.6 percent below its level a year earlier. A fiscal impulse of about 2½ percent of GDP is expected to boost growth in the near term, but it will also work at cross-purposes with monetary policy and counter the effect of higher interest rates on inflation, which is expected to decline only to an average of 9.7 percent in 2023.

Executive Board Assessment[2]

In concluding the 2023 Article IV consultation with the Republic of Estonia, Executive Directors endorsed staff's appraisal, as follows:

The economic effects of the war shock have exacerbated competitiveness erosion. Estonia has made remarkable progress over the past two decades, achieving steady convergence towards more advanced EU economies. However, while the external position is assessed to be broadly in line with medium-term fundamentals and desirable policies, signs of erosion in external performance have emerged in recent years, reflecting rapid growth in unit labor cost and real exchange rate appreciation. Russia's invasion of Ukraine triggered a large rise in inflation, supply chain disruptions and slower growth in key trading partners in the Baltic region. In Estonia, these developments, combined with fiscal tightening in 2022, have led to a

[1] 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.

[2] 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.

sharp economic downturn, while deceleration in productivity has further added to competitiveness pressures.

The war-led shock may leave scars. A very large fiscal impulse in 2023 along with gradually stronger external demand is expected to support the recovery under the baseline but will also leave inflation well above euro area average. In turn, high inflation is likely to exert pressure on wages which, combined with declining productivity growth, may further erode Estonia's competitive position over time. As a result, while the economy managed to recover swiftly from the pandemic, staff project a more permanent scar from the consequences of the war over the medium term, with growth failing to return to its pre-crisis average, absent tighter fiscal policy and proactive structural reforms to support productivity.

This baseline is highly uncertain and subject to domestic downside risks. Fiscal deterioration might become entrenched, above and beyond what is already assumed under the baseline. While supporting near-term growth, an excessively loose fiscal policy would undermine Estonia's disinflationary efforts and further weigh on its medium-term competitiveness prospects. Tighter labor market conditions, rapid wage growth triggered by generous public sector pay rises and waning productivity may exacerbate these adverse dynamics.

External downside risks are also significant. A significant tightening in global financial conditions may cripple bank credit and trigger a global recession. Major central banks could loosen monetary policy prematurely, leading to a de-anchoring of inflation expectations and increasing the risk of a wage-price spiral in Estonia's tight labor market. An accentuation of geopolitical tensions in the region or other war-related effects may also weigh on the outlook.

Estonia's policy mix needs to be re-calibrated to support a more sustainable recovery. A much less stimulative fiscal policy should be considered. Alongside targeted financial policies to underpin financial stability and structural reforms to raise productivity, address labor market shortages, and promote the green and digital transition, this policy mix will help Estonia achieve sustainable and inclusive growth over the longer term.

In the near term, a neutral or—at most—an only slightly expansionary fiscal stance is needed to contain inflation. As energy prices recede, consideration should be given to phasing out the most recent increases in family allowances while retaining targeted support to the most vulnerable groups. Containing the expansion of the public sector wage bill—including by limiting the flexibility of line ministries and local authorities to raise wages—is critical. Re-calibrating current spending towards productivity-enhancing capital spending would help safeguard competitiveness. Finally, the case for bringing forward some of the tax hikes envisaged from 2024 should be explored.

Over the medium-term, fiscal policy should preserve buffers to counter future shocks and spending pressures. Staff's recommended fiscal path entails reaching a balanced structural budget over the forecast horizon through an improvement of about ½ percentage point of GDP a year, anchored in the national fiscal rule. This path requires additional consolidation measures, including means testing social programs, saving on government operational expenditures, and a more efficient execution of capital expenditure.

Financial stability risks appear limited so far, but close vigilance is warranted amid rising interest rates. Comprehensive and frequent bank portfolio reviews should be accompanied by rigorous stress tests, including to assess risks stemming from wholesale deposits, funding through online deposit platforms, cross-border lending, and broader spillover effects from real estate markets in the region. Less-significant institutions, which have more limited buffers,

should be closely monitored. The earlier tightening of countercyclical buffers was appropriate, given the need to preserve robust buffers against sustained increase in credit and house prices. However, policies should be ready to respond to credit supply disruptions. Building on recent progress, systems should be further enhanced to address ML/TF risks.

Targeted structural reforms would help raise productivity, address labor market shortages, and promote the green and digital transition. Encouraging an increase in the share of private sector R&D to a level closer to the EU average would accelerate the evolution towards higher value-added production and exports. Addressing labor market shortages and closing skill gaps, especially in the ICT sector, would further strengthen long-term growth prospects. Conducting a review of recently enacted social welfare reforms along with progress towards reducing the gender pay gap would support more inclusive growth. Finally, phasing out oil shale in energy production, introducing a car registration and road tax, and extending ETS coverage would support a more ambitious green transition.

Estonia: Selected Macroeconomic and Social Indicators, 2022–24

	2022	2023	2024
	Actual	Projections	
	(Percentage change, unless otherwise indicated)		
National Accounts			
Real GDP Growth	-1.3	-1.6	2.9
Private Consumption	2.7	-0.2	3.8
Gross Fixed Capital Formation	-10.9	4.3	9.2
Exports of goods and services	4.7	-3.5	3.6
Imports of goods and services	5.9	-6.0	4.4
GDP (Nominal; Bil. Euros)	36.2	38.9	41.4
HICP Inflation			
Headline			
Period average	19.4	9.7	3.7
End-period	17.5	5.6	3.6
Core			
Period average	11.8	10.9	5.1
End-period	15.6	7.1	4.8
Labor Market			
Avg. monthly wage (yoy)	8.9	11.7	6.3
Unemployment rate	5.6	5.8	5.9
	(Percent of GDP, unless otherwise indicated)		
General Government Finances (ESA 2010)			
Revenue	38.5	38.6	39.8
Expenditure	39.4	43.1	43.0
Fiscal balance	-0.9	-4.5	-3.2
Structural Balance	-0.7	-3.3	-2.4
General govt. gross debt	18.4	22	24.3
Balance of Payment			
Current Account	-2.2	0.2	-0.4
Trade Balance	-0.6	1.0	0.4
Net FDI	-1.6	-1.4	-1.2
NIIP	-20.5	-19.8	-19.0
Exchange Rate			
REER (percentage change)	6.4	…	…

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

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION

July 10, 2023

KEY ISSUES

Context. Estonia has made remarkable progress over the past two decades, achieving steady convergence towards more advanced EU economies. However, signs of erosion in external performance have emerged in recent years, reflecting rapid growth in unit labor cost and real exchange rate appreciation. Russia's invasion of Ukraine triggered a large rise in inflation, supply chain disruptions and slower growth in key trading partners in the Baltic region. In Estonia, these developments, combined with fiscal tightening in 2022, have led to a sharp economic downturn, while deceleration in productivity has exacerbated competitiveness erosion.

Outlook and risks. A very large fiscal impulse in 2023 along with gradually stronger external demand is expected to support the recovery under the baseline but will also leave inflation well above euro area average. In turn, high inflation is likely to exert pressure on wages which, combined with declining productivity growth, may further erode Estonia's competitive position over time. As a result, while the economy managed to recover swiftly from the pandemic, staff project a more permanent scar from the consequences of the war over the medium term, with growth failing to return to its pre-crisis average, absent tighter fiscal policy and proactive structural reforms to support productivity. This baseline is highly uncertain with risks skewed to the downside.

Policy Recommendations. A much less stimulative fiscal policy should be considered, alongside targeted financial and structural policies to underpin financial stability and achieve sustainable medium-term growth.

- **Fiscal policy.** In the near term, a neutral or—at most—an only slightly expansionary fiscal stance is needed to contain inflation. Over the medium-term, staff's recommended fiscal path entails reaching a balanced structural budget over the forecast horizon through an improvement of about ½ percentage point of GDP a year, anchored in the national fiscal rule. This path would help preserve buffers to counter future shocks and spending pressures.

- **Financial policies.** The financial sector is sound, but close vigilance is warranted amid rising interest rates, including to assess risks stemming from wholesale deposits,

funding through online deposit platforms, cross-border lending, and broader spillover effects from real estate markets in the region.

- **Structural reforms.** Targeted structural reforms addressing labor market shortages and encouraging R&D investment, along with a re-calibration of public finance from current to capital spending, can enhance productivity and support competitiveness, while promoting Estonia's green and digital transition.

Approved by
Helge Berger (EUR) and Fabián Valencia (SPR)

Discussions were held in Tallinn during May 9-23, 2023. The team comprised Vincenzo Guzzo (head), Gianluigi Ferrucci, Bingjie Hu, and Neree Noumon (all EUR). Kristel Grace Poh and Maksym Markevych (both LEG) and Raido Kraavik (OED) also participated in the mission. Sadhna Naik and Kelly MacKinnon (both EUR) assisted with the mission and the preparation of the staff report. The mission met with Minister of Finance Mart Võrklaev, the Governor of the Bank of Estonia Madis Müller, the Chairman of the Financial Supervision and Resolution Authority Kilvar Kessler, the Economic Adviser to the Prime Minister Ardo Hansson, the Head of the Finance Committee of the Parliament Annely Akkermann, other senior officials, and members of parliament, as well as representatives of business associations, trade unions, banks, private sector, and academia.

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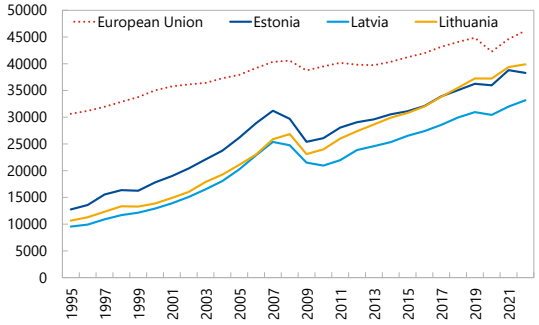
TABLES

ANNEXES

CONTEXT

1. Estonia made remarkable progress over the past two decades. Steady convergence towards more advanced EU economies was underpinned by successful market-oriented policies, strong export performance, fiscal discipline, and a sound financial sector. Solid institutions and a favorable business environment further supported income convergence and generally stable macroeconomic conditions.

GDP Per Capita
(in PPP 2017 international dollars)



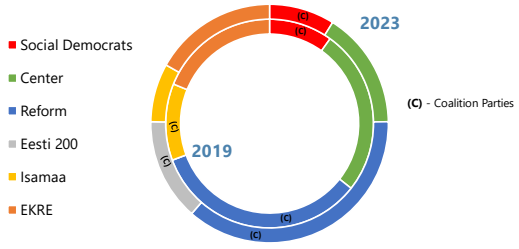
Sources: World Economic Outlook, IMF; and IMF staff calculations.

2. However, in recent years export growth has lost momentum. Signs of erosion in external performance pre-date the pandemic and energy crises. Nominal wage growth has outpaced productivity, leading to rapid growth in unit labor cost and real exchange rate appreciation. Against the backdrop of rising input costs, Estonian exporters have improved their productivity—at least to some extent—and upscaled the quality of their production mix (see Annex I). However, this has not prevented profit margins to squeeze and export growth to decelerate. As a result, Estonia's world and EU export shares have remained broadly flat since 2010.

3. The war-driven shock has pushed the economy into stagflation and exacerbated competitiveness erosion. After a swift rebound from the pandemic in 2021, Russia's invasion of Ukraine has triggered a large rise in inflation, supply chain disruptions, and slower growth in key trading partners. These developments, combined with fiscal tightening in 2022, have led to a sharp economic downturn, while deceleration in productivity has further added to competitiveness pressures.

4. Addressing the cost-of-living crisis and strengthening national security are key political priorities. A new coalition government —formed by the Reform Party, Eesti 200, and the Social Democratic Party— was sworn in on April 17, following a landslide victory of incumbent Prime Minister Kallas' Reform Party at the March 2023 parliamentary election. Political stability and a steady policy direction are expected to prevail, given shared vision on key issues, including tackling the cost-of-living crisis, national security, green transition, education, and innovation. The authorities have generally implemented policies in line with Fund's past advice (Annex VIII).

Composition of Parliament
(share of total seats)

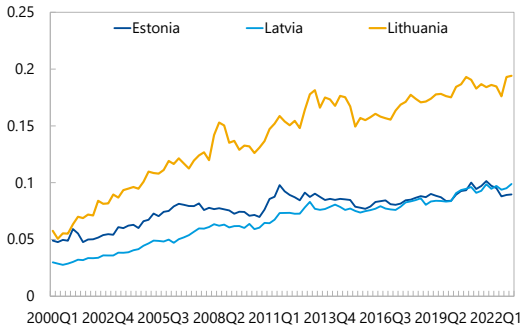


Source: Parliament of Estonia.

Figure 1. Wages, Productivity and Competitiveness

Estonia's export shares have remained broadly flat in terms of world markets…

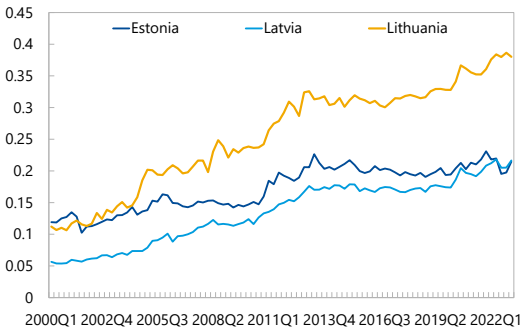
World Export Shares
(Percent)



Source: IMF Direction of Trade Statistics.

… as well as EU markets

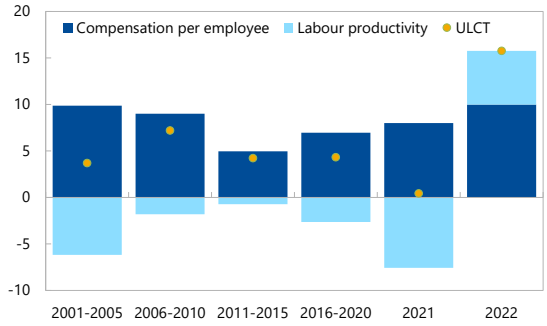
EU Export Shares
(Percent)



Source: IMF Direction of Trade Statistics.

This likely reflects rapid growth in unit labor cost…

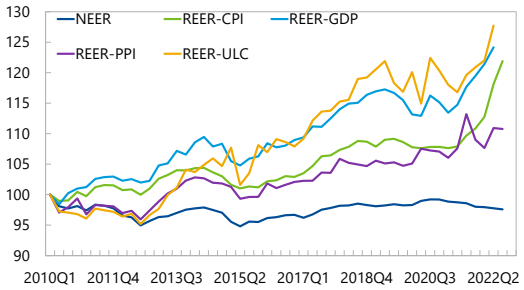
Decomposition of ULCT
(Percentage points)



Sources: European Central Bank; and IMF staff calculations.

… and real exchange rate appreciation.

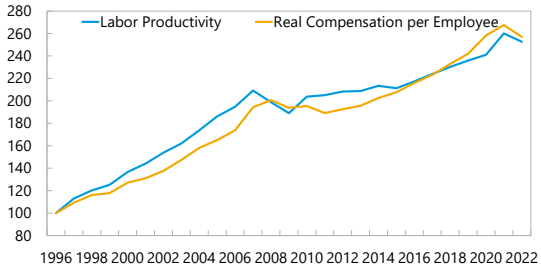
Changes of NEER, REER-ULC and REER-CPI
(Index, 2010Q1 = 100)



Source: European Central Bank.
Note: A decrease (increase) indicates a gain (loss) in competitiveness. The HCIs are calculated vis-a-vis Euro Area member states and 18 trade partners.

If productivity growth does not keep up with compensation…

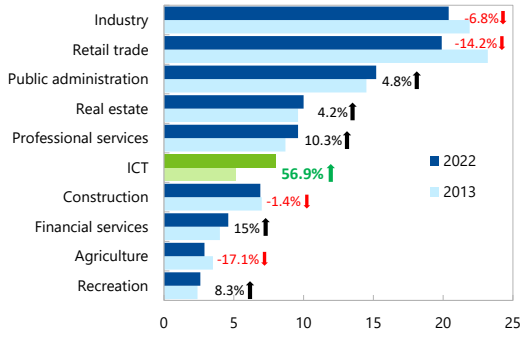
Labor Productivity and Compensation
(Index; 1996 = 100)



Sources: European Central Bank; and IMF staff calculations.
Note: Labor productivity is defined as real GDP per person employed. A positive (negative) value for labor productivity entails a decline (increase)in labor productivity.

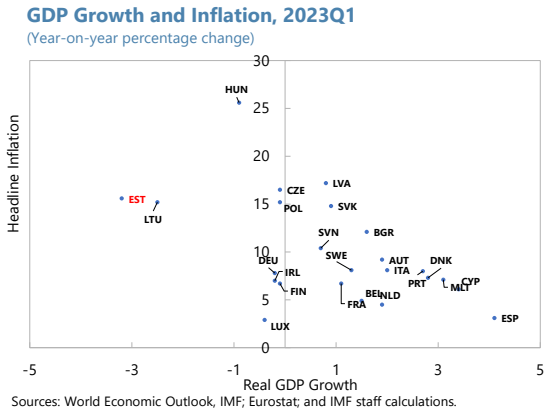
… and the economic structure does not continue evolving towards higher quality output, such as in the rapidly growing ICT sector, competitiveness may be further eroded.

Economic Structure
(Gross value added by industry, percent of total)

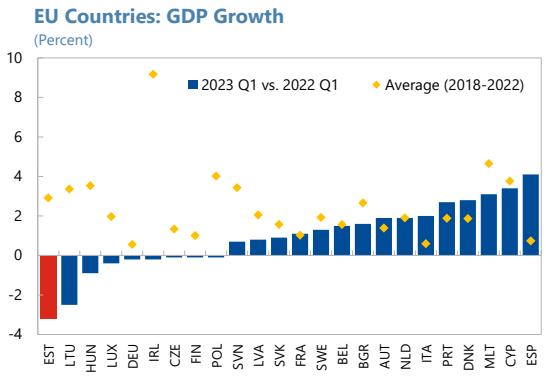


Source: Eurostat.

Text Figure 1. Stagflation



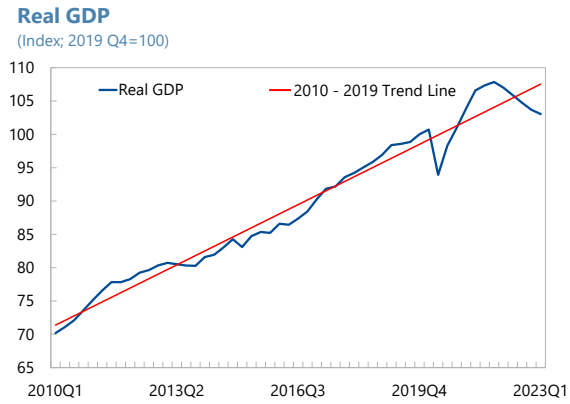
Sources: World Economic Outlook, IMF; Eurostat; and IMF staff calculations.



Source: World Economic Outlook, IMF; and IMF staff calculations.

RECENT DEVELOPMENTS

5. The economic slowdown has been sharp and broad-based. GDP has contracted on a sequential basis for five consecutive quarters, and in Q1/23 was 3.2 percent below its level a year earlier. Exports have been the main driver of the downturn, reflecting weaker demand from external markets—especially for intermediate goods—but private consumption has also weakened considerably as high inflation has weighed on real disposable income despite continued savings' drawdown. After regaining some ground also on the back of favorable FDI flows, private investment has contracted again early this year.



Source: Statistics Estonia; and IMF staff calculations.

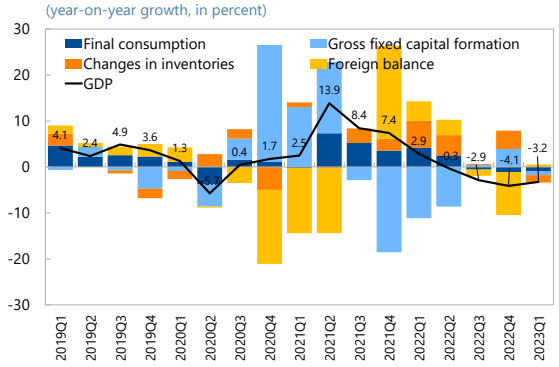
6. But labor market conditions remain tight. Despite the output contraction and job losses in some manufacturing sectors, employment growth has accelerated, and the unemployment rate has further declined to 5.3 percent in Q1/23, from a post-pandemic peak of 7.7 percent. This reflects swift integration of Ukrainian refugees and new jobs created in contact-intensive services, while labor shortages remain significant, especially in the public administration and the ICT sector.[1]

[1]As of early April 2023, there were 68,900 Ukrainian refugees in Estonia (UNHCR), 5.2 percent of population, among the largest shares in the EU.

Figure 2. GDP and Labor Market Developments

GDP Growth and Contributors

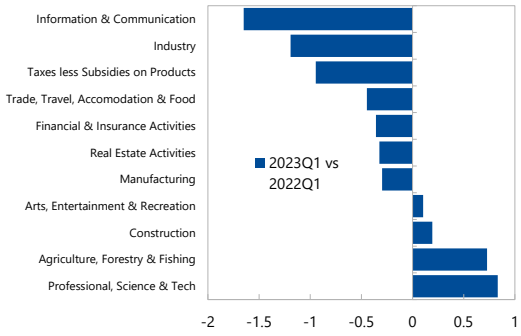
(year-on-year growth, in percent)



Source: Haver Analytics; and IMF staff calculations.

Sectoral Distribution of Real GDP Growth

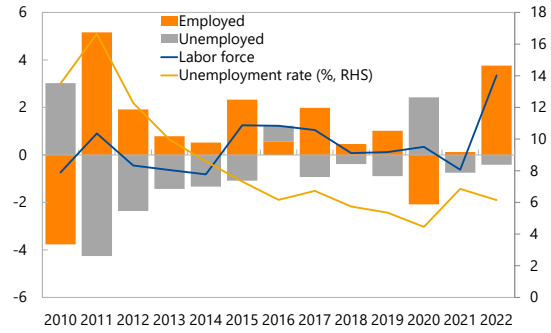
(year-on-year percentage change)



Sources: Haver Analytics; and IMF staff calculations.

Labor Market

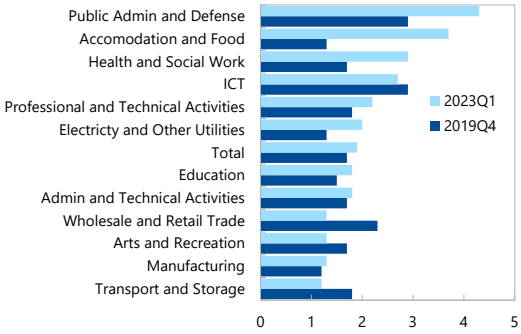
(Year-on-year percentage change)



Source: Haver Analytics; and IMF staff calculations.

Job Vacancy Rate

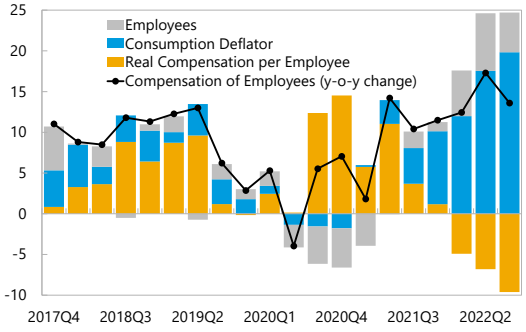
(In percent of total jobs)



Source: Statistics Estonia.

Compensation of Employees and Components

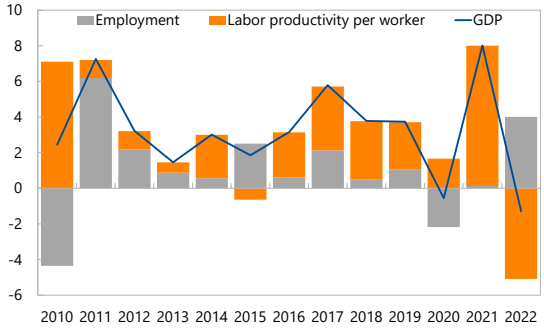
(In percentage points)



Source: European Central Bank.

Employment and Labor Productivity

(Year-on-year percentage change)

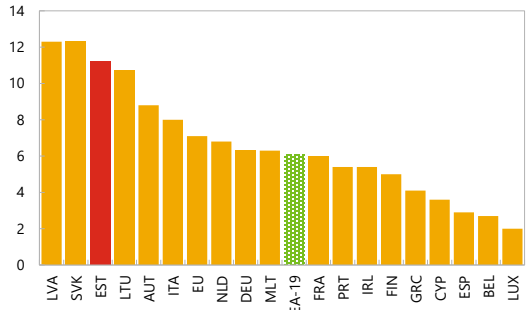


Sources: Haver Analytics; and IMF staff calculations.

Figure 3. Inflation Developments

Inflation, May 2023

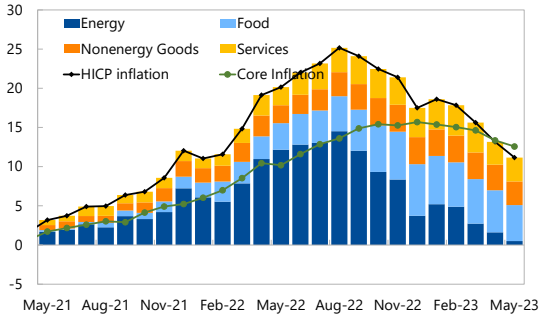
(Year-on-year percentage change)



Source: Eurostat.

Inflation Decomposition

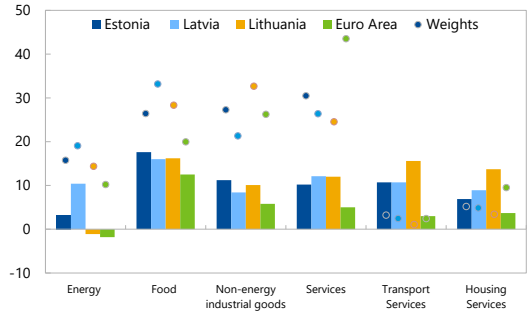
(Percentage points)



Sources: Eurostat, Haver Analytics, and IMF staff calculations.

HICP Inflation, May 2023

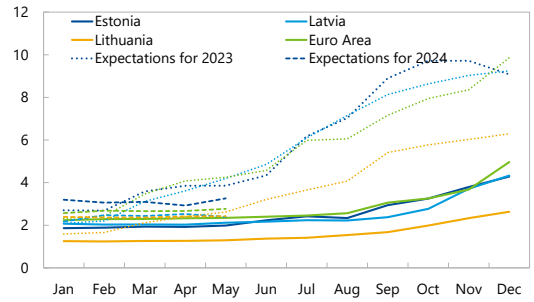
(Percent, year-on-year growth)



Source: Eurostat.

Inflation Expectations for 2022-2024

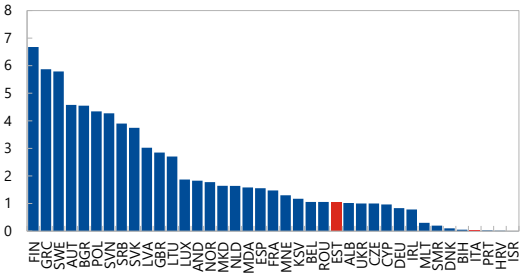
(Percent; year average; based on surveys conducted in the previous year)



Source: Consensus Forecast.
Note: Solid lines reflect inflation expectations for 2022.

Fiscal Support Measures for Energy Crisis, July 2022

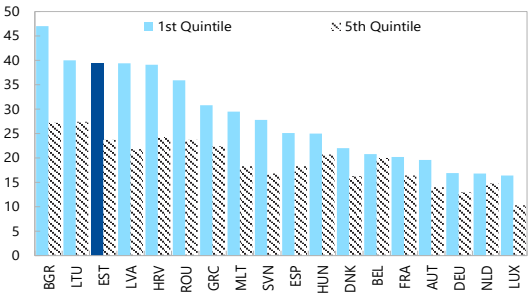
(Percent of GDP)



Source: Updated results of the DEFPA IMF Country Desk Survey from Amaglobeli, D., M. Gu, E. Hanedar, G. Hong, C. Thévenot, 2023, "Policy Responses to High Energy and Food Prices", IMF *Working Paper 23/xx*.

Food and Energy Expenditure by Income Quintile

(Based on 2020 Household Budget Survey, in percent)



Sources: Eurostat; and IMF staff calculations.

7. Inflation remains high. Despite declining from a peak of nearly 25 percent in August 2022 to 11.2 percent in May 2023, inflation remains among the highest in the euro area. The large rise in inflation in 2022 reflected a relatively large share of energy and food in the consumer basket, generally flexible price settings in utility contracts and the high passthrough from global energy prices, as well as supply-side disruptions (see 2022 SIP on recent drivers of inflation in Estonia and Annex II on high inflation in the Baltics). The impact of higher inflation fell disproportionately on low-income earners given the larger weight of food and energy in their consumption basket (see figure 3). Over time, inflation has become increasingly broad-based, with core inflation also rising rapidly despite the widening negative output gap.

8. The budget deficit narrowed considerably in 2022. Buoyed by high inflation, strong labor market, and spending restraint, the general government budget posted a deficit of 0.9 percent of GDP in 2022, a notably lower deficit than the authorities' target of 2.7 percent of GDP and despite measures to mitigate the impact of high energy prices on households and small firms. The narrower deficit reflected a strong revenue performance—including from social security contributions and non-tax revenue—and a lower-than-expected budget execution, including from under-utilization of some refugee-related funds planned on a need-basis. Some Resilience and Recovery Fund (RRF) spending has also been delayed. Fiscal space has remained substantial, with public debt still the lowest in the EU at 18.4 percent of GDP (Annex VII). The debt is financed through a combination of short-term bills, Eurobond funding, and IFI loans.

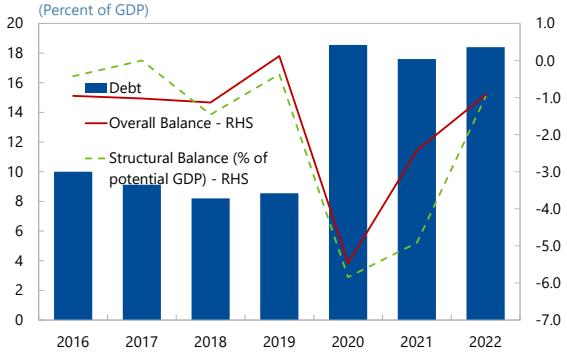
9. Fiscal policy is expected to turn sharply expansionary this year. The 2023 budget foresees permanent increases in defense and social welfare allocations. Public expenditure was budgeted to increase by 5.4 percent of GDP, entailing a wide range of social transfers, active labor market programs to ease the integration of refugees, and measures to boost defense and energy security (figure 5).[2]

10. Financial conditions are tightening. While still looser than warranted by local price and credit developments, higher monetary policy rates are feeding through higher lending rates, which have affected the ease of Estonian households and companies to service their (mostly floating rate) debt and access new credit. Bank credit is still expanding rapidly, although its growth has started moderating in H2/22. Lending surveys point to further weakening demand to finance both consumer purchases and business investment along with tighter credit standards. House prices are decelerating, and the share of loans close to regulatory limits has increased suggesting lower affordability.

[2] The authorities target an increase in defense expenditure to 2.9 percent of GDP in 2023 and 3 percent of GDP over 2024-27 from 2.3 percent of GDP in 2022.

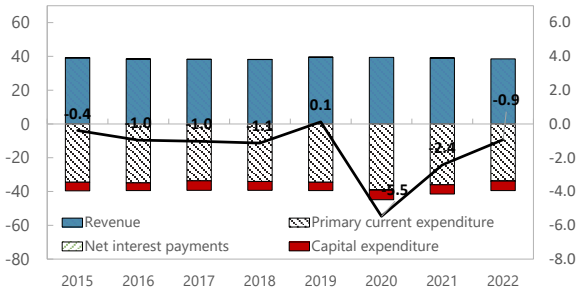
Figure 4. General Government Fiscal Performance

General Government Budgetary Performance
(Percent of GDP)



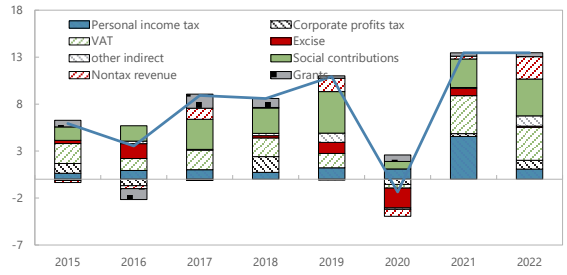
Sources: Estonian authorities; and IMF staff calculations.

General Government Budget Balance
(Percent of GDP)



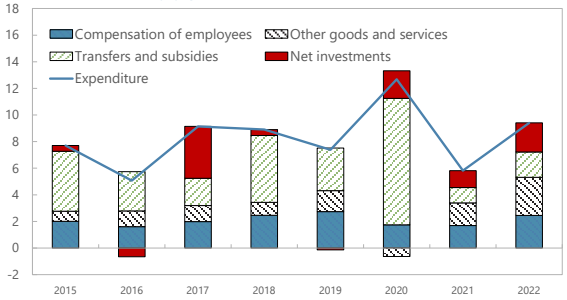
Sources: Estonian Authorities; and IMF Staff Calculations

Nominal Government Revenues, 2015-22
(Contributions to y/y growth)



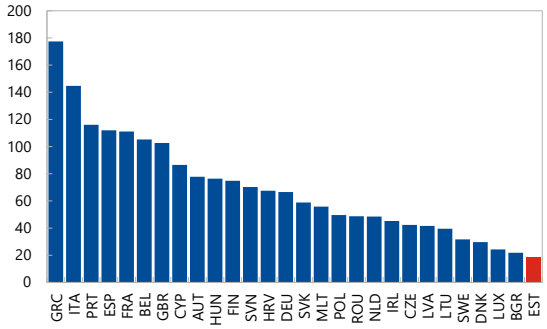
Sources: Estonian Authorities; and IMF Staff Calculations

Nominal Government Expenditures 2015-22
(Contributions to y/y growth)



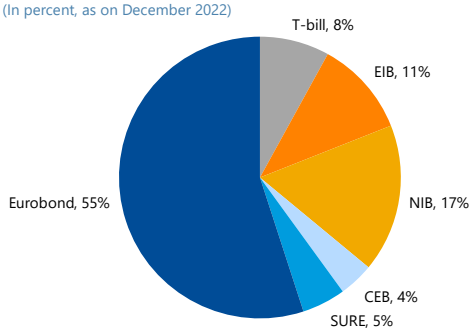
Sources: Estonian Authorities; and IMF Staff Calculations

General Government Debt Stock in EU-27
(Percent of GDP)



Sources: World Economic Outlook, IMF; and IMF staff calculations.

MOF Debt Portfolio Composition
(In percent, as on December 2022)



Source: Ministry of Finance.

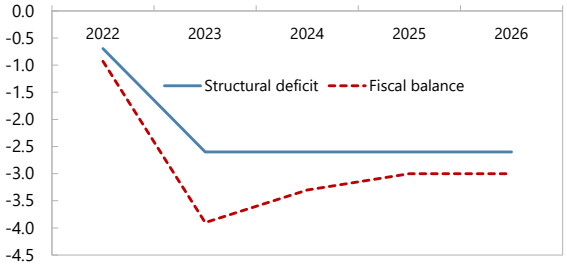
Figure 5. Public Expenditure in the 2023 Budget

Estonia: 2023 Budget Exenditures
(y/y nominal increases)

	Increase in million of euros	Increase in percent of 2023 GDP
Increase in defense spending	273	0.7
Cost-of-living measures	188	0.5
Family allowance changes	149	0.38
Long-term general care reform plan	39	0.1
Expenditure on labor market policy (LMP)	402	1.0
Increase (y/y) in compensation of employees	579	1.5
Other expenditures in the 2023 Budget	437	1.1
Total	2066	5.3

Sources: The Authorities' Budget 2023; and IMF staff calculations.
Note: The cost-of-living revenue measure (basic tax allowance reforms) is estimated at 0.2 pct of GDP.

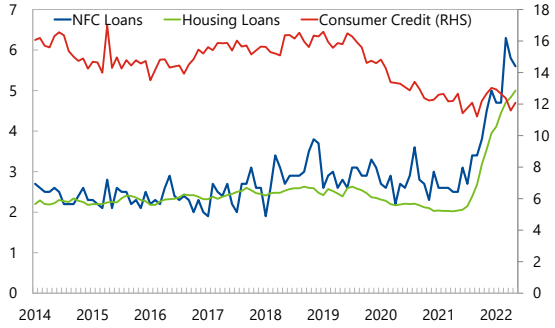
Fiscal Balance in the 2023 Budget, 2023-26
(Percent of GDP)



Sources: Estonian Authorities; and IMF Staff forecasts.
Notes: The values for 2022 are the actual values.

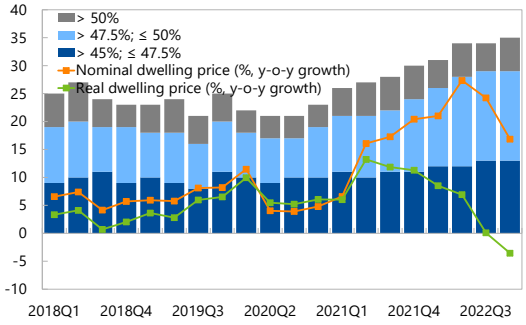
Figure 6. Bank Credit Developments

Lending Rates
(Percent)



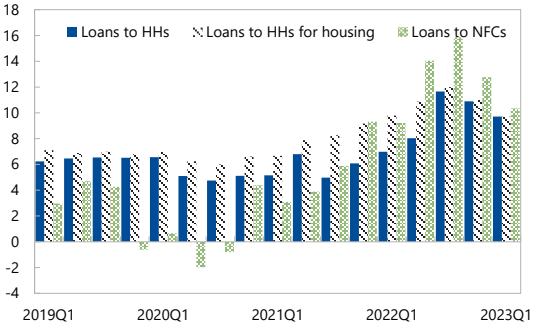
Sources: Eesti Pank.

Share of Housing loans
(In percent, for loans with DSTI higher than 45%)



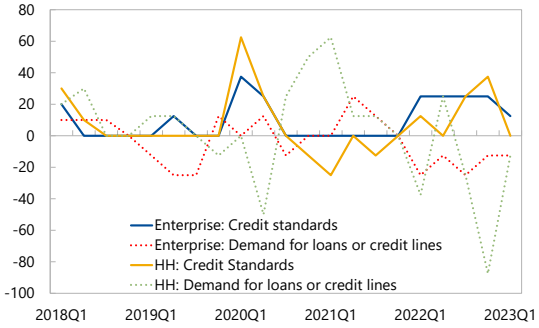
Sources: Eesti Pank; Haver Analytics; and IMF staff calculations.

New loans and leases
(year-on-year growth, in percent)



Sources: Haver Analytics; and IMF staff calculations.

Bank Lending Survey
(Diffusion Index measuring changes in past three months, 0+ = tightening)

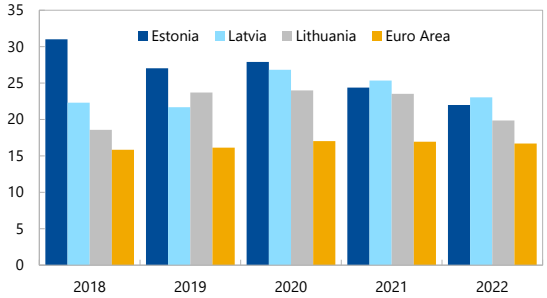


Source: Haver Analytics.

11. Financial stability risks appear limited so far.[3] Capital ratios are above regulatory requirements, especially for systemically important banks. NPL ratios are low, and have continued declining, despite weaker economic conditions. Rising interest rates have boosted profits from lending operations and widened net interest margins. Banks' holdings of securities are relatively small, even compared to other Baltic countries, limiting the risk of (realized or unrealized) losses as interest rates increase. While reliance on wholesale funding is elevated for some banks, systemic liquidity remains ample.

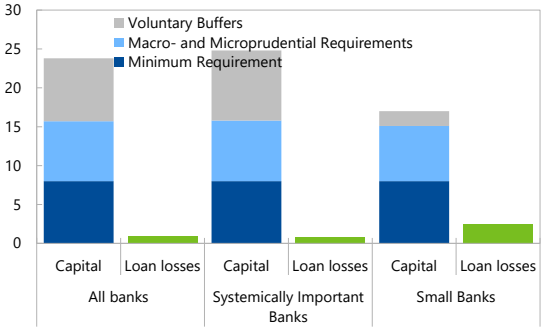
Text Figure 2. Bank Capital Adequacy and Asset Quality

Regulatory Tier 1 Capital to Risk-Weighted Assets
(Percent)



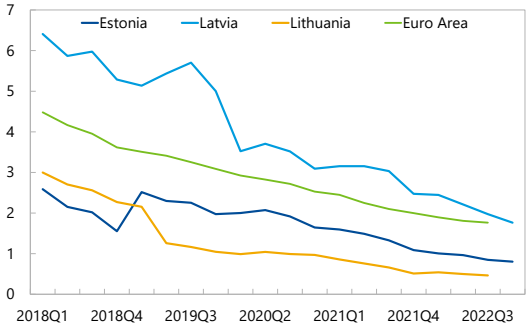
Sources: IMF Financial Soundness Indicators Database; and ECB Consolidated Banking Statistics.
Note: 2022 Data for Lithuania is as of 2022Q3.

Banking Sector Capitalization and Potential Loan Losses
(In percent of risk-weighted assets)



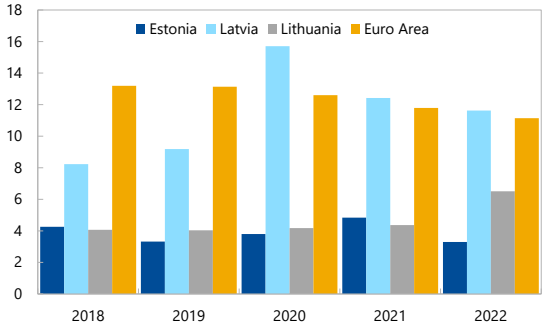
Source: Eesti Pank.

Non-Performing Loans
(Percent of outstanding loans)



Sources: IMF Financial Soundness Indicators Database

Bank Holdings of Debt Securities
(In percent of total bank assets)



Sources: Central Banks; ECB Consolidated Banking Statistics; and IMF staff calculations.

[3] Banks account for 70 percent of financial sector assets or 164 percent of Estonia's GDP. Non-bank financial institutions play a relatively minor role in the Estonian financial system, with pension funds being the second largest financial player and holding assets equivalent to 20 percent of GDP.

12. The external position is broadly in line with medium-term fundamentals and desirable policies (Annex VI). The current account deficit widened to 2.2 percent of GDP, reflecting the impact of a higher energy bill, weakening growth in export markets and real exchange rate appreciation especially on the goods trade balance. In contrast, the services balance registered a moderate improvement, as the effects of earlier one-off factors faded. The EBA-lite current account (CA) methodology (the preferred model for the overall assessment) suggests no material gap, after adjusting for cyclical and one-off factors, but the real effective exchange rate (REER) model points to an overvaluation of around 23 percent, suggesting rising risks to external competitiveness.

Estonia: EBA-lite Model Results, 2022

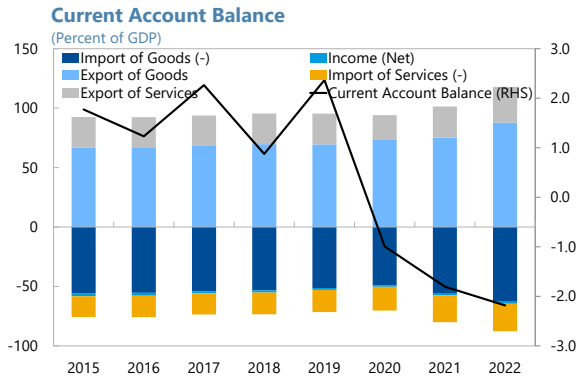
	CA model 1/	**REER model** 1/
	(in percent of GDP)	
CA-Actual	**-2.2**	
Cyclical contributions (from model) (-)	0.2	
COVID-19 adjustors (-) 2/	-0.1	
Natural disasters and conflicts (-)	-0.5	
Adjusted CA	**-1.8**	
CA Norm (from model) 3/	**-1.8**	
Adjusted CA Norm	**-1.8**	
CA Gap	**0.0**	**-12.4**
o/w Relative policy gap	4.1	
Elasticity	-0.5	
REER Gap (in percent)	**0.0**	**23.0**

1/ Based on the EBA-lite 3.0 methodology

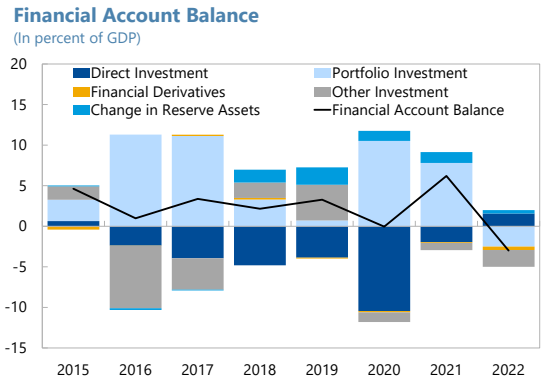
2/ Additional cyclical adjustment to account for the temporary impact of the tourism (0.1 percent of GDP).

3/ Cyclically adjusted, including multilateral consistency adjustments.

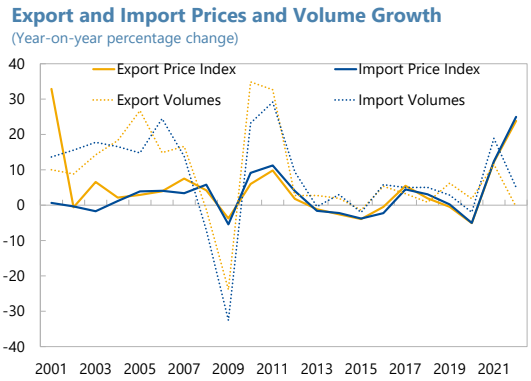
Text Figure 3. External Position



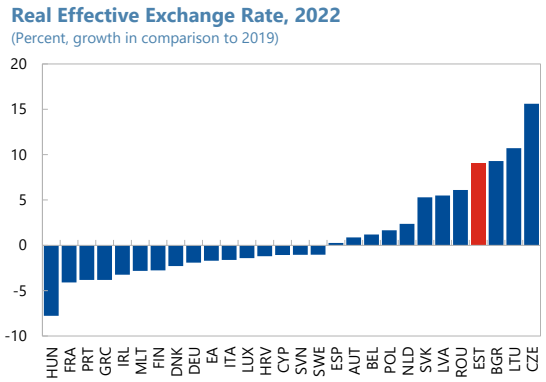
Sources: Estonian authorities; and IMF staff calculation.



Sources: Haver Analytics; and IMF staff calculations.



Sources: World Economic Outlook, IMF; Haver Analytics; and IMF staff calculations.



Sources: Information Notice System, IMF; and IMF staff calculations.

OUTLOOK AND RISKS

13. During 2023, growth is expected to recover, driven by consumption and exports. Growth is expected to improve on a sequential basis during H2, but earlier weakness translates into a projected annual growth rate of -1.6 percent for 2023—close to -1.3 percent last year. A better outlook for real disposable income, reflecting sustained nominal wage growth and gradually receding inflationary pressures, along with stronger external demand support the recovery under the baseline.

14. Loose fiscal policy is expected to boost growth in the near term, countering the effect of tighter monetary policy. The large, mostly permanent increase in discretionary spending is projected to generate a significant fiscal impulse of about 2½ percent of GDP, providing a further lift for growth but also working at cross-purposes with monetary policy and countering the effect of higher interest rates on inflation. Despite the significant fiscal stimulus, the current account deficit is expected to return to a small surplus, on significant import compression early in the year, gradually stronger external demand, and improved terms of trade.

15. Disinflation is expected to be only gradual. Inflation will likely extend its declining trend, to an average of 9.7 percent in 2023, driven by lower energy and commodity prices and their pass-through to retail prices more broadly. However, core inflation is expected to remain stubbornly high reflecting second round effects and the stimulative fiscal policy. The adopted VAT hike (more below) will also lead to a one-off increase in price levels. While compensation per employee has declined in real terms so far, tight labor market conditions and sizable adjustments in minimum and public wages may exert further pressures on wages.[4] The concurrent decline in labor productivity compounds the impact on unit labor cost, especially for services providers, where wages are a sizable input cost.

Estonia: Summary Medium-Term Macroframework

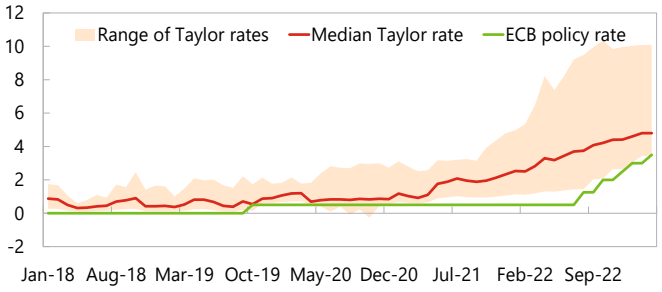
	2021	2022	2023	2024	2025	2026	2027	2028
			Projections					
Real GDP growth (percent)	8.0	-1.3	-1.6	2.9	2.8	2.9	2.9	3.0
Output gap (percent)	2.0	-1.2	-3.7	-2.5	-1.6	-0.9	-0.3	0.0
Inflation (percent)	4.5	19.4	9.7	3.7	3.2	2.8	2.5	2.5
Unemployment rate (percent)	6.2	5.6	5.8	5.9	5.5	5.4	5.3	5.1
CAB (percent of GDP)	-1.8	-2.2	0.2	-0.4	-0.6	-0.9	-1.2	-1.4
Fiscal balance (Percent of GDP)	-2.4	-0.9	-4.5	-3.2	-2.8	-2.7	-2.6	-2.5
Structural balance (percent of GDP)	-4.1	-0.7	-3.3	-2.4	-2.2	-2.3	-2.5	-2.5
General government debt (percent of GDP)	17.6	18.4	22.0	24.3	26.1	27.7	29.2	30.6

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

[4] The monthly minimum wage for full-time employment has increased by around 11 percent this year, implying a reduction in real terms. However, in May 2023, representatives of government, employer associations, and trade unions agreed on increasing the minimum wage to 50 percent of the average wage by 2027 from the current 39 percent. The increase is capped at 16 percent per year.

16. Over the medium term, the policy mix is seen remaining loose under the baseline. Despite higher interest rates, monetary policy is expected to remain looser-than-warranted by developments in the Estonian economy, while the projected consolidation path is seen leaving fiscal policy at best neutral in the medium term after some limited tightening in 2024. In June, Parliament has adopted several bills encompassing increases in the rates of the value added tax, various excises, and a gambling tax from 2024 as well as corporate income and personal income tax (PIT) from 2025. Staff broadly support the adopted tax changes, as they succeed in mobilizing new revenue, while limiting distortions and retaining the international competitiveness of Estonia's tax system. However, the changes are projected to raise revenue by no more than 1 percent of GDP, given the concurrent extension of a basic allowance to all taxpayers which will reduce PIT revenue (see Box 1 for a detailed assessment), therefore leaving scope for further fiscal consolidation.

Taylor Rules for Estonia and ECB Policy Rate
(Percent)



Sources: European Central Bank; Eurostat; and IMF staff calculations.
Note: The range of Taylor rates includes calibrated interest rates obtained from an adjusted Taylor rule of the type $i = r^*+\pi^* + a(\pi-\pi^*) + b(y-y^*)$ with different values for the parameters a and b, and intertial rules with smoothing, where the calibrated rate in the current period depends on the policy rate in the previous period, i.e.: $i = c*i(-1)+(1-c)*[r^*+\pi^* + a(\pi-\pi^*) + b(y-y^*)]$. Core HICP inflation is used in all calibrations while economic slack is measured using detrended unemployment (the unemployment gap).

Box 1. Estonia's 2024-25 Tax Changes[1]

Parliament has adopted several bills encompassing increases in the rates of the corporate income tax (CIT), the personal income tax (PIT), the value added tax (VAT), various excises and a gambling tax. The tax changes will raise about 0.8-1.0 percent of GDP in revenue annually starting from 2024, partly offsetting a permanent increase in defense and social welfare expenditure. Following the rate hike, the CIT will retain its efficiency, while also maintaining a lower rate than most OECD countries and preserving competitive positioning for businesses.[2] In contrast, the combined effect of a higher PIT rate and a basic allowance for all taxpayers is set to lower revenue and reduce PIT progressivity. The changes will raise revenue and enhance at the margin the efficiency of the Value Added Tax (VAT) by raising the reduced rate for hotel accommodations but will also have near-term implications for inflation. The changes in alcohol and tobacco excises and gambling tax rate will align the system with OECD norms.

Parliament has adopted several bills encompassing various tax increases. A first wave of measures will come into effect in January 2024, six months after the adoption of the bills, and will include changes in the tax rates of VAT, excises, and the gambling tax as well as the abolishment of certain PIT exemptions. A new car tax will become effective in mid-2024. Finally, changes to CIT and PIT rates and amendments to the land tax will be applied from 2025.

Impact of the Tax Measures Adopted for 2024-25 1/
(Percent of GDP)

Measures	2024	2025	2026	2027
Changes in CIT rates and PIT rates and allowances (2025) 2/	0.00	-0.58	-0.33	-0.32
Changes in PIT deductions and exemptions 3/	0.00	0.10	0.09	0.08
VAT increase by 2 percent (2024)	0.55	0.53	0.51	0.50
Abolition of the VAT discount for accommodation facilities (2025)	0.00	0.09	0.08	0.08
Tobacco and alcohol excises changes (2024-26)	0.04	0.09	0.08	0.11
Lower excise on diesel in agriculture (2024)	-0.01	-0.02	-0.02	-0.02
Gambling tax (2024)	0.03	0.03	0.03	0.03
Car tax (2024)	0.15	0.27	0.26	0.24
Land tax (2025)	0.00	0.30	0.29	0.27
Deforestation fee (2024)	0.02	0.02	0.02	0.02
TOTAL	0.78	0.83	1.00	1.00

Source: Ministry of Finance; and IMF staff calculations
1/ The timing and parameters of the changes considered are those announced as of end-May 2023. The actual package adopted in June entails lower VAT and CIT hikes and will yield no more than 1 percent of GDP. Taxation of streaming platforms (from 2024) are negligible and not included in this table.
2/ The income tax changes involve, increasing the rate to 22 percent; increasing the tax-free income to 700 euros from 2025; and eliminating of the current basic exemption, replaced by a uniform basic exemption €8,400 annually, except for people in retirement already benefiting from another scheme.
3/ The changes include the abolition of: (i) the mortgage interest deduction (€300 per year); and (ii) exemption for spouses (€2160 annually with some restrictions); and (iii) the additional basic exemption for children annually €1848 for the second child and €3,048 for the third and following children.
3/ Tobacco and alcohol excises will increase by 5 percent per year over 2024-2026.

[1] The Box was prepared by Neree Noumon with inputs by Andualem Mengistu (FAD).
[2] Estonia would remain the leader in tax competitiveness after the Tax Reform (Haddinga, 2023).

Box 1. Estonia's 2024-25 Tax Changes (continued)

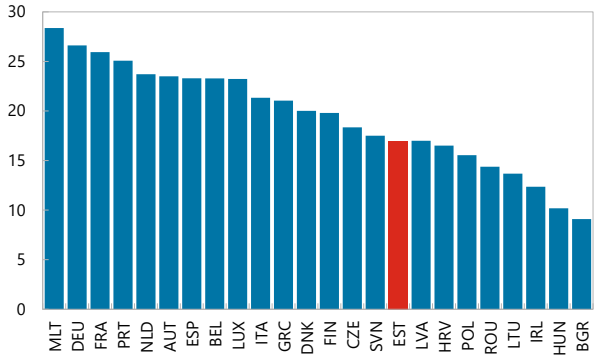
The new car tax should combine a car registration fee and an annual road tax based on the vehicle's emission levels and value. Amendments to the land tax, whose administration is within the remit of local municipalities, should remove the current exemption for primary residences and a 10 percent cap on the increase in payments.

Corporate Income Tax (CIT)

The adopted changes to the CIT raise revenue without introducing new distortions. The measure envisages an increase of the tax rate, which in Estonia is applied only to distributed profits, from 20 to 22 percent. A 14 percent preferential rate levied on companies regularly distributing their earnings was abolished. The composite effective average tax rate remains below OECD average (Figure 1), maintains the zero effective marginal tax rate (EMTR), and prevents double taxation of capital. Furthermore, the abolition of the lower rate for regular profit distributions and the accompanying 7 percent dividend withholding tax for individuals will level the playing field for taxpayers. Indeed, the only entities benefiting from the current 14 percent dividend tax arrangement are non-resident natural persons residing in jurisdictions for which the 7 percent withholding tax is not applied. A 14 percent preferential rate on banks—which, unlike the CIT on non-financial corporations, is levied on entire profits through quarterly advances as opposed to distributed profits—will be raised to 18 percent from the current 14 percent.

Composite Effective Average Tax Rate, 2021

(Percent)



Source: OECD.

Personal Income Tax (PIT)

The combined effect of a higher rate with a basic allowance for all taxpayers is set to lower revenue and reduce PIT progressivity. The abolition of the current basic exemption and its replacement with a uniform basic allowance of €8,400 annually for all taxpayers (except people in retirement age) will reduce the progressivity of the PIT. The existing structure entails a 20 percent flat tax rate, with a tax credit that diminishes as income increases, with those earning more than €25,200 not receiving any tax credit. Under the new regime, a basic allowance, paired with an increased tax rate from 20 to 22 percent, will entail a uniform tax credit of €1,848 for all taxpayers earning a pre-tax annual income of over €8,400. Phasing out the allowance for higher income earners would introduce progressivity and limit revenue losses.

With the adopted changes, the mortgage interest deduction and the additional basic exemptions for spouse and children are abolished. Mortgage interest deductions are generally regressive and violate horizontal equity principle. The abolition of the additional spouse allowance (€2,160 annually, subject to restrictions) will equalize the treatment of a single and married individuals and eliminate any incentives for a spouse not to work (or to work informally). The abolition of the additional basic exemptions for children increases revenue by 0.4 percent of GDP.

Value Added Tax (VAT)

The VAT rate increase supports revenue mobilization while improving efficiency. The VAT system in Estonia is characterized by minimal exemptions and reduced rates. As a result, raising the rate is the primary method available to augment revenue from VAT. The new 22 percent tax rate is more than 2 percentage points above the 19.5 precent OECD average but is in line with the average rate in the EU. Hotels and short-term accommodation currently benefit from a lower 9 percent rate, which could lead to efficiency losses, excessive administrative burdens, and create avenues for tax avoidance and revenue loss. Additionally, a lower rate specifically to hotels is not justifiable from a distributional perspective, as it does not necessarily favor lower-income individuals. The adopted increase of the VAT rate for hotels to 13 percent, should at least partly mitigate these issues.

Box 1. Estonia's 2024-25 Tax Changes (concluded)

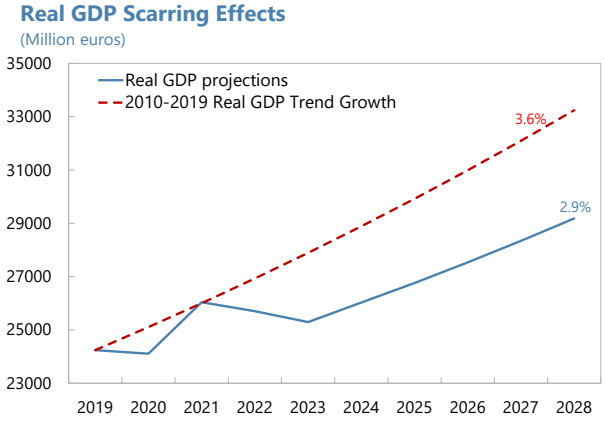
Excises and Gambling Tax

The adopted changes will also entail increases in the excise tax rates for alcohol and tobacco and the gambling tax rate. The adjustments to the excise tax rates (5 percent every year for the next 3 years) will push the excise tax rate for beer and wine slightly above the OECD average, while the tax rate for spirits will remain below the OECD average. The change will boost revenue and have positive externalities for public health, but the significant disparity in the excise rate in Latvia could stimulate increased cross-border trade and offset revenue benefits, if not properly deterred.[3] The current gambling tax rate in Estonia is at the lower end of the international norm. Therefore, the proposed change appears to be a reasonable approach to increase government revenue. Finally, applying the same tax rate to lottery winnings (raised from 18 to 22 percent) to the standard PIT rate is also appropriate.

Finally, the expiration of the excise rate cut for 'special use' diesel fuel was postponed. The excise tax on diesel for special use—initially planned to be raised by 5 percent—will remain fixed at €21/1000 liters. This change will reduce the incentive for industries such as agriculture and forestry to shift towards less carbon-intensive energy sources.

[3] The excise tax rate is USD 3.14 in Estonia and USD 2.65 in Latvia. The average in OECD is USD 4.15.

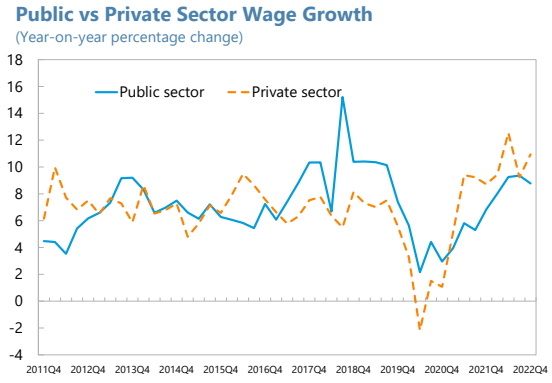
17. Absent a decisive policy re-calibration, the economic shocks triggered by the war may leave scarring effects. This loose policy mix is expected to leave inflation at more than 3 percent on average in 2025, well above the euro area. In turn, high inflation is likely to exert pressure on wages which, combined with declining productivity, may further erode Estonia's competitive position over time. While the economy managed to recover swiftly from the pandemic, under staff's baseline the war shock is expected to leave a more permanent scar over the medium term, with growth failing to return to its pre-crisis trend, absent tighter fiscal policy and proactive structural reforms to support productivity. The projected path of deficit reduction is seen as missing the medium-term structural deficit target of -0.5 percent of GDP and pushing the debt ratio beyond 30 percent of GDP over the forecast horizon.



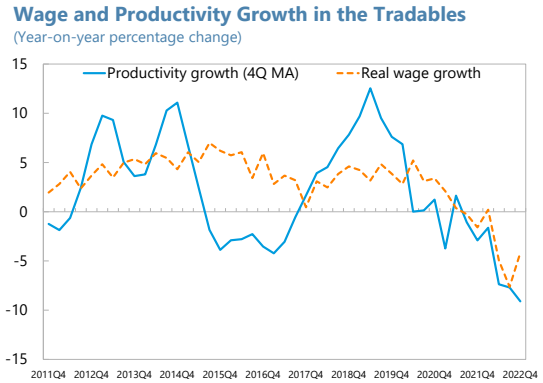
Sources: National Authorities; and IMF staff Calculations.

18. This baseline is highly uncertain, with risks skewed to the downside (see RAM, Annex V). On the domestic front, fiscal deterioration might become entrenched, above and beyond what is already assumed under the baseline. While supporting near-term growth, an excessively loose fiscal policy would undermine Estonia's disinflationary efforts and further weigh on its medium-term competitiveness prospects. Tighter labor market conditions, rapid wage growth triggered by generous public sector pay rises and waning productivity may further exacerbate these adverse dynamics. On the other hand, in a repeat of 2022, budget allocations to line ministries may remain under-utilized again, leading to unintentionally tighter fiscal policy, softer near-term growth, and possibly lower domestically generated inflation.

Text Figure 4. Public, Private Wages and Productivity



Sources: Statistical Authorities; Haver Analytics; and IMF staff calculations.



Sources: Haver Analytics; and IMF staff calculations.

19. External downside risks are also significant. A significant tightening in global financial conditions may cripple bank credit and trigger a global recession. Major central banks could loosen monetary policy prematurely, leading to a de-anchoring of inflation expectations and increasing the risk of a wage-price spiral in Estonia's tight labor market. An accentuation of geopolitical tensions in the region or other war-related effects, including cyberattacks, potential spillovers from sanctions, and money laundering and terrorist financing risks, could further derail recovery prospects.

Authorities' Views

20. The authorities broadly agreed with staff's outlook for growth, while remaining more optimistic on inflation. In line with staff's projections, they expect growth to improve during H2, although the annual growth rate is set to remain negative in 2023, given the negative carryover. They acknowledged that supply chain disruptions and higher input prices, especially in the wood and metal industries, may have weakened Estonia's competitiveness. They also shared the view that high inflation may generate wage pressures and further erode competitiveness over time. Despite recognizing emerging wage pressures, however, the central bank was more positive on the medium-term outlook for inflation. The authorities concurred that an escalation of geopolitical tensions in the region may hurt Estonia's economic outlook.

POLICIES—RE-CALIBRATING ESTONIA'S POLICY MIX

21. The policy mix needs to be re-calibrated to support a more sustainable recovery. Against the backdrop of a structural deceleration in productivity, exacerbated by a war-driven supply shock, Estonia's policy stance in 2023 is expected to feature a mix of only gradually tighter monetary policy, as real rates continue to recover from deeply negative levels, and a much looser fiscal policy. Expansionary policy settings will likely lead to price and wage pressures and further erode Estonia's competitive position. In contrast, a much less stimulative fiscal policy should be considered. Alongside targeted financial policies to underpin financial stability and structural reforms to raise productivity, address labor market shortages, and promote the green and digital

transition (see Annexes I and III), this policy mix will help Estonia achieve sustainable and inclusive growth over the longer term.

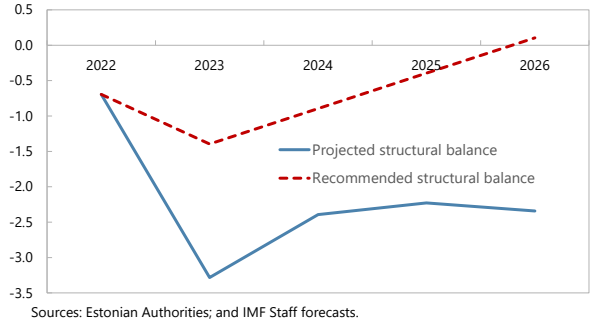
A. Fiscal Policy—Pursuing a Less Stimulative Fiscal Stance to Support Disinflation and Competitiveness

22. A neutral or—at most—an only slightly expansionary fiscal stance is needed for 2023 to help contain inflation. The 2023 budget envisions permanent increases in defense and social welfare allocations. At a projected 4.5 percent of GDP, staff expect the deficit to be about 0.7 percentage point wider than planned in the budget, reflecting a combination of additional pressures on public sector wages, automatic stabilizers and, to a lesser extent, revenue shortfalls. In contrast, a neutral fiscal stance—in other words an unchanged structural balance—would contribute to reducing the risk of inflation becoming entrenched and the resulting threat to long-term competitiveness. This excludes the planned increase in defense spending of around 0.7 percent of GDP, which is expected to have limited domestic impact.

23. Several options to reduce the fiscal impulse in 2023 should be explored, while retaining targeted support to the most vulnerable groups. As energy prices recede, consideration should be given to more targeted and less permanent measures. In this context, staff welcome the phasing out of the most recent increases in family allowances. Containing the expansion of public sector wages is also critical. This includes keeping the wage bill below the average share in GDP observed during 2020-22 and limiting the flexibility of line ministries and local authorities to raise wages. Re-calibrating current spending towards productivity-enhancing capital spending would also be important to safeguard competitiveness. Finally, the case for bringing forward some of the tax hikes currently envisaged from 2024 should be explored. Staff welcome the decision to introduce a car tax, also given its relevant implications in terms of climate change mitigation (see Annex III). The revision of land tax values, last modified in 2001, should be implemented. The land tax exemption for primary residences and the 10 percent cap on increases should be abolished.

24. Over the medium-term, fiscal policy should preserve Estonia's buffers to counter future shocks and spending pressures. Under the baseline, which accounts for the limited impact of the adopted tax hikes, the structural deficit improves by only 0.7 percentage point over 2023-2028 to a deficit of around 2 ½ percent of GDP. In contrast, staff's recommended fiscal path entails reaching a balanced structural budget over the forecast horizon through an improvement of about ½ percentage point of GDP a year, anchored in the national fiscal rule. The recommended path implies a reduction of the fiscal deficit well beyond the current target of 3 percent of GDP by 2024 and requires additional fiscal consolidation measures including means testing for social programs and savings on government operational expenditures. A

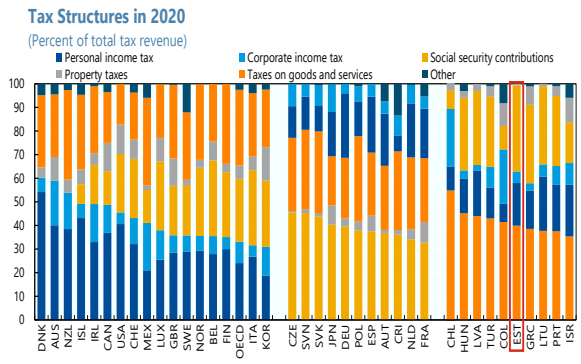
Projected and Recommneded Structural Fiscal Balance, 2022-26
(Percent of GDP)



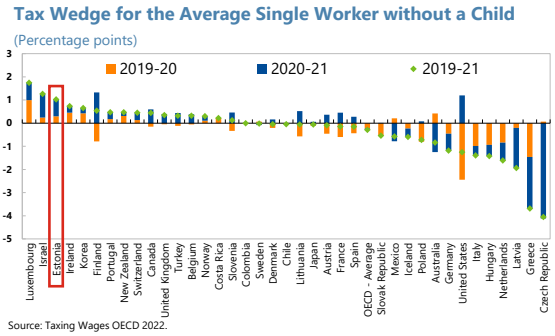
Sources: Estonian Authorities; and IMF Staff forecasts.

more efficient execution of capital expenditure by reviewing project appraisal procedures, while prioritizing productivity-enhancing investment would also be critical. The recent changes in the pension system, which have made contributions to the second pillar voluntary and have led to large withdrawals, will likely result in spending pressures in the long run due to insufficient benefits from the first pillar, further reinforcing the need of preserving fiscal buffers.[5]

Text Figure 5. Tax Structure and Revenue



Source: OECD Revenue Statistics 2021.



Source: Taxing Wages OECD 2022.

25. Ongoing efforts for upgrading fiscal management and institutional capacity should be sustained. Staff welcome the recent efforts to strengthen transparency and fiscal risk management, including the publication of Estonia's first Fiscal Risk Report. [6] Further progress in enhancing long-term planning, project appraisal and execution, in line with the IMF Public Investment Management Assessment would help improve the absorption of the EU Funds and support Estonia's digital advantage, green transition, and social resilience.

Estonia: Public Investment Management Assessment (PIMA) Recommendations

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

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.

Sources: IMF Staff Report for the 2019 AIV

Authorities' Views

26. The authorities agreed that a less stimulative fiscal policy should be considered. Echoing staff's narrative, they noted that the current expansionary fiscal policy could lead to price

[5] The authorities' Pension System Review found that recent changes in the pension system have lowered the replacement rate, computed as average net pension to net wage ratio, by about 4 percentage points. The study also highlighted further spending will likely be needed to maintain adequate standard of living after retirement and meet the minimum pension requirement of the European Social Charter of at least 60 percent of the net median salary.

[6] IMF Staff Report for the 2021 IV, Annex VI.

and wage pressures and further erode Estonia's competitive position. They concurred that fiscal policy should not work at cross purposes with monetary policy and recognized the need to find additional consolidation measures to reduce the budget deficit and preserve buffers against future shocks. They also recognized that any fiscal adjustment should involve both expenditure and revenue measures and committed to a deficit target of 3 percent of GDP by 2024.

27. The authorities shared the thrust of staff's policy advice. On revenue, they noted that the announced tax hikes would yield around 1 percent of GDP in revenue starting from 2024. On spending, they did not see imminent risk of further pressure on public sector wages, while expecting additional savings from the ongoing reorganization of ministerial responsibilities and a broader spending review. They also agreed that public spending should prioritize productivity-enhancing investment. They noted that ongoing efforts for upgrading fiscal management and institutional capacity will further boost spending efficiency and improve the absorption of EU Funds. Concerns were expressed about the softening of EU fiscal rules for low-debt countries.

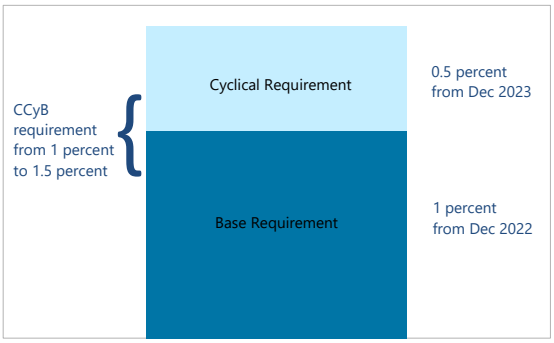
28. However, the authorities did not see scope for bringing forward the tax hikes already announced from 2024. While sympathizing with the general sense of urgency conveyed by staff, the authorities ruled out the case for earlier tax hikes, citing legal requirements to adopt any tax bill at least six months ahead of its entry into effect. They also argued that time should be allowed for the revenue administration to operationalize any tax change. With the aim of preserving banks' capital buffers and regular flow of credit, the central bank called for an end to the special tax regime for banks, which are taxed through quarterly advances on their entire profits, unlike non-financial corporations, for which corporate income tax is levied only on distributed profits

B. Financial Policies—Preserving Financial Stability amid Rising Interest Rates

29. Financial stability risks appear limited so far, but close vigilance is warranted. Rising interest rates affect borrowers' ability to service their debt and, over time, this may weaken banks' asset quality as well as solvency and liquidity positions. While the capital and liquidity position of banks remain sound, comprehensive and frequent bank portfolio reviews should be accompanied by rigorous stress tests, including to assess risks stemming from wholesale deposits, funding through online deposit platforms, cross-border lending, and broader spillover effects from real estate markets in the region. Less-significant institutions, which have more limited buffers, should be closely monitored to ensure they remain well capitalized. Cyber risk should continue to be integrated in vulnerability assessments and contingency plans.

30. The tightening of macro-prudential stance was appropriate, but policies should be ready to respond to credit supply disruptions. In response to rapid credit growth, the countercyclical capital buffer (CCyB) was tightened to 1 percent from December 2022, and it will be further raised to 1.5 percent effective December 2023. The central bank also raised capital requirements on the Less-Significant Institutions (LSIs). Staff see these actions as appropriate, given the need to preserve robust buffers against sustained increase in credit and house prices. Policies, however, should be ready to respond to credit supply disruptions. In an adverse scenario, characterized by a further tightening in global and regional financial conditions, intensified financial instability, and heavy loan losses, including on the back of an abrupt house price correction, a relaxation of the countercyclical capital buffer should be considered to allow adequate provision of credit.

Countercyclical Capital Buffer (CCyB)



Source: Bank of Estonia.

31. Building on recent progress, systems should be further enhanced to address Money Laundering / Terrorist Financing (ML/TF) risks. Staff welcome ongoing efforts to enhance the supervisory capacity of the Financial Supervision and Resolution Authority and the Financial Intelligence Unit. In response to a recent MONEYVAL assessment (see Annex IV), which found Estonia's Anti-Money Laundering / Combating the Financing of Terrorism (AML/CFT) systems in need of further improvement, priority should be given to mitigating cross-border ML/TF risks from higher-risk countries with material financial flows, further enhancing ML/TF risk assessments, and improving risk-based supervision of banks and virtual asset service providers. The legislation on crypto assets should be finalized given elevated risks stemming from the fintech sector.

Authorities' Views

32. The authorities assessed Estonia's financial sector to be resilient and potential risks to be limited. The authorities emphasized that only a very small share of borrowers had problems servicing loans, although they cautioned that, if unemployment were to rise, banks' asset quality would likely deteriorate. The authorities agreed with staff that close vigilance is needed, including in assessing risks stemming from wholesale deposits, cross-border lending, and broader spillovers from real estate markets in the region. While acknowledging the growing reliance on online deposit platforms among some small local banks, they noted that this funding channel has so far been stable and that risks arising from this source of funding should be monitored.

33. The authorities highlighted their progress in dealing with ML/TF risks. They stressed ongoing efforts to strengthen the supervisory capacity of the Financial Supervision and Resolution Authority and the Financial Intelligence Unit and enhanced collaboration among agencies. They cited several initiatives to address the MONEYVAL recommendations and ongoing work to

transpose the EU regulation on markets in crypto assets, in response to risks stemming from the fintech sector. The authorities also noted increased cybersecurity capabilities.

C. Structural Policies—Promoting Inclusive and Sustainable Growth

34. Higher investment in R&D and innovation would enhance Estonia's digital transition. ICT services have expanded rapidly in recent years, while the use of digital processes in traditional sectors, including in construction, has also grown. Encouraging an increase in the share of private sector R&D to a level closer to the EU average, including through increased collaboration between universities and businesses, would help accelerate the country's evolution towards higher value-added production and exports. Further strengthening connectivity, SME adoption of digital technologies, and capital market deepening would also benefit productivity.

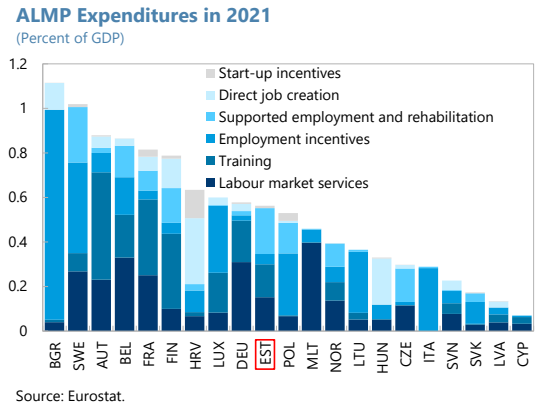
35. Addressing labor market shortages and closing skill gaps is instrumental in strengthening long-term growth prospects. Despite the current economic slowdown, labor market conditions remain tight. Shortage of skilled labor is particularly acute in the ICT sector, a potential hindrance to digital transformation. The authorities should further build on their ongoing efforts to close existing skill gaps and limit skill downgrading of refugees through targeted active labor market policies. In the short term, greater reliance on flexible and part-time work arrangements would enhance labor participation. Over the medium term, policies aimed at enhancing education in technical and digital skills and offering vocational training would facilitate job mobility and boost employment among low-skilled, young, and older workers. Reviewing Estonia's immigration policy with the aim of expanding current quotas would also help ease the shortage of skilled labor.[7]

36. The targeting of social welfare measures should be reviewed. After improving in 2021, social indicators have deteriorated in 2022, reflecting the cost-of-living crisis, particularly among the elderly, people with disabilities, women, and the unemployed. Recent social welfare reforms, including those related to subsistence benefits and unemployment insurance should be reviewed to ensure effectiveness, appropriate targeting, means-testing, and adequate value for money. Progress toward reducing the gender pay gap, which stands out in the EU, should be enhanced alongside efforts to address gender bias in education and the labor market, as well as the high motherhood penalty. [8]

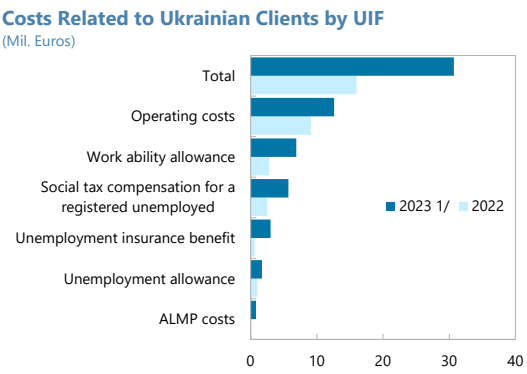
[7] Besides access to social protection as allowed under the EU's Temporary Protection Directive, ALMPs, especially in training and career counselling, have facilitated the integration of Ukrainian refugees, which should offset war-related scarring at least partly over time.

[8] In Estonia, women suffer a lasting income drop of about 33 percent after giving birth to their first child.

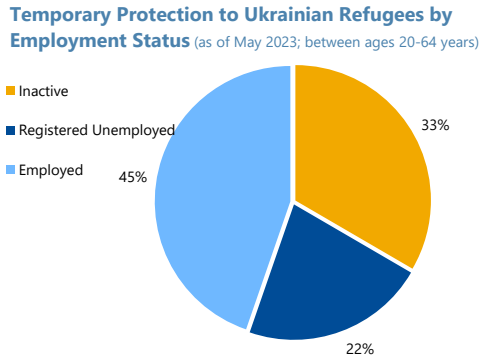
Text Figure 6. Labor Market Policies and The Integration of Ukrainian Refugees



Source: Eurostat.



Source: Unemployment Insurance Fund (UIF).
1/ 2023 data reflects expected costs.



Sources: Statistics Estonia; and Ministry of Social Affairs.

Source: Statistics Estonia.

37. Estonia's energy security could be supported by a more ambitious green transition. Energy security was strengthened and diversified by filling gas reserves, securing sources of LNG supply, and building infrastructures. However, Greenhouse Gas (GHG) emissions have likely increased in 2022 due to a higher reliance on oil shale for electricity production following the energy crisis (see Annex III). Phasing out oil shale in energy production, introducing a car registration and road tax in line with the rest of the EU to incentivize cleaner means of transport, and extending the coverage of the Emissions Trading System, currently the lowest in the EU, are key steps to reducing GHG emissions. Accelerating the planned investment in renewables, especially in wind and solar energy, which are a relatively small share in Estonia's energy mix, and boosting energy efficiency in the building and transport sectors are also priorities.

Authorities' Views

38. The authorities agreed with staff's emphasis on raising productivity and promoting innovation. To this end, they stressed the role of the newly established Estonia Business and Innovation Agency in boosting the country's long-standing digital advantage, increasing its attractiveness as an investment destination, developing start-ups, and gathering venture capital.

39. The authorities highlighted their efforts to address labor market shortages. They recognized that the acute skilled labor shortage in the ICT sector could be a hindrance to digital transformation. They also noted that the integration of Ukrainian refugees in the near term may be hampered by language barriers and limited skill recognition. While acknowledging that these issues take time to resolve, the authorities emphasized their progress in closing existing skill gaps and limit skill downgrading through active labor market policies.

40. The authorities agreed on the importance of promoting more inclusive growth. While acknowledging the deterioration in social indicators, they noted that recent social welfare reforms strike a balance between mitigating the impact of the cost-of-living crisis on vulnerable groups and ensuring an appropriate level of targeting. The authorities recognized the elevated gender pay gap but highlighted recent initiatives aimed at reducing the gap, including the introduction of new digital tools to enhance pay transparency.

41. The authorities also saw scope for a more ambitious green agenda. The authorities confirmed that further energy supply had been secured through an agreement with Latvia allowing joint purchases of liquified natural gas via the Paldiski terminal. They committed to phase out over time the use of oil shale in electricity production, while transitioning to a less polluting use in the chemical industry. They highlighted plans to increase investment in renewables, especially through wind farms, as regulatory and legal constraints are being eased. Finally, they signaled openness to extending the coverage of the Emission Trading System and improving efficiency for the transport and building sectors.

STAFF APPRAISAL

42. The economic effects of the war shock have exacerbated competitiveness erosion. Estonia has made remarkable progress over the past two decades, achieving steady convergence towards more advanced EU economies. However, while the external position is assessed to be broadly in line with medium-term fundamentals and desirable policies, signs of erosion in external performance have emerged in recent years, reflecting rapid growth in unit labor cost and real exchange rate appreciation. Russia's invasion of Ukraine triggered a large rise in inflation, supply chain disruptions and slower growth in key trading partners in the Baltic region. In Estonia, these developments, combined with fiscal tightening in 2022, have led to a sharp economic downturn, while deceleration in productivity has further added to competitiveness pressures.

43. The war-led shock may leave scars. A very large fiscal impulse in 2023 along with gradually stronger external demand is expected to support the recovery under the baseline but will also leave inflation well above euro area average. In turn, high inflation is likely to exert pressure on wages which, combined with declining productivity growth, may further erode Estonia's competitive position over time. As a result, while the economy managed to recover swiftly from the pandemic, staff project a more permanent scar from the consequences of the war over the medium term, with growth failing to return to its pre-crisis average, absent tighter fiscal policy and proactive structural reforms to support productivity.

44. This baseline is highly uncertain and subject to domestic downside risks. Fiscal deterioration might become entrenched, above and beyond what is already assumed under the baseline. While supporting near-term growth, an excessively loose fiscal policy would undermine Estonia's disinflationary efforts and further weigh on its medium-term competitiveness prospects. Tighter labor market conditions, rapid wage growth triggered by generous public sector pay rises and waning productivity may exacerbate these adverse dynamics.

45. External downside risks are also significant. A significant tightening in global financial conditions may cripple bank credit and trigger a global recession. Major central banks could loosen monetary policy prematurely, leading to a de-anchoring of inflation expectations and increasing the risk of a wage-price spiral in Estonia's tight labor market. An accentuation of geopolitical tensions in the region or other war-related effects may also weigh on the outlook.

46. Estonia's policy mix needs to be re-calibrated to support a more sustainable recovery. A much less stimulative fiscal policy should be considered. Alongside targeted financial policies to underpin financial stability and structural reforms to raise productivity, address labor market shortages, and promote the green and digital transition, this policy mix will help Estonia achieve sustainable and inclusive growth over the longer term.

47. In the near term, a neutral or—at most—an only slightly expansionary fiscal stance is needed to contain inflation. As energy prices recede, consideration should be given to phasing out the most recent increases in family allowances while retaining targeted support to the most vulnerable groups. Containing the expansion of the public sector wage bill—including by limiting the flexibility of line ministries and local authorities to raise wages—is critical. Re-calibrating current spending towards productivity-enhancing capital spending would help safeguard competitiveness. Finally, the case for bringing forward some of the tax hikes envisaged from 2024 should be explored.

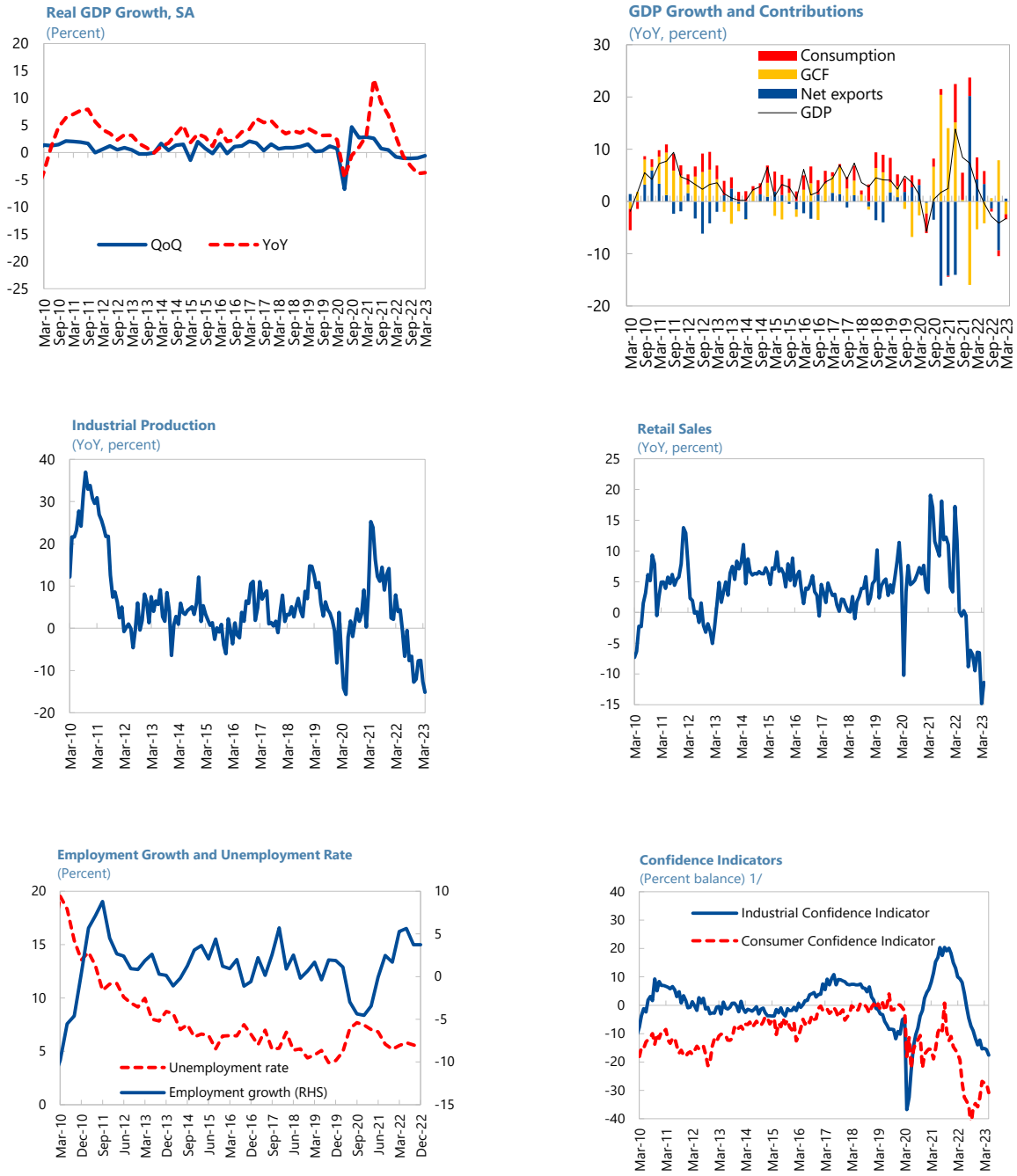
48. Over the medium-term, fiscal policy should preserve buffers to counter future shocks and spending pressures. Staff's recommended fiscal path entails reaching a balanced structural budget over the forecast horizon through an improvement of about ½ percentage point of GDP a year, anchored in the national fiscal rule. This path requires additional consolidation measures, including means testing social programs, saving on government operational expenditures, and a more efficient execution of capital expenditure.

49. Financial stability risks appear limited so far, but close vigilance is warranted amid rising interest rates. Comprehensive and frequent bank portfolio reviews should be accompanied by rigorous stress tests, including to assess risks stemming from wholesale deposits, funding through online deposit platforms, cross-border lending, and broader spillover effects from real estate markets in the region. Less-significant institutions, which have more limited buffers, should be closely monitored. The earlier tightening of countercyclical buffers was appropriate, given the need to preserve robust buffers against sustained increase in credit and house prices. However, policies should be ready to respond to credit supply disruptions. Building on recent progress, systems should be further enhanced to address ML/TF risks.

50. Targeted structural reforms would help raise productivity, address labor market shortages, and promote the green and digital transition. Encouraging an increase in the share of private sector R&D to a level closer to the EU average would accelerate the evolution towards higher value-added production and exports. Addressing labor market shortages and closing skill gaps, especially in the ICT sector, would further strengthen long-term growth prospects. Conducting a review of recently enacted social welfare reforms along with progress towards reducing the gender pay gap would support more inclusive growth. Finally, phasing out oil shale in energy production, introducing a car registration and road tax, and extending ETS coverage would support a more ambitious green transition.

51. It is recommended that the next Article IV consultation be completed on the standard 12-month cycle.

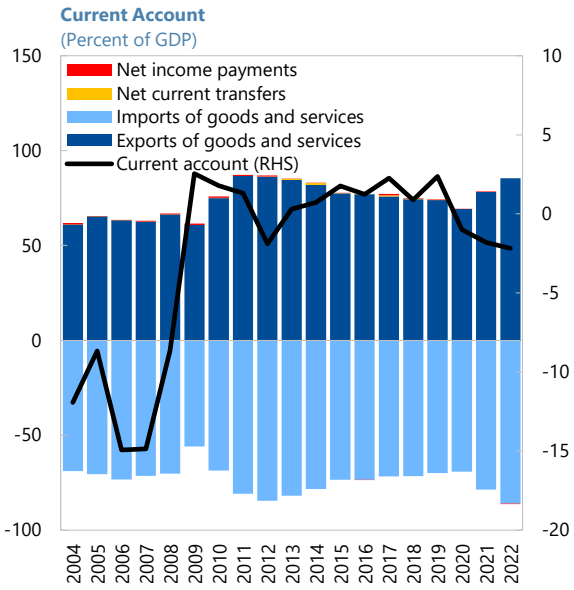
Figure 7. Estonia: Real Sector Developments, 2010-23

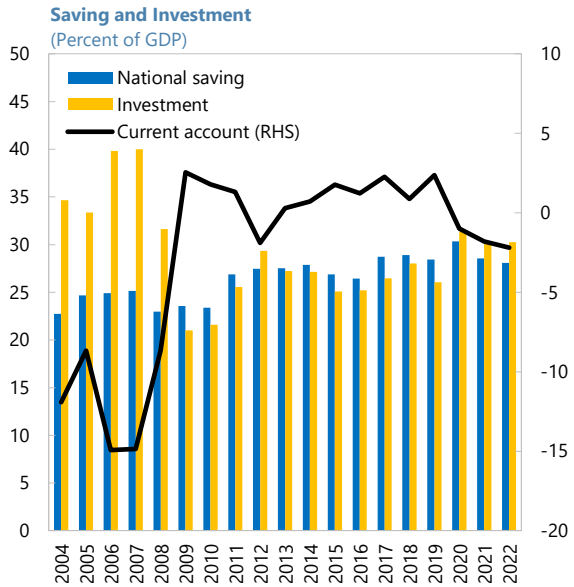


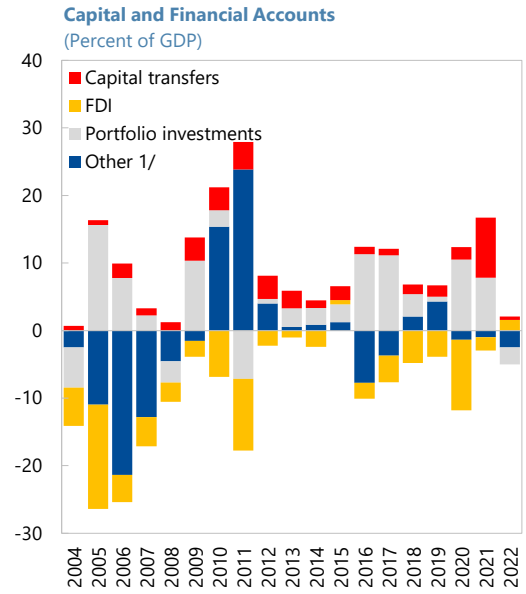
Source: Haver Analytics; and National Authorities.

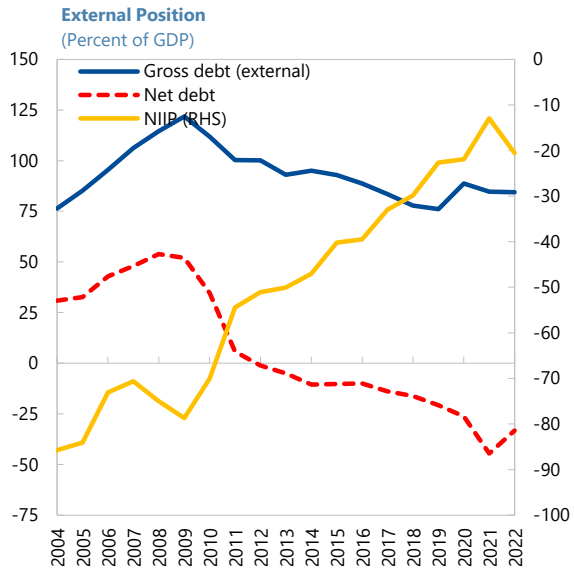
1/Balance equals percent of responsents reporting an increase minus the percent of respondents reporting a decrease.

Figure 8. Estonia: External Sector Developments, 2004-22





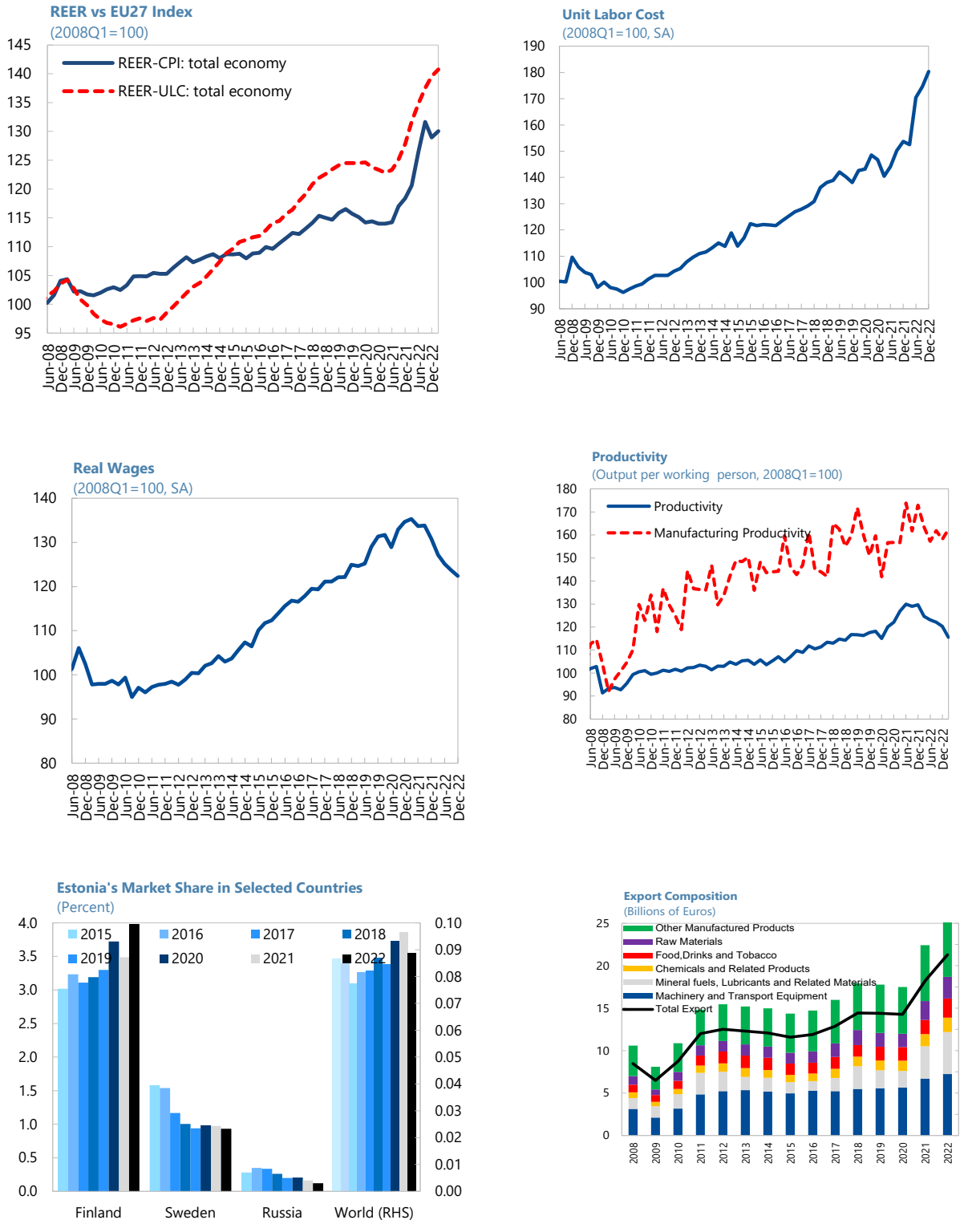




Source: Haver Analytics; and IMF staff calculations.

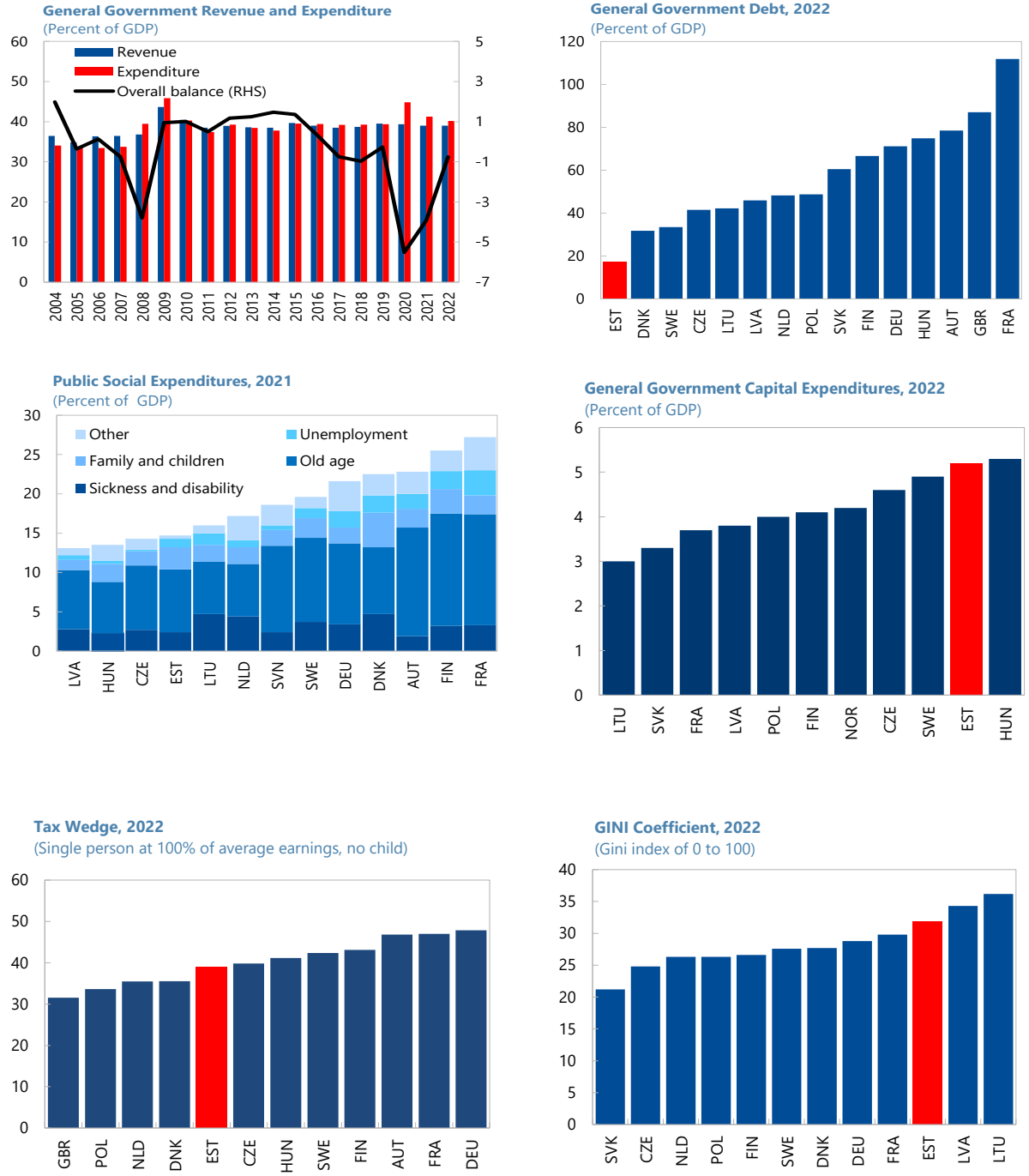
1/ Other is defined as the sum of financial derivatives, and other investments.

Figure 9. Estonia: External Competitiveness, 2008-22



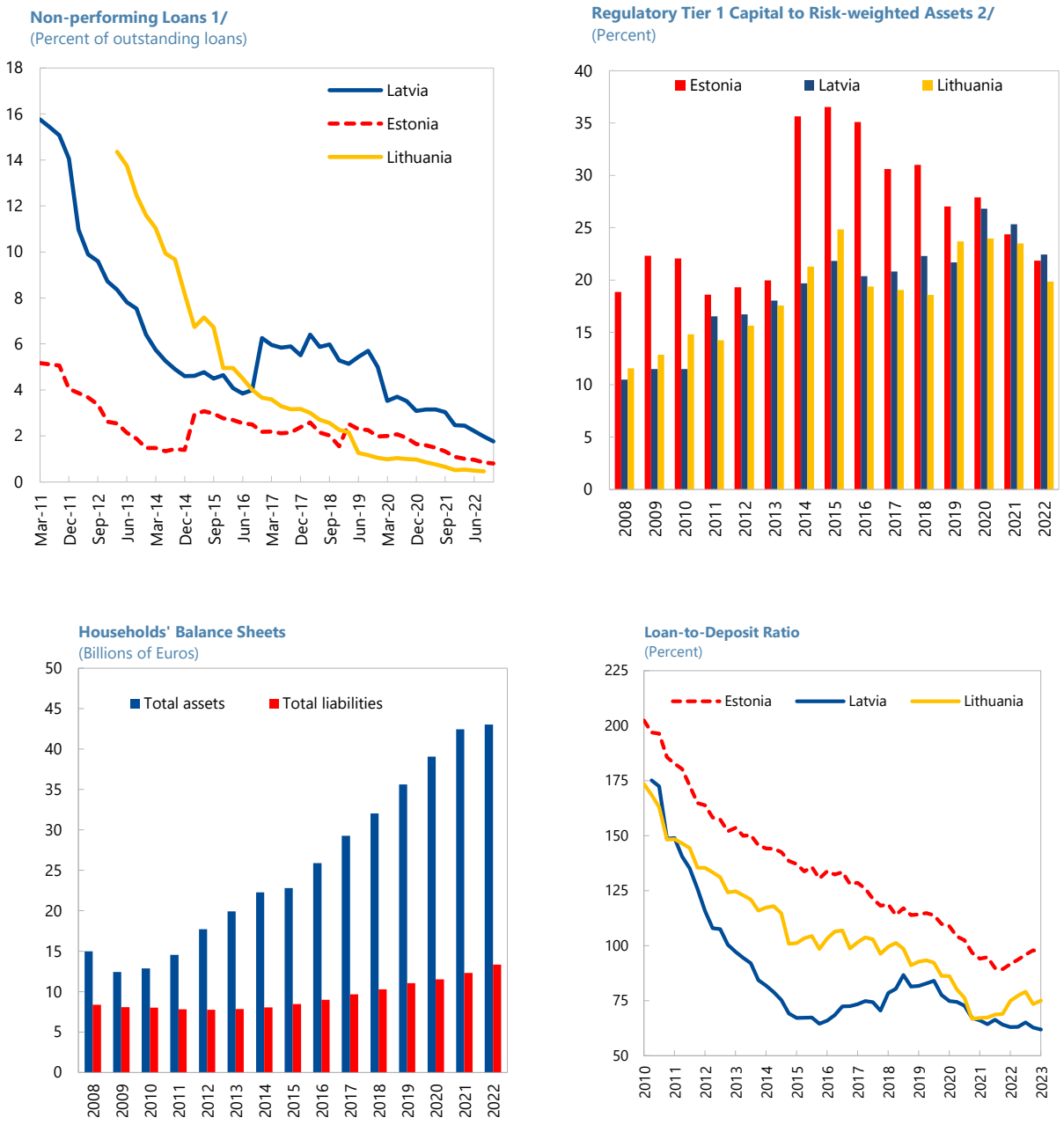
Source: Direction of Trade Statistics, IMF; World Economic Outlook, IMF; and EU Commission.

Figure 10. Estonia: Fiscal Developments and Structure, 2004-22



Sources: World Economic Outlook, IMF; Eurostat; and OECD.

Figure 11. Estonia: Financial Sector Developments



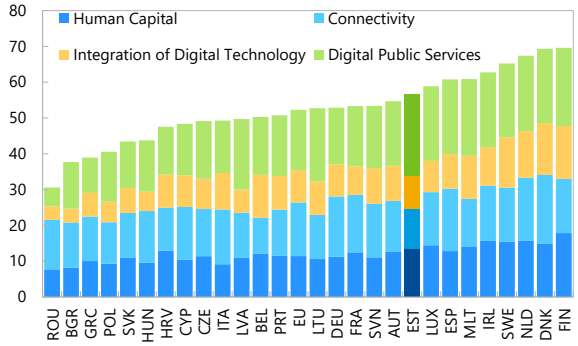
Source: Haver Analytics; National Authorities and IMF staff calculations.

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.

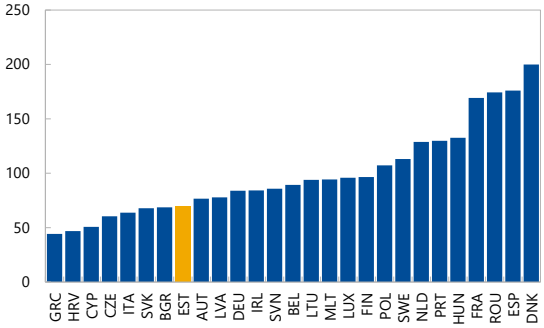
2/ Latest data available for Lithuania is 2022Q3.

Figure 12. Estonia: Digital Transition and Social Indicators

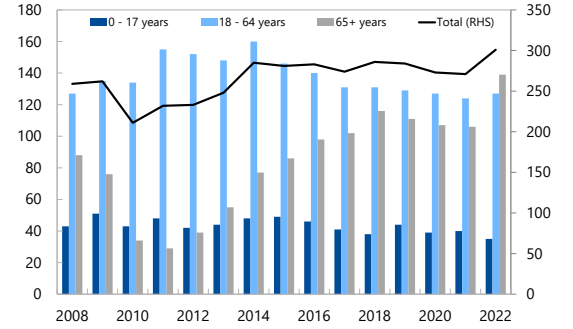
Digital Economy and Society Index, 2022
(Weighted score from 0 to 100)



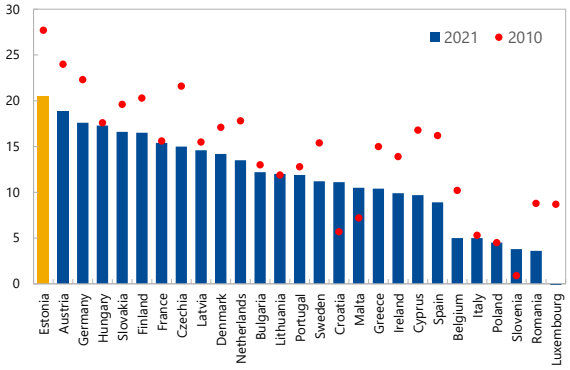
Fixed Broadband Download Speed
(In Mbps; as on April 2023)



At-Risk-of-Poverty-Rate by Age Group
(In thousands, Cut-off point: 60% of median equivalized income after social transfers)



Gender Pay Gap, 2021 1/
(Percent of male gross earnings)



Source: European Commission; Speedtest Global Index; and Eurostat.

1/ Data for Greece and Ireland is 2018.

Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2021–28

	2021	2022	2023	2024	2025	2026	2027	2028
					Projections			
National income, prices, and wages								
GDP (nominal; billions of Euro)	31.4	36.2	38.9	41.4	43.8	46.2	48.7	51.3
Annual change (in percent)	14.5	15.1	7.5	6.5	5.8	5.6	5.3	5.3
Real GDP growth (year-on-year in percent) 1/	8.0	-1.3	-1.6	2.9	2.8	2.9	2.9	3.0
Private consumption	6.5	2.7	-0.2	3.8	3.7	3.6	3.5	3.5
Gross fixed capital formation	2.8	-10.9	4.3	9.2	4.3	4.2	4.1	4.1
Exports of goods and services	19.9	4.7	-3.5	3.6	3.9	4.0	4.2	4.2
Imports of goods and services	21.0	5.9	-6.0	4.4	4.4	4.5	4.5	4.5
Average HICP (year-on-year change in percent)	4.5	19.4	9.7	3.7	3.2	2.8	2.5	2.5
Average Core HICP inflation	2.4	11.8	10.9	5.1	3.7	3.2	2.8	2.5
GDP deflator (year-on-year change in percent)	6.0	16.6	9.2	3.5	2.9	2.6	2.3	2.3
Average monthly wage (year-on-year growth in percent)	6.8	8.9	11.7	6.3	5.9	5.6	5.2	5.0
Unemployment rate (ILO definition, percent, pa)	6.2	5.6	5.8	5.9	5.5	5.4	5.3	5.1
Average nominal ULC (year-on-year growth in percent)	1.3	15.2	17.4	3.2	3.2	2.6	2.2	1.8
General government (ESA10 basis; percent of GDP)								
Revenue	39.0	38.5	38.6	39.8	40.6	40.8	40.9	40.9
Expenditure	41.5	39.4	43.1	43.0	43.3	43.4	43.4	43.4
Financial surplus (+) / deficit (-)	-2.4	-0.9	-4.5	-3.2	-2.8	-2.7	-2.6	-2.5
Structural balance	-4.1	-0.7	-3.3	-2.4	-2.2	-2.3	-2.5	-2.5
Total general government debt	17.6	18.4	22.0	24.3	26.1	27.7	29.2	30.6
Net government debt 2/	4.5	4.3	8.9	12.0	14.5	16.7	18.7	20.6
External sector (percent of GDP)								
Merchandise trade balance	-4.1	-7.4	-7.4	-8.0	-8.5	-9.0	-9.5	-10.1
Service balance	3.8	6.8	8.5	8.4	8.5	8.6	8.9	9.1
Primary income balance	-1.7	-1.3	-1.0	-0.9	-0.7	-0.6	-0.6	-0.5
Current account	-1.8	-2.2	0.2	-0.4	-0.6	-0.9	-1.2	-1.4
Gross external debt/GDP (percent) 3/	84.7	84.4	82.5	80.6	79.1	77.5	76.0	74.4
Exchange rate (US$/Euro - period averages)	1.18	1.05	1.08	1.08	1.08	1.08	1.08	1.08
Real effective exchange rate (annual changes in percent)	1.8	6.4	4.9	...	...	...	...	...
Nominal effective exchange rate (annual changes in percent)	0.6	-2.3	2.8	...	...	...	...	...
Money and credit (year-on-year growth in percent)								
Credit to the economy	6.5	11.1	...	...	...	...	...	...
Output gap (in percent of potential output)	2.0	-1.2	-3.7	-2.5	-1.6	-0.9	-0.3	0.0
Growth rate of potential output (in percent)	3.3	1.9	1.0	1.6	1.9	2.2	2.4	2.6

Social Indicators (reference year):
Population (2023): 1.36 million; Per capita GDP (2022): $28,631; Life expectancy at birth: 81.3 (female) and 72.4 (male);
At-risk-of-poverty rate (2021): 22.8 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 the Stabilization Reserve Fund (SRF).

3/ Includes trade credits.

Table 2. Estonia: Summary of General Government Operations, 2021-28

(in percent of GDP)

	2021	2022	2023	2024	2025	2026	2027	2028
					Projections			
Revenue and Grants	39.0	38.5	38.6	39.8	40.6	40.8	40.9	40.9
Revenue	36.8	36.4	36.2	37.4	38.3	38.6	38.8	38.9
Tax revenue	21.7	21.1	20.9	21.8	22.3	22.5	22.6	22.6
Direct taxes	8.4	7.9	7.8	7.9	8.1	8.2	8.2	8.2
Personal income tax	6.8	6.3	6.2	6.1	6.2	6.1	6.1	6.1
Corporate profits tax	1.5	1.6	1.6	1.7	2.0	2.1	2.1	2.1
Indirect taxes	13.3	13.2	13.1	13.9	14.1	14.3	14.5	14.5
VAT	9.1	9.1	9.1	9.6	9.6	9.6	9.6	9.6
Excises	3.1	2.8	2.7	2.9	3.2	3.3	3.5	3.5
Other taxes (incl. land tax)	1.0	1.3	1.3	1.4	1.4	1.4	1.4	1.4
Social contributions	11.9	11.7	12.0	12.2	12.5	12.6	12.6	12.7
Pension insurance (net)	5.8	5.9	5.9	6.0	6.1	6.1	6.1	6.1
Health insurance	4.4	4.3	4.4	4.4	4.4	4.4	4.4	4.4
Unemployment insurance tax	1.4	1.2	1.3	1.4	1.5	1.5	1.5	1.5
Other (incl. self employed)	0.4	0.3	0.4	0.4	0.5	0.5	0.6	0.6
Nontax revenue	3.2	3.6	3.3	3.4	3.5	3.5	3.5	3.5
O/w: Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	2.3	2.1	2.3	2.3	2.3	2.2	2.1	2.0
O/w: EU	2.0	1.8	2.1	2.2	2.3	2.1	2.0	1.9
Expenditure	41.5	39.4	43.1	43.0	43.3	43.4	43.4	43.4
Expense (current expenditure)	35.9	33.8	36.3	36.3	36.3	36.5	36.6	36.7
Compensation of employees	10.9	10.4	11.5	11.7	11.5	11.4	11.4	11.4
Wages and salaries	8.0	7.6	8.1	8.2	8.3	8.3	8.3	8.3
Employers' social contributions	3.0	2.8	3.5	3.5	3.3	3.2	3.1	3.1
Other goods and services	6.3	6.5	6.7	6.7	6.8	6.9	6.9	6.9
Transfers and subsidies	18.7	17.0	18.1	17.9	18.0	18.2	18.3	18.4
Subsidies	1.0	0.7	0.7	0.6	0.6	0.6	0.6	0.6
Transfers to households	14.9	13.8	14.6	14.6	14.7	14.9	15.0	15.1
Social benefits	12.4	11.5	12.3	12.5	12.8	13.0	13.1	13.2
Social transfers in kind	2.4	2.3	2.3	2.1	1.9	1.9	1.9	1.9
Other transfers	2.9	2.4	2.7	2.7	2.7	2.7	2.7	2.7
Property income	0.0	0.1	0.3	0.4	0.5	0.5	0.5	0.5
O/w: Interest expenses	0.0	0.1	0.3	0.4	0.5	0.5	0.5	0.5
Other current transfers	2.3	1.8	1.9	1.9	1.8	1.7	1.8	1.8
Capital transfers	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Net acquisition of NFA (capital expenditure)	5.5	5.6	6.7	6.7	7.0	6.9	6.8	6.7
Acquisition	5.6	5.7	...	...	...	...	...	...
Disposal	-0.1	-0.1	...	...	...	...	...	...
Financial surplus (+) / deficit (-)	-2.4	-0.9	-4.5	-3.2	-2.8	-2.7	-2.6	-2.5
One-off items	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cyclical adjustment	0.7	-0.4	-1.2	-0.8	-0.5	-0.3	-0.1	0.0
Structural balance	-4.1	-0.7	-3.3	-2.4	-2.2	-2.3	-2.5	-2.5
Financing (accrual basis)	2.0	0.9	4.5	3.2	2.8	2.7	2.6	2.5
Net incurrence of liabilities	2.5	4.0	4.9	3.6	3.1	3.0	2.9	2.8
Net acquisition of financial assets	0.5	3.1	0.4	0.4	0.4	0.3	0.3	0.3
Other and Errors and Omissions	-0.4	0.0	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, 2016–22

(In millions of euros)

	2016	2017	2018	2019	2020	2021	2022
Total Assets	**9,059**	**9,405**	**9,647**	**9,656**	**11,005**	**12,097**	**14,300**
Fiscal reserves	2,144	2,146	2,149	2,553	2,941	3,453	4,414
Currency and deposits	1,063	1,368	1,220	1,738	2,173	2,648	2,141
Securities other than shares, excl. financial derivatives	825	527	645	526	430	475	1,893
Short-term securities, excl. financial derivatives	470	270	256	242	214	132	1,304
Long-term securities, excl. financial derivatives	356	257	389	284	217	343	590
Financial derivatives	0	0	0	0	0	0	0
Other	256	252	284	290	338	330	380
Loans	706	713	724	719	996	1,009	1,061
Short-term	5	4	4	3	2	3	3
Long-term	701	708	720	716	994	1,007	1,058
Equity	5,186	5,539	5,637	5,225	5,716	6,316	7,306
Other	1,023	1,007	1,137	1,159	1,351	1,319	1,519
Total Liabilities 1/	**2,979**	**3,128**	**3,351**	**3,748**	**6,803**	**7,644**	**9,141**
Securities other than shares, excl. financial derivatives	221	264	194	248	2,262	2,001	2,653
O/W: Long-term securities, excl. financial derivatives	221	264	194	148	1,636	1,601	2,302
Loans	1,927	1,894	1,931	2,116	3,077	3,492	3,652
Short-term	7	8	5	4	2	3	6
Long-term	1,920	1,885	1,925	2,112	3,075	3,490	3,646
Other accounts receivable/payable	770	908	1,172	1,322	1,395	2,018	2,674

Source: Statistics Estonia.

1/ Including commitments under the European Financial Stability Fund.

Table 4. Estonia: Summary Balance of Payments, 2021–28

	2021	2022	2023	2024	2025	2026	2027	2028
			Projections					
			(Millions of Euros)					
Current Account	-567	-790	63	-146	-283	-427	-564	-702
Primary Current Account 1/	1,868	1,812	2,388	2,240	2,165	2,084	2,009	1,933
Trade Balance	-114	-203	396	162	0	-168	-330	-492
Exports of goods	16,367	20,092	20,705	22,252	23,761	25,333	26,919	28,589
Imports of goods	17,662	22,759	23,600	25,580	27,499	29,500	31,562	33,749
Services Balance	1,181	2,463	3,291	3,490	3,738	3,999	4,314	4,668
Exports of services	8,254	10,845	12,046	13,026	14,061	15,139	16,306	17,579
Imports of services	7,073	8,382	8,755	9,536	10,323	11,139	11,993	12,911
of which: imports of computer services	2,482	1,435	...	...	...	...	...	...
Primary Income	-545	-485	-379	-352	-326	-299	-273	-246
Receipts	1,890	2,118	1,945	2,034	2,123	2,212	2,300	2,389
Payments	2,435	2,602	2,324	2,386	2,449	2,511	2,573	2,635
Secondary Income	92	-102	46	44	42	40	38	36
Capital Account	2,801	181	194	207	219	231	244	256
Net lending (+) / borrowing (-) balance	2,234	-609	258	61	-64	-196	-320	-446
Financial Account	1,949	-1,066	258	61	-64	-196	-320	-446
Direct investment	-611	569	535	461	386	312	238	165
Assets	5,558	2,086	2,128	2,085	2,044	2,003	1,963	1,923
Liabilities	6,169	1,517	1,593	1,625	1,657	1,690	1,724	1,759
Portfolio investment	2,453	-907	-195	-222	-249	-276	-304	-333
Financial derivatives	-32	-158	-138	-124	-112	-101	-91	-47
Loans and other investments (net) 2/	-284	-722	167	-398	-402	-406	-411	-416
Change in reserves	421	152	-111	344	312	276	247	185
Errors and Omissions	-285	-457	0	0	0	0	0	0
			(In percent of GDP, unless otherwise specified)					
Current Account	-1.8	-2.2	0.2	-0.4	-0.6	-0.9	-1.2	-1.4
Trade balance	-0.4	-0.6	1.0	0.4	0.0	-0.4	-0.7	-1.0
Service balance	3.8	6.8	8.5	8.4	8.5	8.6	8.9	9.1
Primary income balance	-1.7	-1.3	-1.0	-0.9	-0.7	-0.6	-0.6	-0.5
Secondary income balance	0.3	-0.3	0.1	0.1	0.1	0.1	0.1	0.1
Net lending (+) / borrowing (-) balance	7.1	-1.7	0.7	0.1	-0.1	-0.4	-0.7	-0.9
Exports of goods and services (growth in percent)	29.4	25.7	5.9	7.7	7.2	7.0	6.8	6.8
Imports of goods and services (growth in percent)	30.2	25.9	3.9	8.5	7.7	7.4	7.2	7.1
Net FDI from abroad	1.9	-1.6	-1.4	-1.1	-0.9	-0.7	-0.5	-0.3
Total external debt 3/								
Gross	84.7	84.4	82.5	81.4	80.8	80.3	80.0	79.6

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.

Table 5. Estonia: Macroeconomic Framework, 2021–28

(Percent of GDP, unless otherwise indicated)

	2021	2022	2023	2024	2025	2026	2027	2028
					Projections			
Real GDP growth (percent)	8.0	-1.3	-1.6	2.9	2.8	2.9	2.9	3.0
Domestic demand real growth (percent)	6.4	1.2	-2.2	2.8	2.7	2.8	2.8	2.9
Final consumption real growth (percent)	5.7	1.6	0.2	3.3	2.8	2.9	2.8	2.8
Capital formation real growth (percent)	7.7	0.2	3.6	7.8	3.7	3.6	3.6	3.6
Fixed capital formation real growth (percent)	2.8	-10.9	4.3	9.2	4.3	4.2	4.1	4.1
Net exports contribution to real GDP (ppts)	-1.1	-1.1	2.4	-0.8	-0.6	-0.5	-0.5	-0.4
Exports real growth (percent)	19.9	4.7	-3.5	3.6	3.9	4.0	4.2	4.2
Imports real growth (percent)	21.0	5.9	-6.0	4.4	4.4	4.5	4.5	4.5
Statistical discrepancy contribution to real GDP (ppts)	2.6	-1.4	0.7	0.0	0.0	0.0	0.0	0.0
Gross saving	28.5	28.1	26.4	25.3	25.5	25.7	25.8	26.1
Private	25.4	23.4	24.1	21.8	21.2	21.4	21.6	21.9
Public	3.1	4.7	2.3	3.4	4.3	4.3	4.2	4.2
Investment	30.3	30.3	25.9	25.4	25.8	26.2	26.6	27.0
O/w: Fixed investment	28.9	25.3	24.9	25.4	25.8	26.2	26.6	27.0
Private	23.3	19.6	18.1	18.7	18.8	19.3	19.8	20.3
Public	5.6	5.7	6.7	6.7	7.0	6.9	6.8	6.7
Current account	-1.8	-2.2	0.2	-0.4	-0.6	-0.9	-1.2	-1.4
Memorandum items:								
Fiscal balance 1/	-2.4	-0.9	-4.5	-3.2	-2.8	-2.7	-2.6	-2.5
Revenues	39.0	38.5	38.6	39.8	40.6	40.8	40.9	40.9
Expenditure	41.5	39.4	43.1	43.0	43.3	43.4	43.4	43.4
Structural balance	-4.1	-0.7	-3.3	-2.4	-2.2	-2.3	-2.5	-2.5
Total general government debt	17.6	18.4	22.0	24.3	26.1	27.7	29.2	30.6
Net non-debt creating capital inflows ("+" inflow)	36.3	2.2	4.1	3.9	3.7	3.6	3.4	3.3
Capital transfers 2/	8.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Portfolio investment (net)	7.8	-2.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6
FDI liabilities	19.6	4.2	4.1	3.9	3.8	3.7	3.5	3.4
Average HICP inflation (percent)	4.5	19.4	9.7	3.7	3.2	2.8	2.5	2.5
Unemployment rate (percent)	6.2	5.6	5.8	5.9	5.5	5.4	5.3	5.1
Average wage growth (percent)	6.8	8.9	11.7	6.3	5.9	5.6	5.2	5.0
Labor compensation share of GDP	48.7	48.2	51.8	51.6	51.8	51.8	51.7	51.5
Output gap (in percent of potential output)	2.0	-1.2	-3.7	-2.5	-1.6	-0.9	-0.3	0.0
Growth rate of potential output (in percent)	3.3	1.9	1.0	1.6	1.9	2.2	2.4	2.6

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

1/ Public savings minus public investment differs from the fiscal balance by the amount of capital transfers received from abroad.
2/ Mainly EU capital grants, all of which are channelled through the budget.

Table 6. Estonia: Summary of Monetary Accounts, 2013-22

(Millions of Euros, unless otherwise specified)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CENTRAL BANK										
Net foreign assets	2731	4188	4805	4851	6660	7425	7894	8528	12146	11003
Net domestic assets	985	1235	1308	1235	908	602	444	2308	1678	684
Net domestic claims	11	58	129	150	-48	-150	-202	1759	1282	312
Claims on Central government (net)	0	0	0	-7	-209	-204	-229	-252	-794	-203
Claims on Private Sector	6	6	54	71	70	4	4	3	3	2
Claims on Other Depository Corporations	5	52	75	86	91	50	23	2008	2073	513
Other items net	974	1177	1179	1085	956	752	646	549	396	372
Monetary base	3716	5424	6115	6086	7570	8027	8340	10836	13822	11688
OTHER DEPOSITORY CORPORATIONS										
Net foreign assets	-1807	-2764	-3523	-3452	-3750	-3426	-1196	1352	-256	-1196
Net domestic assets	12062	14087	16161	17304	18413	19790	18926	23964	28856	27242
Net domestic claims	15029	17001	19074	20402	22079	23497	23747	26810	31634	31781
Claims on Central government (net)	-766	-834	-600	-662	-788	-589	-1079	-1129	-697	-979
Claims on State and Local Government	372	401	405	414	461	476	364	577	628	687
Claims on Private Sector	13134	13481	14175	15109	15215	16061	16578	17400	18647	20773
of which: Private Sector Credit	13113	13462	14147	15081	15187	16030	16544	17367	18627	20740
Claims on Central Bank	1576	2948	3471	3357	4725	5009	5072	7187	9904	7671
Claims on Other Financial Corporations	713	1005	1623	2184	2466	2540	2812	2775	3152	3629
Other items net	-2967	-2914	-2913	-3098	-3666	-3707	-4821	-2846	-2778	-4539
Liabilities to the Central Bank	5	52	75	86	97	62	23	2008	2073	513
Liquid Liabilities	10074	11015	12284	13500	14267	15672	16800	19726	22850	23140
Transferable deposits	6943	8070	9730	10889	12016	13266	14356	17618	20882	20436
Other deposits	3131	2945	2554	2611	2186	2395	2439	2096	1964	2701
Securities other than shares	0	0	0	0	65	11	5	12	4	3
Non-liquid liabilities	180	257	277	265	298	630	905	3583	3677	2397
DEPOSITORY CORPORATIONS										
Net foreign assets	924	1424	1282	1399	2910	3999	6698	9880	11890	9807
Net domestic assets	11286	12065	13646	14831	14201	14699	13393	13488	14879	17346
Net domestic claims	13459	14059	15657	17109	17215	18288	18450	19374	20939	23909
Claims on Central government (net)	-766	-834	-600	-669	-997	-793	-1308	-1381	-1491	-1182
Claims on State and Local Government	372	401	405	414	461	476	364	577	628	687
Claims on Private Sector	13140	13487	14229	15180	15285	16065	16582	17403	18650	20775
of which: Private Sector Credit	13119	13468	14201	15152	15257	16034	16548	17370	18630	20742
Claims on Other Financial Corporations	713	1005	1623	2184	2466	2540	2812	2775	3152	3629
Other items net	-2173	-1994	-2011	-2278	-3014	-3589	-5057	-5886	-6060	-6563
Broad money	12214	13491	14928	16229	17112	18698	20091	23369	26767	27158
Memorandum items:										
Year-on-year growth (percent)										
Monetary base	-0.1	46.0	12.7	-0.5	24.4	6.0	3.9	29.9	27.6	-15.4
Broad money	6.5	10.5	10.7	8.7	5.4	9.3	7.4	16.3	14.5	1.5
Depository Corporations ,Claims on Private Sector	0.6	2.6	5.5	6.7	0.7	5.1	3.2	5.0	7.2	11.4
Depository Corporations, Credit to Private Sector	0.6	2.7	5.4	6.7	0.7	5.1	3.2	5.0	7.3	11.3
Financial Corporations, Credit to Private Sector										
Broad money multiplier (ratio)	3.3	2.5	2.4	2.7	2.3	2.3	2.4	2.2	1.9	2.3

Source: Bank of Estonia; European Central Bank; and IMF staff calculations.

Table 7. Estonia: Indicators of External Vulnerability, 2016–22

(Percent of GDP, unless otherwise indicated)

	2016	2017	2018	2019	2020	2021	2022
External Indicators							
Exports of goods and services (year-on-year, percent)	4.8	7.9	6.7	6.4	-7.3	29.4	25.7
Imports of goods and services (year-on-year, percent)	5.3	7.1	8.6	4.5	-2.0	30.2	25.9
Current account balance	1.2	2.3	0.9	2.4	-1.0	-1.8	-2.2
Capital and financial account balance	2.3	3.2	2.3	4.1	0.8	7.1	-1.7
Total external debt 1/	88.7	83.4	77.9	76.1	88.8	84.7	84.4
Debt service to exports of GNFS	69.5	61.2	51.4	46.4	57.5	49.7	45.6
External interest payments to exports of GNFS (percent)	1.9	1.7	1.6	1.5	1.7	1.3	1.1
External amortization payments to exports of GNFS (percent)	67.7	59.4	49.4	44.4	55.7	48.2	44.1
Exchange rate (per US$, period average)2/	1.11	1.13	1.18	1.12	1.14	1.18	1.05
Financial Market Indicators							
Stock market index 3/	1076	1242	1163	1280	1344	2001	1767
Foreign currency debt rating 4/	AA-	AA-	AA-	AA-	AA-	AA-	AA-

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

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

2/ For 2008-10, EEKs per US$; starting in 2011, Euros per US$.

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

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

Table 8. Estonia: Households, Financial Assets and Liabilities, 2016–22

(In millions of euros)

	2016	2017	2018	2019	2020	2021	2022
Total Assets	**25,904**	**29,266**	**32,018**	**35,612**	**39,048**	**42,427**	**43,017**
Currency and deposits	7,040	7,262	7,983	8,590	9,760	11,583	11,936
Securities other than shares	65	68	83	115	114	125	130
Shares and other equity	14,539	17,144	18,756	20,773	22,348	28,904	29,268
Insurance technical reserves	3,589	4,150	4,458	5,356	5,910	648	533
Other	671	642	738	778	916	1,167	1,150
Total Liabilities	**8,996**	**9,679**	**10,298**	**11,043**	**11,514**	**12,324**	**13,340**
Loans	8,404	9,045	9,585	10,283	10,722	11,412	12,372
Short-term	153	169	255	279	259	224	231
Long-term	8,251	8,876	9,330	10,003	10,464	11,188	12,141
Other	592	634	713	760	792	912	968
Net Financial Assets	**16,908**	**19,587**	**21,720**	**24,569**	**27,534**	**30,103**	**29,677**
Memorandum item							
Liabilities to gross wages and salaries ratio	115.2	113.6	109.8	108.6	109.5	107.0	101.7

Sources: Eesti Pank; and Statistics Estonia.

Table 9. Estonia: Financial Soundness Indicators, 2016–22

(Percent)

	2016	2017	2018	2019	2020	2021	2022
Capital adequacy							
Regulatory capital to risk-weighted assets	35.1	30.6	31.0	27.0	27.9	24.4	21.8
Regulatory Tier I capital to risk-weighted assets	34.5	30.1	30.4	26.6	27.3	23.6	21.1
NPLs net of provisions to capital	4.8	7.8	5.0	5.8	4.1	2.2	0.6
Asset composition and quality							
NPLs to gross loans (non-financial sector)	2.2	2.4	1.6	2.0	1.6	1.1	0.8
Sectoral distribution of loans to non-financial sector:							
Loans to households	42.5	44.4	44.9	46.2	46.2	45.5	..
Loans to non-financial corporations	40.8	37.7	37.5	35.9	35.7	35.4	..
Earnings and profitability							
Return on assets	2.5	2.2	2.0	1.4	1.1	1.2	1.8
Return on equity	13.9	11.4	10.8	8.8	7.3	9.4	14.2
Interest margin to gross income	54.5	57.9	59.8	59.2	60.7	62.6	66.7
Noninterest expenses to gross income	43.4	46.8	47.2	56.3	55.5	57.2	52.1
Liquidity							
Liquid assets to total short-term liabilities	31.5	28.1	26.4	25.0	30.6	31.0	25.7
Loans to deposits	103.8	118.7	114.4	105.5	90.0	93.5	98.8

Sources: IFS database, Eesti Pank, and Financial Supervisory Authority.

Annex I. Productivity and Competitiveness: Is Estonia Upscaling Its Production and Export Mix?[1]

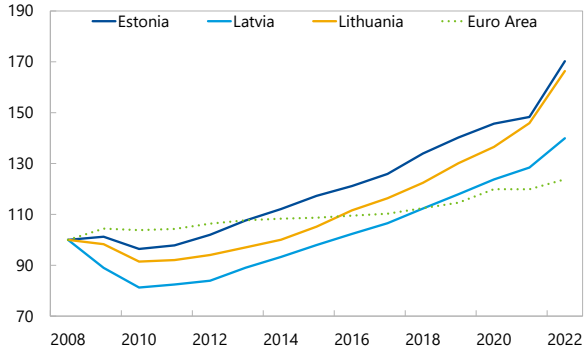
Estonia has performed remarkably well since regaining independence in 1991, achieving steady and rapid convergence towards the income levels of the more advanced EU economies. However, signs of erosion of competitiveness have emerged lately, which are only in part related to the pandemic and war shocks. Against the backdrop of rising input costs, Estonian exporters have seen their profit margins eroded, but, on a more positive note, they have also become more productive. There is also tentative evidence that they may have upscaled the quality of their production mix. As the economy exits the convergence process and enters a more mature phase of economic development, this Annex offers some initial considerations on how Estonia can avoid the risk of being caught in a middle-income trap of eroding competitiveness and how it can continue sustain its progress towards higher productivity levels.

A. External Performance

1. Estonia's export growth has lost momentum in recent years. Strong export performance and gains in export market shares have supported the country's catch-up process vis-à-vis more advanced economies following its regained independence in 1991. However, Estonia's world and EU export shares have remained broadly flat both in value and in volume terms since 2010. In other words, exports have grown broadly in line with export markets. Estonia's export performance has been outpaced by that of Lithuania, whose gains in export market shares have been mainly driven by exports of services.

2. The softening in Estonia's external performance pre-dates the pandemic and energy crises. Estonia's exports have held up as a share of GDP over the past 10 years, as tradeable and non-tradeable sectors have expanded at similar rates. However, the export share of GDP has been comparatively less dynamic than in the euro area and the other Baltics, in a further sign of the country's relatively weaker external performance.

Unit Labor Costs
(NSA, 2008 = 100; based on persons, for the total economy)



Sources: European Central Bank; and IMF staff calculations.

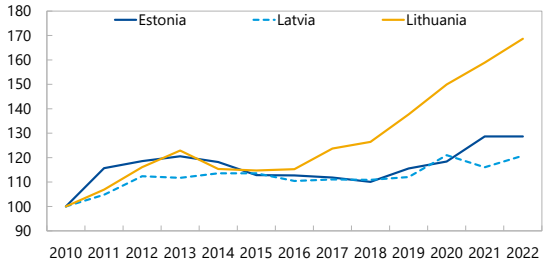
3. Estonian exporters have adapted to a sustained rise in their relative input costs. Nominal wage growth has outpaced productivity in Estonia and the Baltics, leading to rapid growth in unit labor cost (ULC). This is common in the catch-up phase of economic development and does not necessarily reflect competitiveness losses but poses challenges to exporters. Absent strong pricing power, exporters can react to a sustained rise in their input costs in three ways: (i) they can squeeze their profit

[1] Prepared by Gianluigi Ferrucci.

margins; (ii) they can become more productive, thus increasing output with the same resources that are becoming more expensive; and/or (iii) they can improve their non-price competitiveness, upscaling their production mix towards goods and services of higher quality and for which consumer demand is less sensitive to sales prices. In the case of Estonia, there is evidence that all three channels have been at play in recent years.

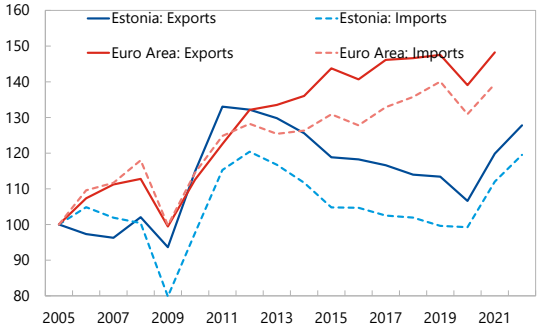
Annex I. Text Figure 1. Estonia: External Performance Indicators

Export Performance Index (EPI)
(Index; 2010 = 100)



Sources: IMF WEO; and ECB Harmonized Competitiveness Indicator (HCI-42).
Note: EPI is based on trade volumes. It is defined as the ratio between country i's export volumes and its export demand, in turn defined as the weighted average of import volumes of country i's trading partners using trade weights that reflect the relevance of the trading partner as a destination for country i's exports.

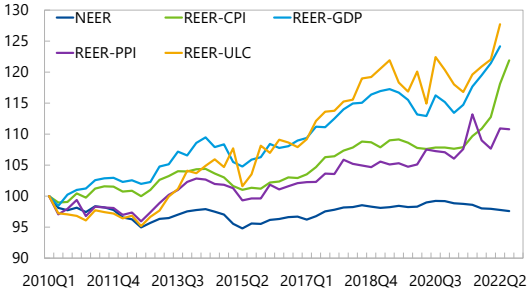
Exports and Imports to GDP
(Percent)



Sources: IMF, Balance of Payments Database; and IMF, World Economic Outlook.

B. Price and Cost Competitiveness, Productivity Growth and Non-Price Competitiveness

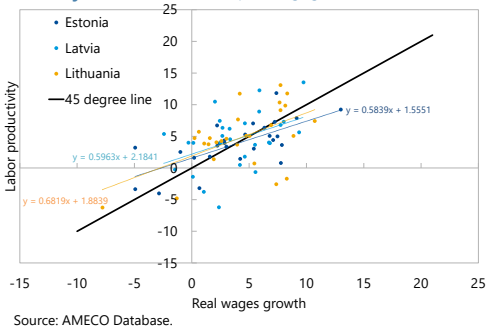
Changes of NEER, REER-ULC and REER-CPI
(Index, 2010Q1 = 100)



Source: European Central Bank.
Note: A decrease (increase) indicates a gain (loss) in competitiveness. The HCIs are calculated vis-a-vis EA MSs and 18 trade partners.

4. Indicators of price and cost competitiveness point to significant squeeze in exporters' profit margins. Estonia has faced significant real exchange rate appreciation since 2010 and this trend has worsened after 2021. Notably, losses of price competitiveness, as implied by CPI-and PPI-based real effective exchange rates (REERs), have been more moderate than losses of cost competitiveness, as captured by ULC- and GDP deflator-based REERs. This suggests incomplete cost pass-through to final prices and thus a squeeze in exporters' profit margins.

Labor Productivity and Real Wages Growth for the Whole Economy, 1996-2022 (annual percentage growth)

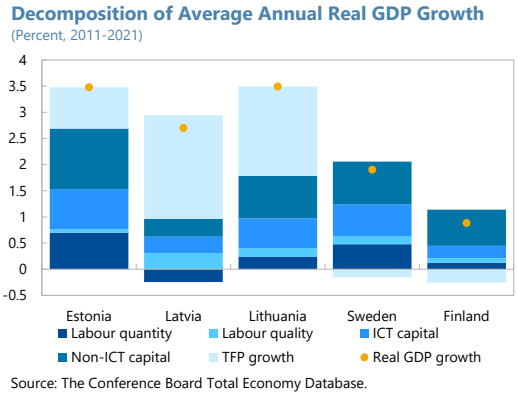


Source: AMECO Database.

5. Productivity gains have been a key factor supporting Estonia's competitiveness over the past decades. While nominal wage growth has systematically outpaced productivity, underpinning rapid ULC growth, labor productivity and real wages have been more closely aligned in Estonia since 1996. Annex II shows that a unit increase in whole-economy

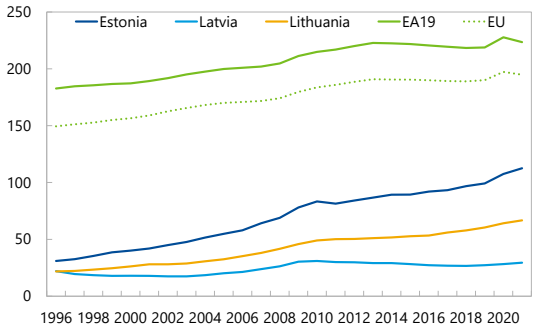
labor productivity has typically been associated with a less than proportional increase in real wages in all Baltic countries, including Estonia.

6. Estonia's growth has been mainly driven by capital accumulation. Estonia's capital stock has quadrupled in the past 25 years driven by both ICT and non-ICT investment, although it still remains lower than that of the EU and euro area averages. Labor deepening has contributed strongly to growth, but labor productivity measured as GDP per person employed also remains still about half the level in the euro area. High hours worked and high participation rates imply that the low hanging fruits have already been gathered and future growth in labor productivity can mainly come from efficiency gains as opposed to labor intensity.

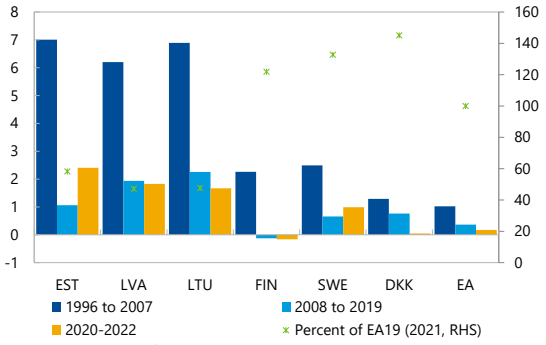


Source: The Conference Board Total Economy Database.

Annex I. Text Figure 2. Factors Driving Growth: Capital Intensity and Labor Productivity



Source: Ameco Database.



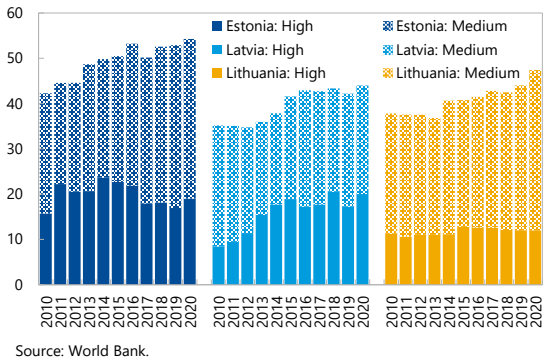
Source: AMECO Database.

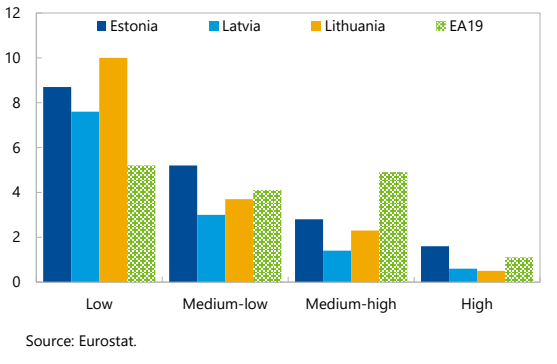
7. There is also evidence of a move towards a more sophisticated mix of good and services and gains in non-price competitiveness. Estonia's gross exports exhibit a higher content of foreign value added than those of the other Baltics, suggesting a closer integration of Estonia in global value chains than Latvia and Lithuania. Moreover, the technological intensity of Estonia's exports has risen over time and is higher than that of the other Baltics.

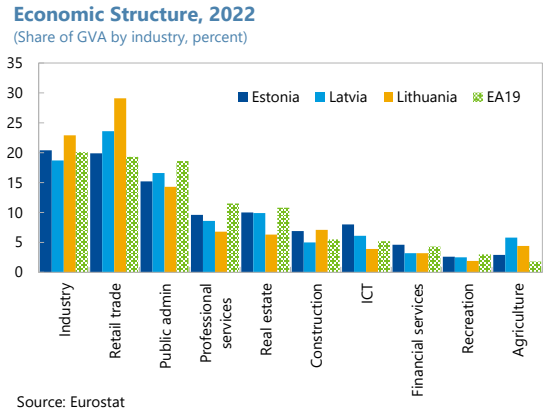
8. The rapid growth of Estonia's ICT sector is a further sign of growing technological sophistication. Despite a traditional economic structure, industry has fallen as a share of gross value added during the past decade and the share of services has increased, led by a growing role of the ICT sector. In 2022, the ICT sector accounted for about 8 percent of the country's gross value added by industry, against 5 percent in the euro area. Within the ICT sector, computer programming has trebled in size in the past eight years. However, the technological intensity of exports remains moderate,

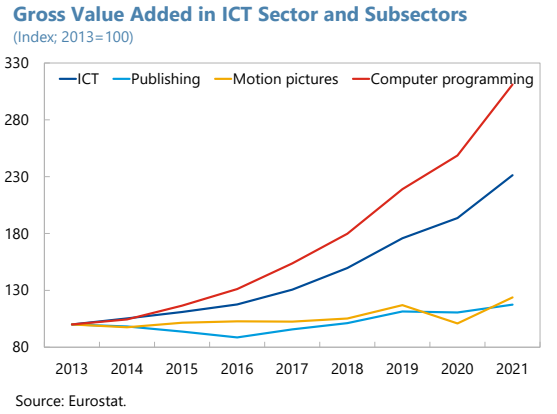
especially the share of high-tech exports, which was still less than 20 percent of total in 2020. Moreover, low-tech manufacturing is still the dominant share of employment in Estonia and in the Baltics. And despite its recent growth, Estonia's manufacturing still lags euro area's technological intensity in the medium-high and high-tech segments, suggesting that the process of upscaling of production has still some headroom for potential future growth.

Annex I. Text Figure 3. Non-Price Competitiveness Indicators









C. Structural Features Constraining Productivity and Competitiveness

9. Estonia's flexible and lightly regulated labor market is a key strength, but skill shortages are a limiting factor. Estonia has one of the lowest rates of coverage of collective bargaining in wage settlement among the OECD countries. This feature is generally expected to lead to a closer match between salaries and productivity at firm level, which in turn should support competitiveness. However, skill shortages are an increasingly relevant limiting factor constraining potential, particularly in the ICT sector. In 2022, labor shortages were reported as a factor limiting production in industry (for 23.3% of firms) and construction (for 32.5% of firms).[2]

[2] Based on data from European Labour Authority (2023), EURES Report on labour shortages and surpluses 2022.

10. Another important obstacle to productivity is Estonia's relatively small share of R&D spending, particularly in the private sector. Estonia's spending on R&D fell between 2011 and 2021 and is about 0.5 percentage point of GDP lower than the EU and euro area averages. The relatively low R&D spending is also reflected in a low number of patent applications relative to the EU average.

11. Firm size and the production structure of the economy could also be holding back productivity growth. Corporate leverage is low in Estonia, possibly reflecting the corporate tax code, which provides strong incentives to retain earnings as a source of funding. This is a source of strength in a crisis as equity is a more stable form of funding. But less risky, more stable funding over time may come at the cost of firm size. This may have contributed to Estonian large SMEs' share of value added, the highest in the OECD. As SMEs tend to be less productive and less innovative than larger firms, firm size may have been a hindrance to higher productivity and value-added growth and may remain a limiting factor going forward.

D. Conclusions and Policy Considerations

12. As Estonia exits a phase of rapid catch-up, targeted structural reforms can support competitiveness and enhance productivity. These include:

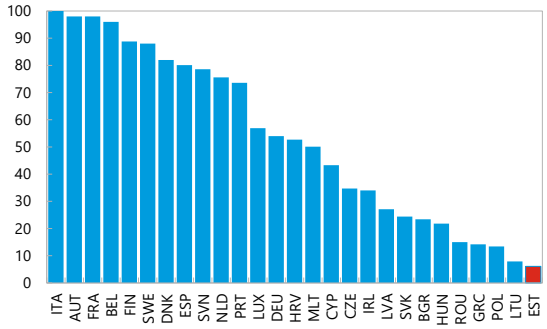
- Improving the quality of labor by addressing shortages of skilled workers;
- increasing R&D spending to support a shift towards higher value-added products and services;
- sustaining investment and growth of the capital stock, for example re-calibrating from current spending to productivity-enhancing capital spending, to ensure continued convergence.

This assessment offers only a preliminary discussion in areas that may benefit from future potential investigation. Questions that could be further explored include whether: i) the productive structure of the economy and the prevalence of SMEs are factors hindering productivity growth; and ii) more sophisticated financial markets and instruments and a correspondingly lower reliance on reinvested earnings as a source of financing could foster firms' size growth.

Annex I. Text Figure 4. Structural Features Constraining Competitiveness

Collective Bargaining Coverage in the EU

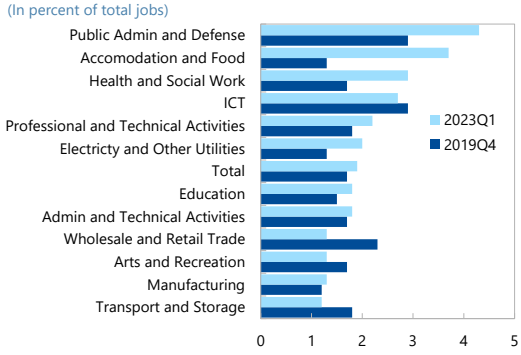
(Percent, 2019 or latest available)



Source: OECD Employment Protection Legislation Database.

Job Vacancy Rate

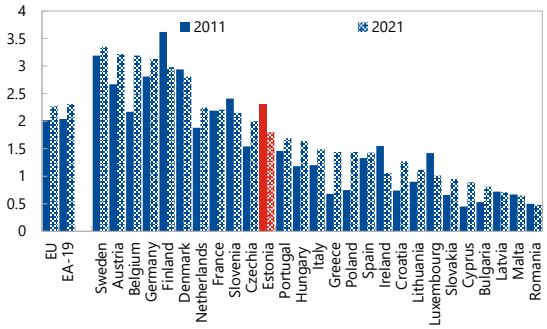
(In percent of total jobs)



Source: Statistics Estonia.

Gross Domestic Expenditure on R&D

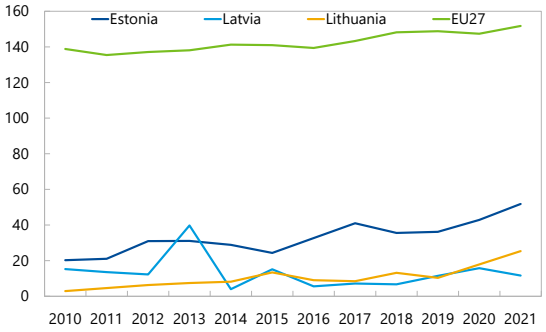
(percent of GDP)



Source: Eurostat

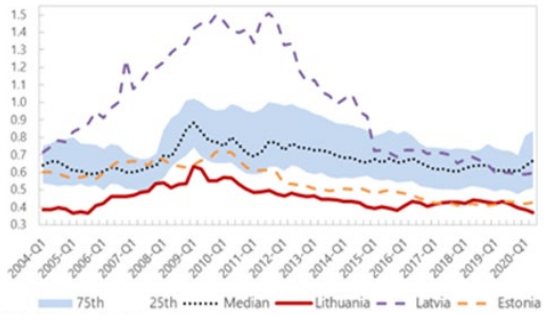
Patent Applications by Applicants' Country of Residence

(Number per million inhabitants)



Source: Eurostat.

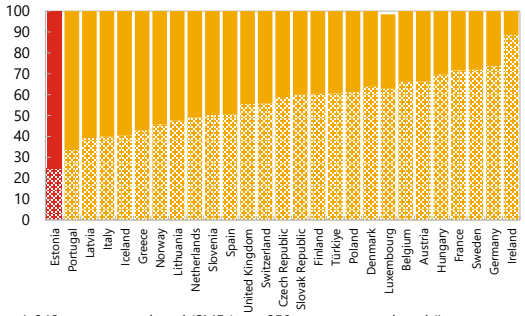
NFC Leverage: Debt to Equity (Ratio)



Note: Debt includes debt securities and loans.
Sample includes 24 EU countries, Bulgaria, Denmark, Croatia, and Romania.

Value Added in Manufacturing by Firm Size

(Percent of total, 2020 or latest year available)



1-249 persons employed (SMEs) 250+ persons employed (Large enterprises)

Source: OECD.

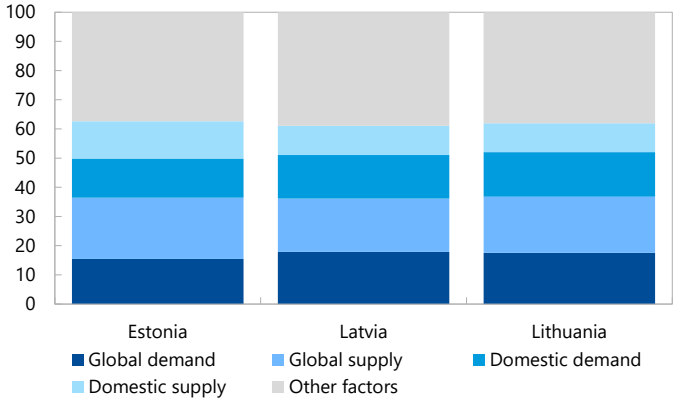
Annex II. High Inflation in the Baltics: Inflation Dynamics and Its Impact on Competitiveness and Firm Performance[1]

A. Inflation Dynamics and the Role of Policies

1. After a period of low and stable inflation, the Baltics have experienced a surge in inflation, which remains twice as high as in the rest of the eurozone. The period after the global financial crisis (GFC), when the three countries joined the euro, and before the pandemic was characterized by low and stable inflation with a differential vis-a-vis the euro area broadly consistent with the ongoing convergence process. More recently, prior to Russia's invasion of Ukraine, the robust post-pandemic recovery resulted in demand-driven inflationary pressures compounded by supply bottlenecks. The war in Ukraine has generated further supply-side pressures and contributed to second-round effects—intensified by tight labor markets—due to higher wages and production costs. These factors pushed inflation above 20 percent in 2022 and are projected to keep it at an elevated level relative to the euro area for the foreseeable future.

2. Inflation in the Baltics is mainly driven by global factors, but domestic demand matters as well, suggesting that fiscal policy can play a role in containing inflation. Furthermore, while global supply factors do not seem to have an immediate significant impact on wage growth in the Baltics, demand shocks (domestic and global) have a positive and significant impact. Using sign restrictions in a structural vector autoregression model to identify supply and demand factors, we find that about 37 percent of the variance of inflation is explained by global factors (demand and supply). A 5 percentage point increase in oil prices increases inflation in the Baltics by around 0.3-0.4 percentage points (0.1 percentage points in the euro area) and leads to a 0.7-0.8 percentage point contraction in output (0.5 percentage points in the euro area as a whole). Notably, the impact on wage growth is not statistically significant in Estonia and Latvia. However, the oil price shock leads to a 1 percentage point decline in wage growth in Lithuania after the third quarter. While domestic factors (demand and supply) only explain about 25 percent of the variance of inflation, these shocks have a significant impact on inflation. A one standard deviation shock to domestic real GDP—around 0.7-0.8 percentage points of growth in the Baltics and 0.6 percentage points in the euro area—, increases inflation by around 0.3-0.4 percentage points in the Baltics, well above the 0.1 percentage point impact in the euro area. Thus, through its impact on domestic demand, fiscal policy

Variance Decomposition for Inflation
(Shares)



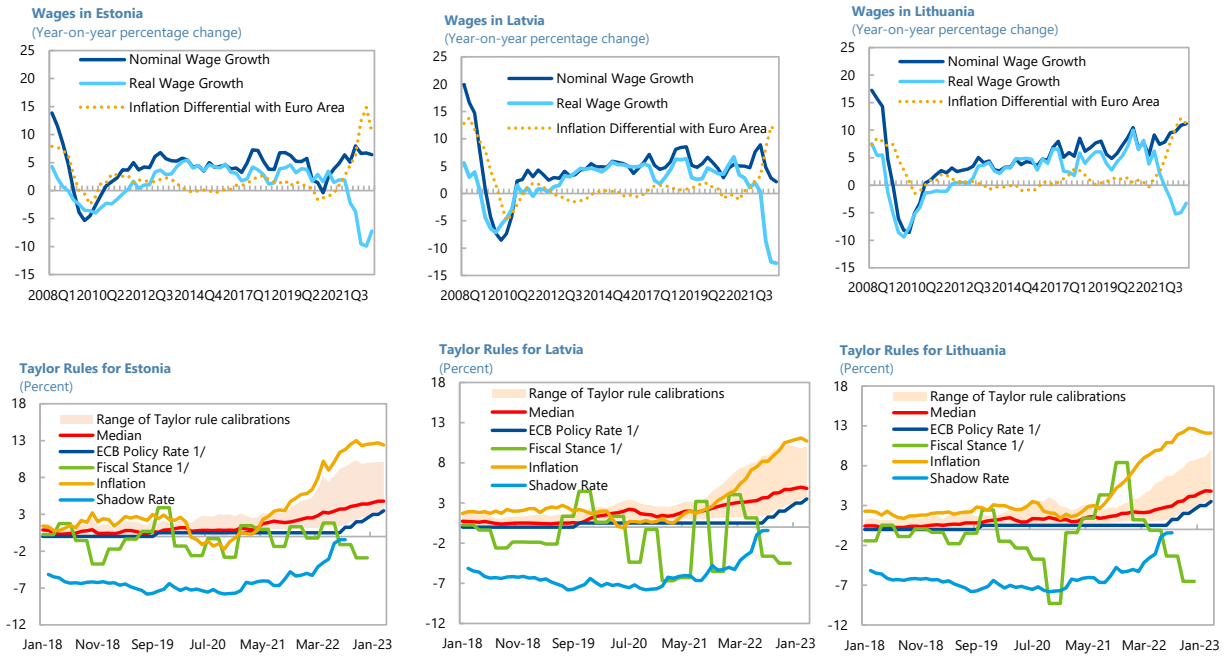
Source: IMF staff calculations.

[1] Cevik, S., A. Fan, B. Hu, S. Naik, N. Noumon, and K. Primus (*forthcoming*). "High Inflation in the Baltics: Disentangling Inflation Dynamics and Its Impact on Competitiveness and Firm Performance," IMF Working Paper No. 23/x.

can affect inflation. A domestic demand shock has an impact on wage growth in Estonia (1 percentage point) and the euro area (0.4 percentage points). Similarly, global demand shocks have a significant positive impact on wage growth in the Baltics (1 percentage point) and euro area (0.5 percentage points).

3. Monetary conditions have tightened recently in response to rising inflation, but fiscal policy—the only macroeconomic stabilization tool available in the Baltics—has not done enough. Given the small share of the Baltic economies in euro area GDP, ECB monetary policy cannot fully respond to specific conditions in these small open economies. As a consequence, over the last few years, monetary tightening came late from the perspective of the Baltic region—starting more than a year after inflation began to pick up—leaving the monetary policy stance too loose relative to domestic economic conditions. Thus, the onus to contain inflationary pressures partly lies with fiscal policy. While the fiscal stance was largely countercyclical before and throughout the pandemic, more recently it has not done enough to contain inflation, particularly in Estonia and Lithuania where the fiscal stance is expected to loosen this year.

Annex II. Text Figure 1. Baltics: Monetary and Fiscal Policy Stance



Source: European Central Bank; Haver Analytics; and IMF staff calculations.
1/ ECB policy rate is the main refinancing operation rate and fiscal stance is calculated as the year-on-year difference in cyclically adjusted primary balance in percent of potential GDP.
Note: The range of Taylor rates includes calibrated interest rates obtained from an adjusted Taylor rule of the type $i = r^*+\pi^* + a(\pi-\pi^*) + b(y-y^*)$ with different values for the parameters a and b, and intertial rules with smoothing, where the calibrated rate in the current period depends on the policy rate in the previous period, i.e.: $i = c*i(-1)+(1-c)*[r^*+\pi^* + a(\pi-\pi^*) + b(y-y^*)]$. Core HICP inflation is used in all calibrations while economic slack is measured using detrended unemployment (the unemployment gap).

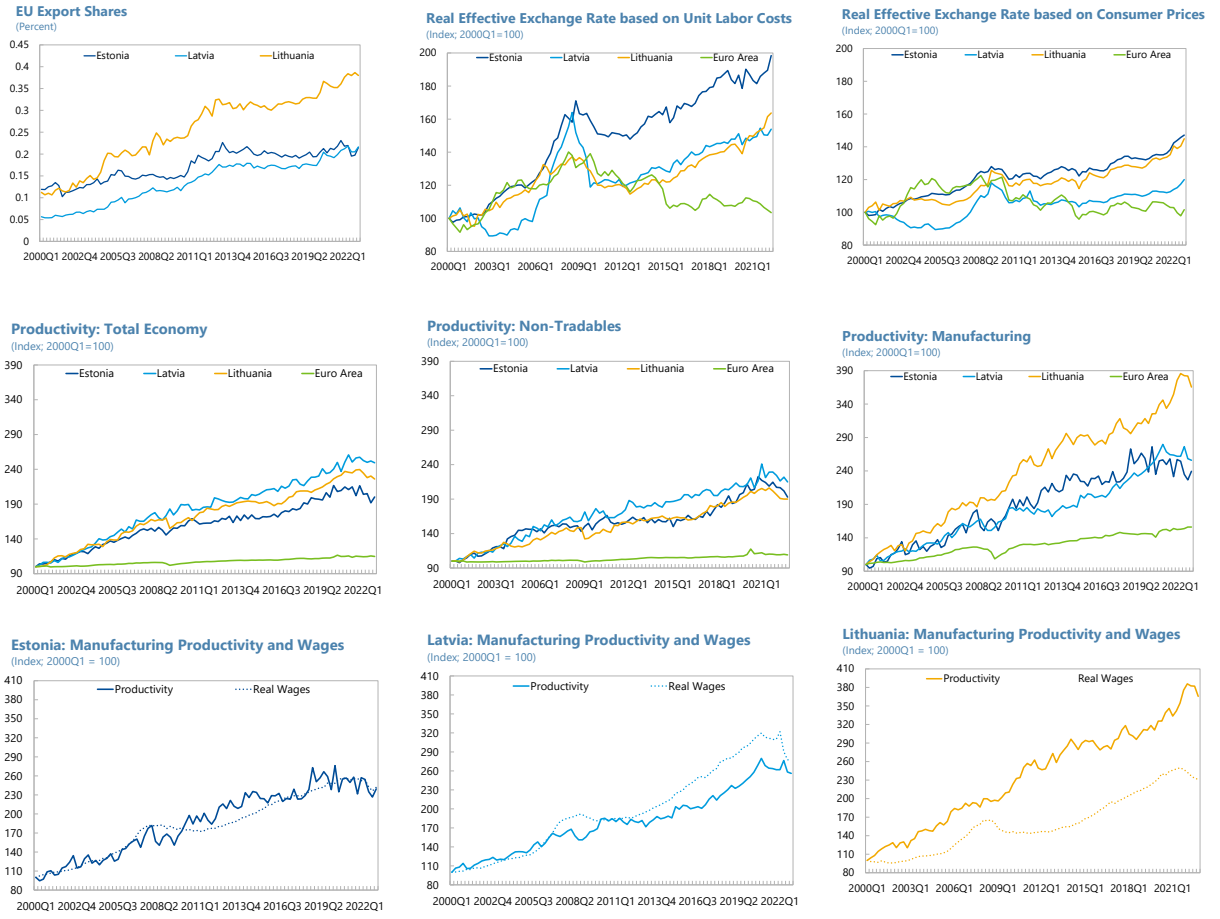
4. Fiscal policy plays a relevant role in containing inflation through its impact on domestic demand. Using an augmented Phillips curve with fiscal variables, we find that an increase of one percentage point of (potential) GDP in the cyclically adjusted primary balance is associated with an increase in inflation of around 0.3-0.4 percentage points in the Baltics.[2] A VAR framework delivers consistent results—a 0.3-0.75 percentage points increase in inflation—although, in this case, the result is not statistically significant for Lithuania. These findings are consistent with Chapter 2 of the IMF Fiscal Monitor, April 2023, where, using a Bayesian panel VAR of 17 advanced economies between 1985-2019, the authors found that a one percent of GDP increase in fiscal spending leads to a 0.5 percentage point increase in inflation, with the effect dissipating over 3 to 4 years. While this result is larger than our finding using a Phillips curve framework, their sample includes bigger and less open economies than the Baltics that, therefore, suffer smaller leakage effects of fiscal policy.

B. Inflation, Wages, and Competitiveness

5. Persistently high inflation and wage growth in the Baltics could put competitiveness and income convergence with the euro area at risk. The strong policy response to the large pre-GFC imbalances through fiscal consolidation and nominal wage reductions boosted competitiveness in the Baltics and set the stage for an export boom. Although real wages have increased significantly since 2013, large productivity gains supported the competitiveness of the tradeable sector. Thus, while the real effective exchange rate has steadily appreciated since the GFC, current accounts have remained strong over the same period. However, going forward, persistently higher inflation than in the euro area above what would be justified by productivity gains, could make inflation expectations adjust upwards, perpetuating large increases in price and wages. This would erode competitiveness and slow income convergence. A loose policy mix, particularly in Estonia and Lithuania, and tight labor markets have exacerbated these risks.

[2] Adding fiscal policy variables in this context raises concerns of endogeneity. However, the use of quarterly data should, as argued by Blanchard and Perotti (2002), largely mitigate this concern given the lags, realistically beyond three months, between approving discretionary fiscal policy measures and their actual implementation. Similarly, collinearity between the output gap and the CAPB could reduce the significance of the estimated coefficients as they explain some of the same variance. However, given the relatively low correlation between the two—around -0.3—and that all estimates of the CAPB are statistically significant, this issue should not be a big concern.

Annex II. Text Figure 2. Exports Share, Competitiveness, and Labor Productivity Wage-Productivity Nexus

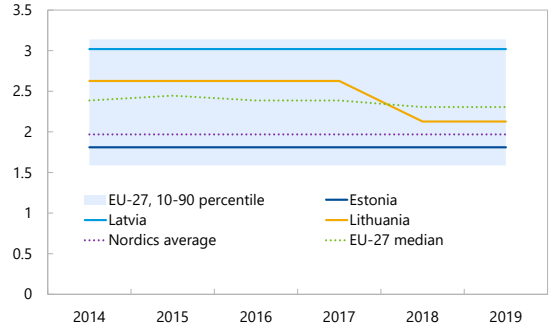


Sources: Eurostat; IFS; Haver Analytics and IMF staff calculations.

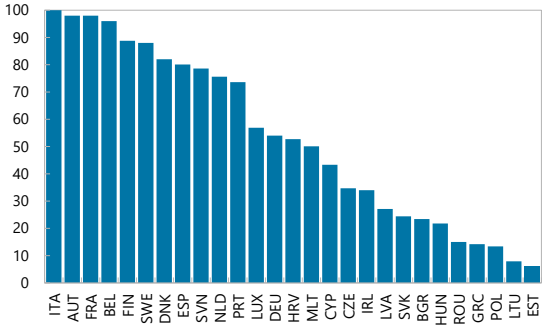
6. There is a close long-term relationship between real wages and productivity in the three countries with short-term deviations self-correcting in Estonia and Lithuania. Co-integration tests confirm that labor productivity and real wages co-move in the three Baltic economies over the longer horizon. The estimated long-run relationship suggests that a one percent increase in labor productivity is associated with an increase in real wages of about 0.8, 0.9, and 1.3 percent in Lithuania, Estonia, and Latvia respectively. Thus, while wage growth is, in the longer-term, slightly below productivity growth in Lithuania and Estonia, it exceeds it in Latvia. This relationship strengthened post-GFC in Lithuania, but it is robust over the whole sample period (2000-2022) for Estonia. Regarding short-term deviations, the speed of reversion to the long-run relationship is estimated to be faster for Estonia (about 3 quarters) than for Lithuania (6 quarters). On the other hand, there is no significant evidence that short-term deviations are self-correcting in Latvia.

Annex II. Text Figure 3. The Role of the Labor Market

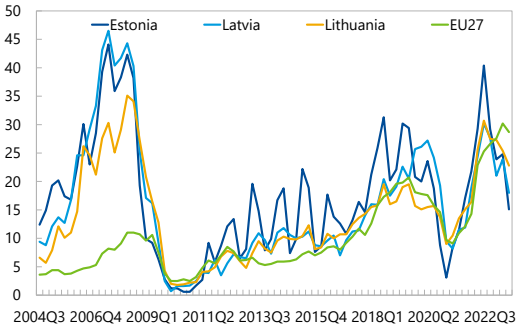
Employment Protection Legislation Indicator for Dismissing Regular Workers (Summary Index)



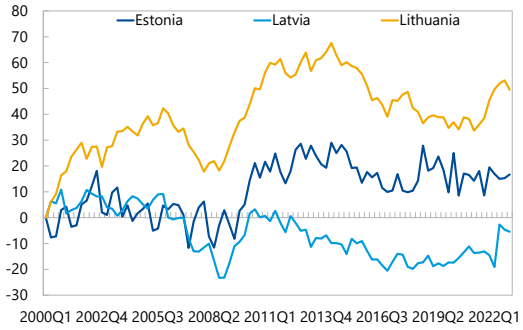
Collective Bargaining Coverage in the EU
(Percent, 2019 or latest available)



Labor Shortage in Manufacturing Industries
(Percent, share of labor in factors limiting production)



Cumulative Productivity-Wage Sequential Differential
(Percent)



Source: OECD; European Commission; Eurostat; Haver Analytics; and IMF staff calculations.

7. The close relationship between wages and productivity in the Baltics and the apparent lack of a self-correcting mechanism in Latvia can be explained by differences in labor markets. Estonia has the most flexible labor market in the Baltics as proxied by employment protection legislations (EPL) underpinned by early reforms (2009-2010). Lithuania follows closely, having made improvements with an important reform of the labor code in 2017-18. Latvia has the least flexible market, with EPLs among the most stringent in Europe and no recent reform efforts. Flexible labor markets result in wages largely determined at the firm-level rather than the industry-level. This is supported by the small share of workers covered by collective bargaining in the region. Flexibility to adjust to the economic cycle is also evident in employers' perceived labor market shortages, which tend to be lower than the EU average during downturn and higher during expansions.

C. Inflation and Nonfinancial Firm Performance

8. In the past, firm level data suggest that temporary inflation shocks—likely linked to increases in demand—have had a small, transitory positive impact on profitability and investment. Given the negative impact of inflation surprises on real wages, firms' profitability increases in the short-term supporting higher investment that is followed by higher productivity going forward. These are the findings of an analysis based on an unbalanced panel of more than one hundred thousand firms from the Baltics. These results seem to be driven by firms in the tradable sector, with non-tradable firms' responses being statistically insignificant.

9. However, depending on the circumstances, persistent bouts of inflation could have negative effects on investment and productivity. The results suggest, that during expansionary periods, the impact on profitability is positive but transitory with a longer-lasting increase in investment. On the other hand, during contractionary periods, an inflation shock decreases profitability which, over time, has a negative impact on investment. Moreover, the sample period, 1997-2021, is one of low and stable inflation (particularly since the GFC).[3] This suggests that the inflation shocks analyzed here are moderate demand shocks unlike those in high and volatile inflation cases that have been found to have significant detrimental effects on firms' performance in the literature.[4]

D. Some Policy Considerations

10. High and persistent inflation is the biggest risk facing the Baltic economies and fiscal policy can proactively reduce this risk. Supply shocks present a difficult tradeoff to policy makers that are called to opt between containing inflation or supporting activity. Given the balance of risks and the impact of fiscal policy on inflation through its effect on domestic demand, a tighter fiscal stance would actively contribute to lower inflation in the current context.

11. Structural policies such as setting moderate minimum and public sector wages can also help mitigate the risk of higher wage growth. This is the case given their important role as a reference in private sector wage negotiations. It also makes inflation expectations less backwards looking.

12. Short-term deviations of wages from productivity can be absorbed in Estonia and Lithuania provided they are temporary but not in Latvia where risks are higher. With wage growth in tradables below productivity growth in equilibrium and with short-term deviations self-correcting over time, the long-term impact of deviations of wages from productivity in the current high inflationary environment should be limited for Estonia and Lithuania. With wage growth already above

[3] One standard deviation inflation shock was equal to 2.5 percent during the sample period, compared to as much as 25 percent recorded in 2022.

[4] See, for example, Banerjee, Cockerell, and Russell (2001), Mishkin (2007), and Bhattacharjee and others (2008).

productivity growth in equilibrium and no significant self-correcting mechanism to rectify short-term deviations for Latvia, the long-term impact of the current environment can be long-lasting, especially if further inflation risks materialized. This reinforces the role of fiscal policy in containing inflationary risks.

13. The lack of macroeconomic imbalances, flexible labor markets and the strong external position provide some comfort that these economies will be able to absorb the current shock. This is in sharp contrast to the situation in 2008 when large imbalances triggered increasingly unsustainable macro dynamics. On the other hand, the lower labor market flexibility in Latvia may have an impact on the economy's competitiveness and its capacity to absorb shocks compared to the other Baltic economies.

Pre War vs. Pre GFC vs. Pre Covid

	2007	2019	2021
Current Account (percent GDP):	-13.1	4.3	9.2
Savings-Investment balances:			
Non-financial corporates	-9.2	1.1	11.6
Households	-7.1	1.7	0.9
General government	2.6	0.1	-2.4
Financial corporates	0.5	1.4	-0.9
Output gap (percent potential GDP)	8.0	1.6	2.0
Nominal wage growth 1/	13.8	7.4	6.8
Inflation 2/	0.2	2.3	4.5
Budget balance (percent GDP)	2.8	0.1	-2.5
Structural balance (percent potential GDP)	0.2	-0.3	-4.1
Effective interest rate on public debt 2/	2.6	0.3	0.2

Sources: Eurostat, Haver, IMF staff calculations
1/ 2008, 2019 and 2021
2/ 2009, 2019 and 2021

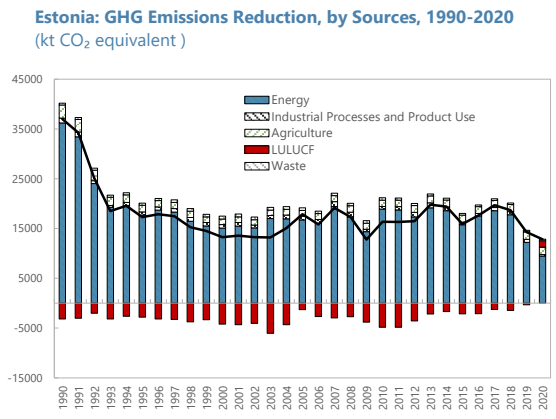
Annex III. Climate Policy in Estonia[1]

The transition towards decarbonizing the Estonian economy requires more ambitious actions on carbon pricing, energy efficiency and sustainable mobility. Using cross-country comparisons, this Annex highlights key areas where Estonia differs substantially from its European peers and provides a snapshot of policies for consideration.

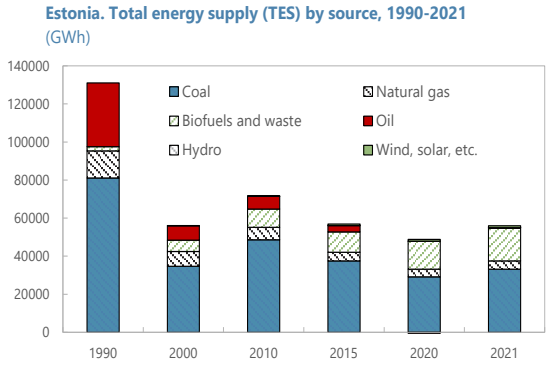
A. Introduction

1. Estonia's carbon footprint improved significantly in the early 1990s, but progress has stalled since then. In 2020, Estonia's greenhouse gas (GHG) emission reduction was among the highest in the EU, at 72 percent excluding land use, land-use change and forestry (LULUCF), relative to 1990's levels. Most of the decrease followed the transition from a planned economy to a market economy when the country regained its independence in 1991. A further fall in emissions was recorded after 2018, reflecting EU green transition policies and rising CO2 prices but also transitory factors, such as the effect of the pandemic-related restrictions on economic activity and personal mobility. These latter gains are likely to have been reversed as pandemic-related restrictions were subsequently lifted in 2021. Moreover, data for 2022 are likely to show an increase in emissions due to Estonia's increased reliance on oil shale for electricity production following Russia's war on Ukraine and the subsequent fall in supply of Russian gas.

Annex III. Text Figure 1. Estonia's Greenhouse Gas Emissions Reduction



Source: UNCCC; and IMF staff calculations.



Source: IEA.

2. Estonia's carbon emission per capita remains among the highest in Europe. This reflects the country's inefficient energy mix and its heavy reliance on oil shale in energy production. At current policies, Estonia's goal to achieve climate neutrality by 2050 in line with EU objectives, is largely out of

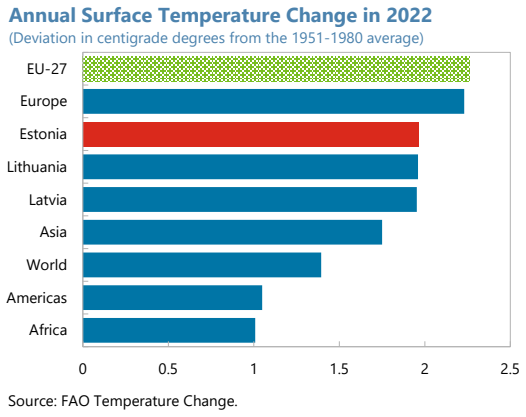
[1] Prepared by Gianluigi Ferrucci.

reach, absent a deep restructuring of its energy mix. Estonia has committed to phase out oil shale in power generation by 2035.

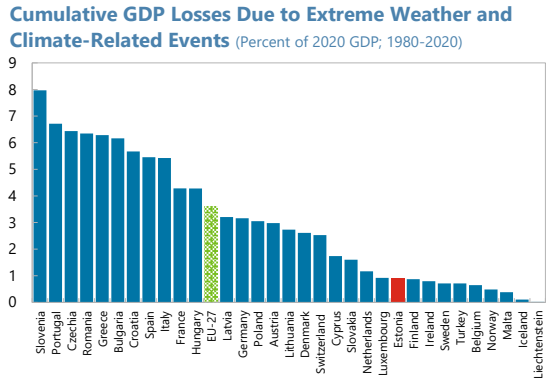
B. Physical Risk and Adaptation Policies

3. Despite a significant warming trend, damages from extreme weather events have remained relatively contained in Estonia so far. Estonia has experienced a faster temperature rise than the world average, with steady decline in winter ice and snow coverage. However, cumulated losses from extreme weather events have remained contained so far, at less than 1 percent of 2020 GDP over the period 1980-2020, against an EU average of around 3.5 percent of GDP.

Annex III. Text Figure 2. Temperature Anomalies and Damages from Extreme Weather Events

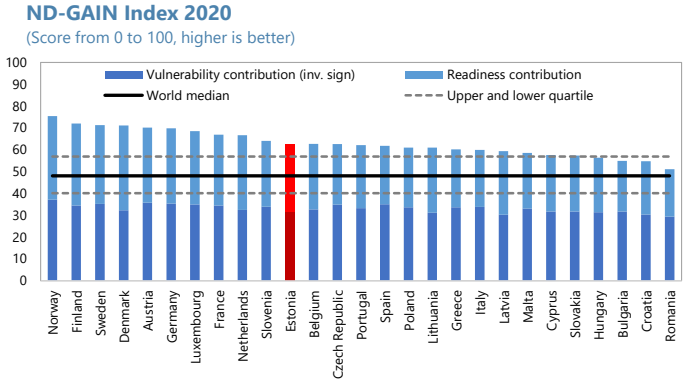


Source: FAO Temperature Change.



Sources: European Environment Agency.

4. Estonia's limited exposure to physical risk is confirmed by several comprehensive and forward-looking metrics. According to the ND-GAIN Country Index, a commonly used score of a country's vulnerability to climate-related natural disasters and its preparedness to deal with the consequences of such disasters, Estonia ranks in the upper quartile of the distribution of 182 countries globally, together with most EU peers. This high ranking reflects the country's relatively contained vulnerability to natural disasters due to its geographical position and its high readiness to deal with the consequences of such disasters, as it is generally the case for advanced economies.



Source: Notre Dame Global Adaptation Initiative.

5. Nevertheless, adaptation challenges are likely to remain significant for Estonia going forward. The favorable ranking in adaptation scores is no reason for complacency but it justifies the authorities' focus on mitigation action during the transition. In other words, given the country's

contained vulnerability to moderate degrees of global warming, making sure that the world collectively achieves the Paris targets would be the best way for Estonia to avoid the worst consequences of climate change.

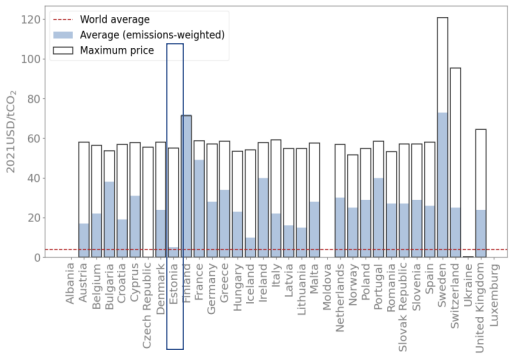
C. Mitigating Climate Change

6. In terms of mitigation action, Estonia stands out in three dimensions relatively to its European peers.

7. First, Estonia lacks an appropriate car tax. While Estonia is broadly in line with the EU average for collection of environmental tax revenues, the transport tax component stands significantly below that of its EU peers (and the EU average). This could be the source of important distortions, as it is argued below.

8. Second, Estonia provides relatively high fossil fuel subsidies. Fossil fuel subsidies may be of two types: i) explicit subsidies, which occur when the retail price of a fossil fuel falls below the fuel's supply cost; and ii) implicit subsidies, which occur when the retail price fails to internalize the externality cost of emissions, or the social cost of carbon, and other congestion costs. Explicit subsidies tend to be less frequent in advanced economies, although some examples can be identified for Estonia.[2] Implicit subsidies depend on the country's energy mix and energy efficiency. In the case of Estonia, they are clearly related to its high carbon intensity, which in turn is related to high reliance on oil shale. Reducing high fossil fuel subsidies would require reforming explicit subsidies and fostering energy efficiency by progressively phasing out oil shale.

Maximum and Average CO2 Prices in Europe, 2021

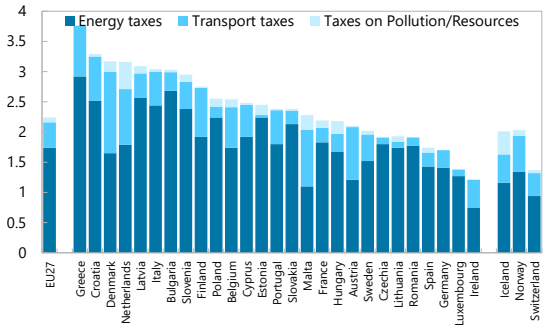


Source: IMF staff calculations.

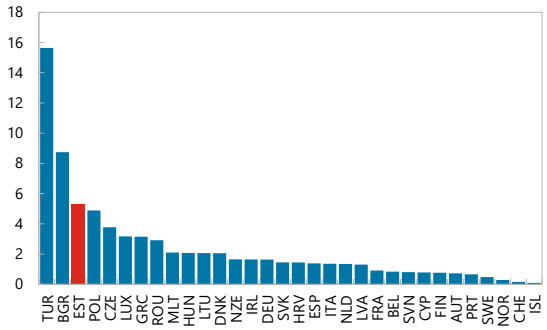
9. Third, the effective coverage of the EU Emission Trading System (ETS) is low. The carbon price effectively paid by Estonian establishments is one of the lowest in the EU, when the price is weighted by the emissions effectively covered by the ETS. Tightening the emission cap and increasing the carbon price will thus be key to help Estonia achieve its carbon reduction targets and climate neutrality by 2050.

[2] These include: the energy tax relief for companies in agriculture and forestry for gas oil, the reduced energy tax rate for light fuel oil used in mobile machinery, the excise duty exemptions on diesel used for agricultural, fishing, aquaculture and navigation purposes and the excise tax exemption and tax relief for natural gas for industrial consumers. See European Commission (2023), COMMISSION STAFF WORKING DOCUMENT 2023 Country Report - Estonia Accompanying the document Recommendation for a COUNCIL RECOMMENDATION on the 2023 National Reform Programme of Estonia and delivering a Council opinion on the 2023 Stability Programme of Estonia, SWD/2023/606 final, available here.

Annex III. Text Figure 3. Climate Change Mitigation: Cross-Country Comparison



Source: Eurostat.



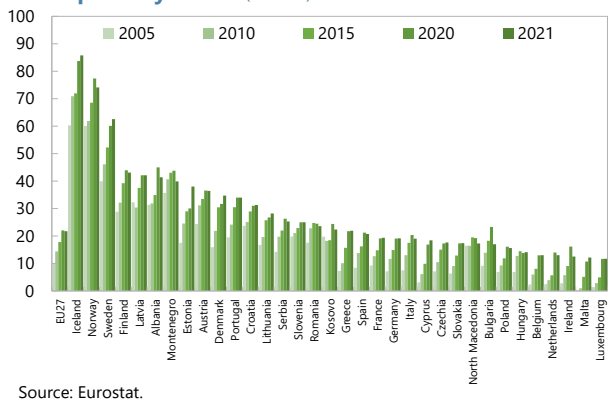
Source: IMF staff calculations.

D. Sectoral Policies

10. Power and heat, residential and commercial, and road transport are the economic sectors producing most GHG emissions in Estonia. Mitigation policies in these sectors, in the form of regulation, standard setting, taxes for polluting activities and incentives for clean activities can support a faster transition to net zero.

11. Greening Estonia's energy mix will require a significant increase in the share of renewable sources while penalizing the use of oil shale in energy production. While the share of renewables in gross final energy consumption has risen significantly since 2005, reaching almost 40 percent of total in 2021, further progress will be key to achieve de-carbonization targets and strengthen energy security. Targeted subsidies, fast-tracking of investment in wind and solar power generation, investment in grid integration, storage and dispatchable generation will be necessary to support the EU ETS in greening Estonia's energy mix.

Share of Renewable Energy in Gross Final Energy Consumption by Sector (Percent)



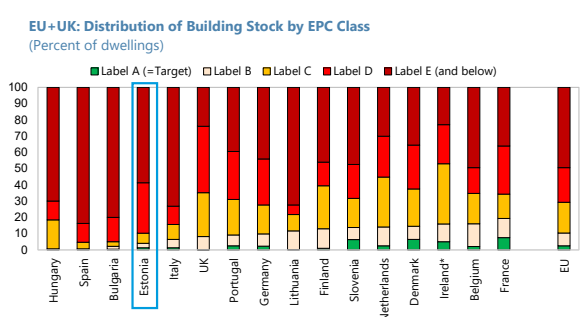
Source: Eurostat.

12. Enhancing energy efficiency in the residential sector will also be key to achieve energy savings targets. Around 90 percent of Estonia's residential housing stock is rated below D on the Energy performance Certificates (EPCs), a rating scheme that summarizes the energy efficiency of buildings in the EU. Reducing buildings' energy demand will thus require accelerating renovations to increase energy efficiency. As a thought experiment, a full upgrade of Estonia's housing stock to the highest energy efficiency standard (EPC=A) would reduce emissions per capita by 42 percent relative to current levels. While this figure is lower than the EU average, considering country-specific

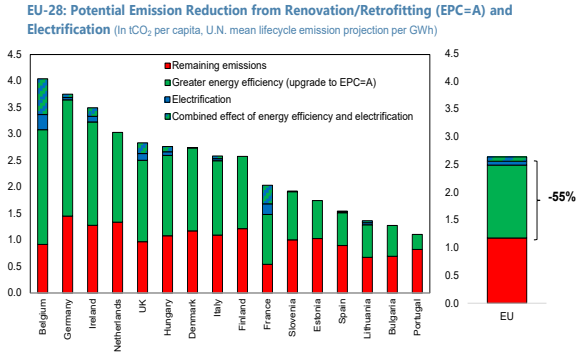
retrofitting costs for renovation, energy cost savings would fully repay the investment costs in a shorter time than required on average in the EU, which would justify prioritizing the related investment from an EU-wide perspective.

13. A more fuel-efficient stock of vehicles could support reducing emissions in the transport sector. GHG emissions in the transport sector have increased steadily since the early 1990s, driven by road transport. Transport GHG emissions have doubled over the past 30 years in Estonia, whereas in the EU, they have increased by only 16 percent (the comparison excludes the temporary dip related to the pandemic in 2020). The increase in the number of vehicles—mostly passenger cars—and kilometers driven over time, reflects rising living standards and income growth over the past three decades. Although the emissions of new passenger cars have declined in recent years, the emission efficiency of new passenger cars in CO2/km has been below the EU average, mainly reflecting the low share of zero- and low-emission vehicles. A well calibrated registration and road tax would promote greater vehicle efficiency and reduce emissions generated by the transport sector.

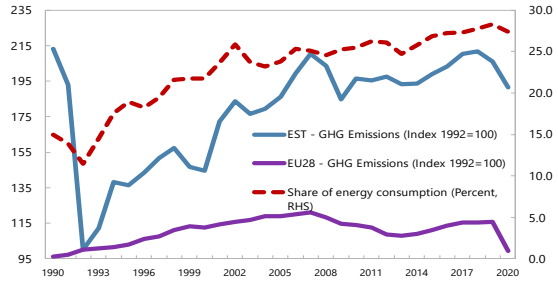
Annex III. Text Figure 4. Sectoral Policies



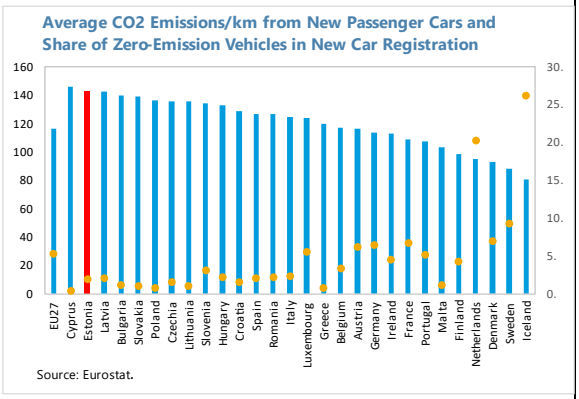
Sources: BPIE, Central Statistics Office (Ireland), EEA, Eurostat (EU Building Stock Observatory), and staff calculations. *Note:* 1/ countries with no central database (e.g., Poland) or with limited information (Czech Republic, Romania, Slovak Republic) are not



Sources: European Environment Agency, Eurostat, UNFCCC, and staff calculations.



Source: OECD GHG Emissions database; and IEA World energy balance database.



Source: Eurostat.

E. Concluding Remarks

14. Transition risk and climate change mitigation are core focus areas for Estonia. Raising energy efficiency and improving the energy mix will require: i) introducing a transport tax in line with

the rest of the EU, to incentivize cleaner means of transport; ii) reducing the country's high fossil fuel subsidies by fostering energy efficiency and phasing out oil-shale; and iii) extending the coverage of the EU ETS and raising the carbon price. These policies could be complemented by actions to accelerate investment in renewables in line with best comparators, to progress on the way to Paris and enhance energy security, as well as policies to boost energy efficiency in the building and transport sectors.

Annex IV. MONEYVAL Assessment on Estonia

1. The Moneyval report on Estonia was published in January 2023. The report provided a comprehensive assessment of the country's level of compliance with the recommendations of the Financial Action Task Force (FATF). The report highlighted both positive aspects and areas where Estonia could improve its AML/CFT system. Key positive aspects noted in the report included Estonia's substantial level of effectiveness in international cooperation, use of financial intelligence, and implementation of the United Nations targeted financial sanctions on proliferation financing.

2. The report called for enhanced awareness, investigation, and sanctions. The report identified several areas where Estonia could improve its AML/CFT system including enhancing the understanding of ML/TF risks, the effectiveness of ML and TF investigations and prosecutions, the confiscation of proceeds of crime, the implementation of targeted financial sanctions on TF, the application of AML/CFT preventative measures by the private sector, the supervision and transparency of beneficial ownership of legal persons and legal arrangements.

3. The report concluded that focused supervisory actions led to significant improvement in the implementation of preventative measures over the assessment period. While the understanding of ML/TF risks was good in the banking sector, virtual assets service providers (VASPs) and company service providers (CSPs) demonstrated a superficial understanding of ML risks to which their individual businesses were exposed. Understanding of terrorism financing was generally lower across all sectors. Banks and VASPs have a generally good understanding of their AML/CFT obligations, while CSPs only have to a lesser degree. Hence, further continued efforts of the supervisory authorities in strengthening the implementation of preventative measures by the private sector are still expected.

4. Further efforts are needed to improve the availability of beneficial ownership information. Beneficial ownership (BO) information on legal persons is available to competent authorities, but the measures in place do not fully enable availability of adequate, accurate, and current BO information. The large share of Estonian companies with e-residents as their basic or beneficial owners, coupled with significant involvement of licensed and non-licensed CSPs in the company registration processes, and with poorly designed and vaguely understood customer due diligence measures implemented by them, are factors with adverse impact on the quality of BO information. Applicable sanctions are not effective.

5. Based on the assessment results, Estonia was placed under an enhanced follow-up process. The enhanced follow-up process requires reporting back on progress to Moneyval more frequently than in standard follow-ups. Regular follow-ups—Moneyval' s default mechanism to ensure a continuous monitoring—entail reporting back 2-and-a-half years after the adoption of the country's mutual evaluation report (MER) and subsequently at 3-year intervals.

Annex V. Risk Assessment Matrix

Conjunctural risks [1]			
Risks	**Likelihood**	**Impact on the Estonia**	**Recommended Policy Response**
Intensification of regional conflict(s). Escalation of Russia's war in Ukraine or other regional conflicts and resulting economic sanctions disrupt trade (e.g., energy, food, tourism, and/or critical supply chain components), remittances, refugee flows, FDI and financial flows, and payment systems.	**High**	**High** Geopolitical and diplomatic tensions from the war in Ukraine remain high, though Estonia has diversified its imports and gas exposures away from Russia. The likelihood of confidence shocks is high.	Continue to diversify trade, imports, and sources of energy supplies. Enhance investments in energy efficiency and increase reliance on renewable sources of energy. Step up AML/CFT risk monitoring.
Social discontent. Supply shocks, high inflation, real wage drops, and spillovers from crises in other countries worsen inequality, trigger social unrest, and give rise to financing pressures and damaging populist policies with possible spillovers to other EMDEs. This exacerbates imbalances, slows growth, and triggers market repricing.	**High**	**Low** The risks from high core and food price inflation are partially mitigated by easing energy prices. Strong wage growth and vigorous policy response through cost-of-living measures limit risks of social unrest.	Keep participating in European policy responses. Diversify energy and food supply. Incentivize domestic production of food and renewable energy. Target support measures to vulnerable members of the population. Maintain sound fiscal position with well-anchored public debt and ample fiscal liquidity and reserves.
Abrupt global slowdown or recession. Global and idiosyncratic risk factors combine to cause a synchronized sharp growth slowdown, with outright recessions in some countries, spillovers through trade and financial channels, and downward pressures on some commodity prices.	**Medium**	**Medium** As a small open economy, Estonia would be affected through its trading partners. However, limited complex production processes and industrial clusters reduce the likelihood of large supply chain disruptions.	Participate in global and European policy initiatives. Manage risk through supply diversification, contingency plans, and investment in energy efficiency.
Commodity price volatility. A succession of supply disruptions (e.g., due to conflicts and export restrictions) and demand fluctuations (e.g., reflecting China reopening) causes recurrent commodity price volatility, external and fiscal pressures, and social and economic instability.	**Medium**	**High** High energy price inflation and supply disruptions have fueled food price volatility in the region.	Keep participating in European policy responses. Diversify energy and food supply. Incentivize domestic production of food and renewable energy.
Monetary policy miscalibration. Amid high economic uncertainty and volatility, major central banks slow monetary policy tightening or pivot to loosen monetary policy stance prematurely, de-anchoring inflation expectations and triggering a wage-price spiral in tight labor markets.	**Medium**	**Medium** A looser ECB monetary policy would exacerbate inflationary pressures on Estonia, and de-anchor inflation expectations. This could further increase scarring including related to competitiveness erosion and increase the risk-of-poverty.	Adjust fiscal spending to be better targeted and efficient, while allowing automatic stabilizers. Contain public sector wage growth. Reduce vulnerabilities of households and corporates including using macroprudential policy tools.
Fiscal deterioration. Loose fiscal policy might become entrenched, above and beyond what is already assumed under the baseline.	**Medium**	**Medium** While supporting near-term growth, an excessively loose fiscal policy would undermine Estonia's disinflationary efforts and further weigh on its competitiveness prospects. Tighter labor market conditions, rapid wage growth triggered by generous public sector pay rises, and waning	Adopt a much less stimulative fiscal policy. Contain public wage growth, while boosting productivity-enhancing investments.

		productivity may further exacerbate these dynamics.	
Budget under execution. Allocations to line ministries may remain under-utilized as it was the case in 2022.	**Medium**	**Medium** Budget under-execution would lead to unintentionally tighter fiscal policy, softer near-term growth, and possibly lower domestically generated inflation.	Ensure timely and efficient execution of critical social and productivity-enhancing expenditures. Improve the absorption of the EU Funds.
Systemic financial instability. Sharp swings in real interest rates, risk premia, and assets repricing amid economic slowdowns and policy shifts trigger insolvencies in countries with weak banks or non-bank financial institutions, causing markets dislocations and adverse cross-border spillovers.	**Medium**	**Medium** Rising rates could affect the ability of households and corporate to service their debt.	Maintain sufficient capital buffers especially for small banks. Mitigate the risks associated with cross-border lending including to Latvia and Lithuania.
Structural risks			
Source of Risks, Likelihood, and Time Horizon		**Impact on the Estonia**	**Recommended Policy Response**
Deepening geo-economic fragmentation. Broader and deeper conflict(s) and weakened international cooperation could lead to a more rapid reconfiguration of trade and FDI, supply disruptions, technological and payments systems fragmentation, rising input costs, financial instability, a fracturing of international monetary and financial systems, and lower potential growth.	**High**	**High** Geopolitical tensions with Russia are high due to the strong support of Ukraine. Falling demand in Estonia's trading partners could negatively affect trade and further value chains disruption could lower potential growth.	Ensure that support and spending in security-related areas are adequate. Continue implementing reforms of the AML/CFT system to protect the integrity of the financial sector, including the recommendations of the Moneyval assessment and the IMF TA report on financial flows analysis.
Cyberthreats. Cyberattacks on critical domestic and/or international physical or digital infrastructure (including digital currency and crypto ecosystems) trigger financial and economic instability.	**Medium**	**High** Geopolitical tensions with Russia and frequent cyber-attacks point to elevated risks going forward.	Continue to enhance preparedness for cyberattacks through extensive risk monitoring in cooperation with private and public sector stakeholders.
Extreme climate events. Extreme climate events cause more severe than expected damage to infrastructure (especially in smaller vulnerable economies) and loss of human lives and livelihoods, amplifying supply chain disruptions and inflationary pressures, causing water and food shortages, and reducing growth.	**Medium**	**Medium** The Estonia's strategy on climate adaptation identifies industry and energy as the main sectors subject to climate change risks and put emphasis on connectivity across sectors.	Accelerate the implementation the National Action Plan on Adaptation which established a robust scheme to build and enhance energy sector's climate resilience.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path. 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. The conjunctural shocks and scenarios highlight risks that may materialize over a shorter horizon (between 12 to 18 months) given the current baseline. Structural risks are those that are likely to remain salient over a longer horizon.

Annex VI. External Sector Assessment[1]

Overall Assessment: *Estonia's external position is in line with that implied by medium-term fundamentals and desirable policies, despite a moderate widening of the current account deficit in 2022, reflecting the impact of a higher energy bill, weakening growth in export markets and real exchange rate appreciation especially on the goods trade balance only partly offset by an improvement in the services trade balance. After returning to a small surplus in 2023, the current account balance is expected to deteriorate again over the medium term but remain close to the norm. This assessment is based on the EBA-lite current account (CA) methodology, the preferred approach for the overall assessment. However, the real effective exchange rate (REER) model points to an overvaluation of around 23 percent, suggesting rising risks to external competitiveness.*

Potential Policy Responses: *Persistently high inflation and risk of further erosion in competitiveness call for less accommodative fiscal policy going forward. Macroprudential policies should focus on mitigating financial sector risks, while being ready to respond to credit supply disruptions. Structural policies to increase productivity and the resilience of the economy to future shocks, including through investment in innovation and human capital, would help promote competitiveness. Efforts to foster green and digital transformation should help address other important challenges.*

Foreign Assets and Liabilities: Position and Trajectory

Background. Estonia's net international investment position (NIIP) weakened from -13 percent of GDP in 2021 to -20.5 percent in 2022. The negative NIIP largely reflects net inflows of FDI and other investments. Gross external debt as a share of GDP declined slightly from 84.7 percent of GDP in 2021 to 84.4 percent in 2022. Government liquidity reserves have declined but remain relatively large (at about 8.3 percent of GDP at end-2022).

Assessment. After a slight improvement, the NIIP is expected to deteriorate in the medium term, consistently with the projected current account path. Nonetheless, Estonia's NIIP compares favorably with many of its European peers, and a gradual deterioration would not imply risks to external sustainability.

2022 (% GDP)	NIIP: -20.5	Gross Assets: 167.6	Debt Assets: 41.7	Gross Liab.: 188.1	Debt Liab.: 13.5

Current Account

Background. Estonia's current account (CA) position was in deficit (widening from 1.8 percent in 2021 to 2.2 percent of GDP in 2022) for a third consecutive year (after several years of surpluses), as a deterioration in the goods trade deficit more than offset an improvement in the services trade surplus. In 2022, both exports and imports of goods and services grew strongly by 26 percent, although growth in services exports slowed down to 32 percent from 42 percent in 2021. The goods trade deficit widened from 4.1 percent of GDP in 2021 to 7.4 percent in 2022. The services trade surplus

Estonia: EBA-lite Model Results, 2022

	CA model 1/	REER model 1/
	(in percent of GDP)	
CA-Actual	**-2.2**	
Cyclical contributions (from model) (-)	0.2	
COVID-19 adjustors (-) 2/	-0.1	
Natural disasters and conflicts (-)	-0.5	
Adjusted CA	**-1.8**	
CA Norm (from model) 3/	**-1.8**	
Adjusted CA Norm	**-1.8**	
CA Gap	**0.0**	**-12.4**
o/w Relative policy gap	4.1	
Elasticity	-0.5	
REER Gap (in percent)	**0.0**	**23.0**

1/ Based on the EBA-lite 3.0 methodology
2/ Additional cyclical adjustment to account for the temporary impact of the tourism (0.1 percent of GDP).
3/ Cyclically adjusted, including multilateral consistency adjustments.

[1] Prepared by Bingjie Hu.

improved from 3.8 to 6.8 percent of GDP but remained lower than the pre-pandemic average of 7.5 percent of GDP during 2016–19.

Assessment. The CA position in 2022 is in line with that implied by fundamentals and desirable policies. The EBA-lite CA methodology suggests that Estonia has a multilaterally consistent CA deficit norm of 1.8 percent of GDP (text table). The estimated policy gap is 4.1 percent of GDP, partly reflecting the public health expenditure as share of GDP falling short of its desirable level. Going forward, the current account dynamics would be shaped by multiple forces. On the one hand, services exports are expected to recover further in the medium term. On the other hand, the combination of looser-than-warranted monetary policy and a slow pace of fiscal consolidation is expected to leave inflation well above euro area average, leading to a competitiveness gap over time. Staff expect the external position to remain weaker than pre-pandemic average, absent more decisive fiscal consolidation and proactive structural reforms.

Real Exchange Rate

Background. The real effective exchange rate appreciated by 6.3 percent in 2022, on higher inflation in Estonia than in its trading partners. In contrast, the nominal effective exchange rate depreciated by 2.3 percent, reflecting the weakening of the euro against the currencies of major trading partners.

Assessment. The EBA-lite CA method (the preferred model for the overall assessment, given its relatively robust results for Estonia) points to a fairly valued real effective exchange rate. In contrast, the REER method suggests a real exchange rate overvaluation of around 23 percent. Unit labor costs, productivity, and nonprice competitiveness warrant close monitoring.

Capital and Financial Accounts: Flows and Policy Measures

Background. The capital account recorded a surplus of 0.5 percent of GDP in 2002, down sharply from 6.4 percent of GDP in 2021 (due to a large one-off intra-group transfer of property rights in 2021). The financial account (BPM6 methodology) registered an inflow of 3 percent of GDP, mainly consisting of portfolio investment, loans, and other investment inflows. There was a significant increase in currency and deposits liabilities of about 4 percent of GDP in 2022.

Assessment. Despite rising uncertainty over financial conditions in international capital markets, risks of an abrupt change in capital flows are assessed to be contained.

FX Intervention and Reserves Level

Background. The Euro has the status of a global reserve currency. Thus, reserves held by euro area economies are typically low by standard metrics (6 percent of GDP for Estonia as of end-2022).

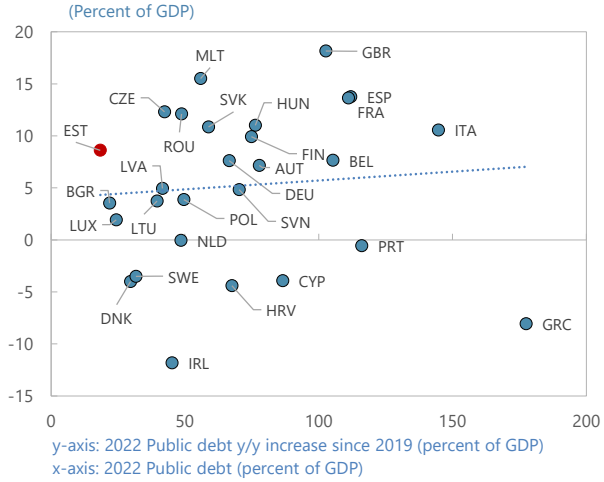
Assessment. The reserve level is assessed to be adequate.

Annex VII. Debt Sustainability Analysis[1]

Despite a lower-than-expected budget deficit—on the back of revenue windfalls from high inflation and low spending execution in 2022—sizable borrowing has led to an increase in debt in 2022. The planned large fiscal expansion in 2023—to address the cost-of-living crisis and rising security challenges —is expected to widen the deficit and significantly increase debt. Given the lower-than-expected budget deficit, the unused borrowings in 2022 have boosted liquidity reserves and led to a small net debt (4.3 percent of GDP in 2022). Over the medium term, debt will continue to rise albeit at a slower pace in the outer years, supported by a gradual fiscal consolidation. Financial risks are expected to remain negligible, firmly underpinned by strong fiscal institutions and sound financial management.

1. Despite a low deficit, Estonia's debt stock increased in 2022 on the back of increased borrowing. The fiscal deficit narrowed to 0.9 percent in 2022 from 2.4 percent in 2021, but new borrowings amounted to EUR 1.67 billion or 4.6 percent of GDP.[2] Overall, in 2022, the general government debt further increased by 0.8 percentage point of GDP to 18.4 percent of GDP, as the nominal debt's contribution (+3.6 percentage points) was partially offset by the contribution of nominal GDP growth (-2.8 percentage points). Estonia's public debt remains the lowest in the EU, and mostly consists of longer-term instruments, though the average maturity is comparatively lower in Europe.[3] On the asset side, the government's fiscal reserves remained broadly stable since 2021, with net government debt still low (4.3 percent of GDP in 2022). As of 2022/Q4, financial reserves stood at EUR 3.0 billion (8.3 percent of GDP), of which a larger-than-projected liquidity reserve balance of 7.3 percent of GDP reflected a low deficit and unused new borrowing, including the proceeds of a 10-year (EUR 1 billion) bond issued in October 2022 (at 4 percent per annum yield). As of end-March 2023, financial reserves declined to EUR 1.8 billion (4.7 percent of GDP), of which liquidity reserves stood at EUR 1.34 billion (3.5 percent of GDP).

Public Debt across Europe, 2020-22
(Percent of GDP)



y-axis: 2022 Public debt y/y increase since 2019 (percent of GDP)
x-axis: 2022 Public debt (percent of GDP)

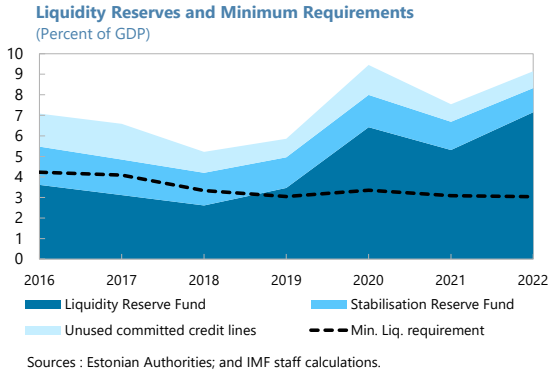
Sources: WEO Database; and IMF staff calculations.

[1] Prepared by Neree Noumon

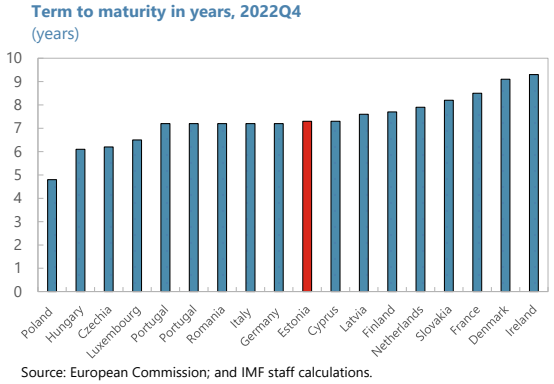
[2] 2022 new borrowings to cover the general state budget deficit and supplement the liquidity reserve amounted to EUR 1.67 billion (4.6 percent of GDP) and consisted of (i) EUR 500 million of gross issuance of T-bills (ii) EUR 170 million of IFI loan; and (iii) EUR 1 billion of Eurobond issuance. Estonia's outstanding debt obligations also include two EIB loans, one loan from Nordic Investment Bank, a SURE facility loan and a 2020 Eurobond

[3] Estonia is assessed to be a low scrutiny case under the IMF's DSA framework.

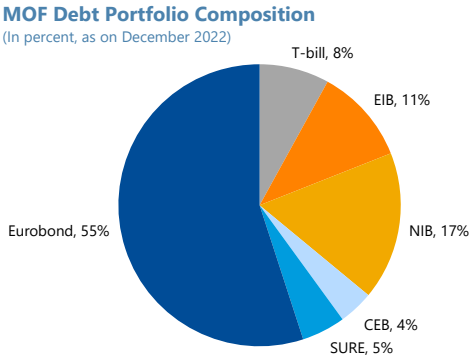
Annex VII. Text Figure 1. Estonia: Liquidity Reserves and Maturity of Outstanding Debt



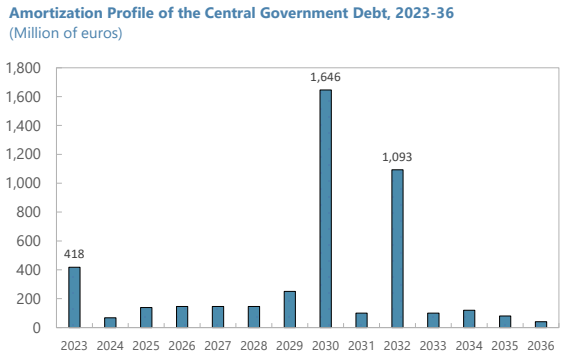
Sources : Estonian Authorities; and IMF staff calculations.



Source: European Commission; and IMF staff calculations.



Source: Ministry of Finance.



Sources: Estonian Authorities.

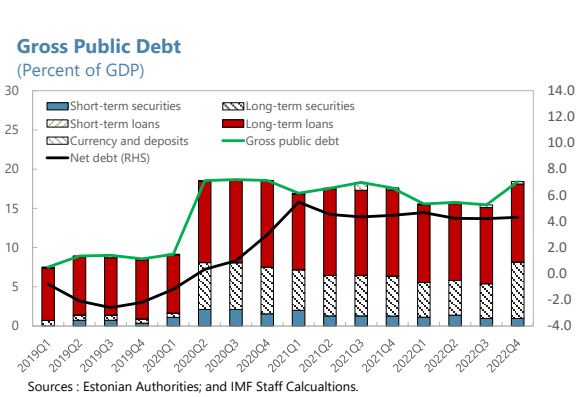
2. The 2023 debt is expected to increase as the budget deficit expands to accommodate security and cost-of-living challenges. The 2023 budget (which targets 3.8 percent of GDP) focuses on addressing the cost-of-living crisis and rising security challenges.[4] Staff estimates that the 2023 deficit will widen to 4.5 percent of GDP and would require a higher level of borrowing than originally planned. Debt is forecasted to increase to 22.0 percent of GDP in 2023. Meanwhile, higher interest rate partly reflecting the ECB's rate hikes, are projected to push up the government interest payments from 0.1 percent of GDP in 2022 to 0.3 percent of GDP in 2023 and 0.5 percent of GDP in 2025.

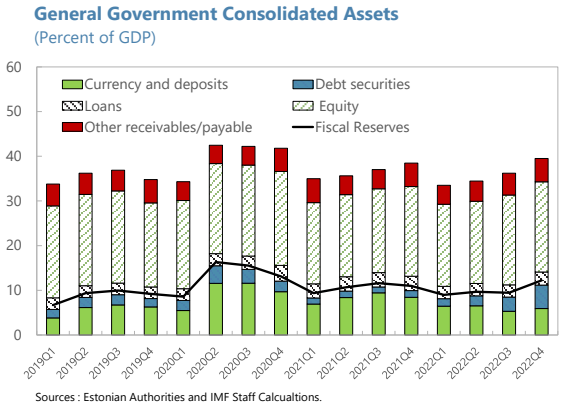
3. Debt is expected to continue to rise reflecting substantial medium-term spending pressures and limited consolidation. The fiscal deficit is expected to slowly narrow to 2.5 percent of GDP in 2028, reflecting cost-of-living, security, and energy security spending pressures. Gross financing needs are expected to increase sharply in 2023 (to 4.6 percent of GDP)—reflecting the widening deficit and amortization costs—and only gradually decrease over time to about 4.0 percent of GDP in 2028. Accordingly, Estonia's debt-to-GDP ratio is expected to continue to increase from

[4] The MoF's borrowing plan for 2023 include: (i) issuing T-bills for short-term funding gaps; and (ii) an additional Eurobond issuance and loans from European IFIs to cover funding needs.

22.0 percent of GDP in 2023 to 30.6 percent of GDP in 2028, as the debt stabilizing budget primary deficit will only be reached over the longer horizon.

Annex VII. Text Figure 2. Estonia: Gross Public Debt -2019Q1-2022Q4





4. Financial risks remain low, underpinned by fiscal discipline and strong institutions. The Treasury's asset-liability management (ALM) principles seek to match the duration of financial assets and liabilities, minimize liquidity and refinancing risks, as well as the potential impact of interest rate changes on the government's balance sheet.[5] Credit risk is mitigated by the requirement to invest financial reserves only in highly rated assets. The interest rate risk has increased but is mitigated by the sound interest rate risk management and further contained by the relatively high debt portfolio's average time to refixing (5.4 years in 2022). The weighted average interest rate of the debt portfolio has remained relatively low at 2.2 percent per annum as of end-March 2023. Currency risks related to the MoF's debt obligations are equally limited since all obligations are denominated in euros[6]. Refinancing risks are contained by the financial risk management rules, with average term to maturity stood high at 7.3 years at end-2022 though relatively lower than the EU average.[7]

[5] The ALM principles were modified in June 2020 to de-link interest rate risk management for financial assets and liabilities, and anchor risk management principles for liabilities to the average interest rate re-fixing period.

[6] The State Treasury can do on-lending and borrow in foreign currency if the total foreign currency exposure is below 1 percent of the Liquidity Reserve.

[7] The financial risk management rules require (i) outstanding short-term debt to be lower than 25 percent of annual budgeted expenditures; and (ii) the repayments of long-term debt obligations to be spread out to lower annual repayments below 5 percent of forecasted GDP each year.

Annex VII. Figure 1. Estonia: Risk of Sovereign Stress

Horizon	Mechanical signal	Final assessment	Comments
Overall	…	Moderate	The overall risk of sovereign stres is moderate, a relatively low level of vulnerability in the near-term on the basis of a projected fiscal consolidation path, and moderate levels of vulnerability in the medium-, and long-term horizons.
Near-term 1/			
Medium-term	Low	Low	Medium-term risks are assessed as moderate against a mechanical low signal. This also reflect the permanent cost-of-living and defense measures.
Fanchart	Moderate	…	
GFN	Low	…	
Stress test	…	…	
Long-term	…	Moderate	Long-term risks are moderate with the necessity to be cautious of long-term aging-related expenditures on health and pension.
Sustainability assessment 2/	…	…	Not required for surveillance countries
Debt stabilization in the baseline			No

DSA Summary Assessment

Commentary: Estonia is at a moderate overall risk of sovereign stress. The medium-term liquidity risks as analyzed by the GFN Financeability Module are moderate. Over the longer run, Estonia should continue with reforms and investments to enhance productivity growth and safeguard competitivenss.

Source: Fund staff.

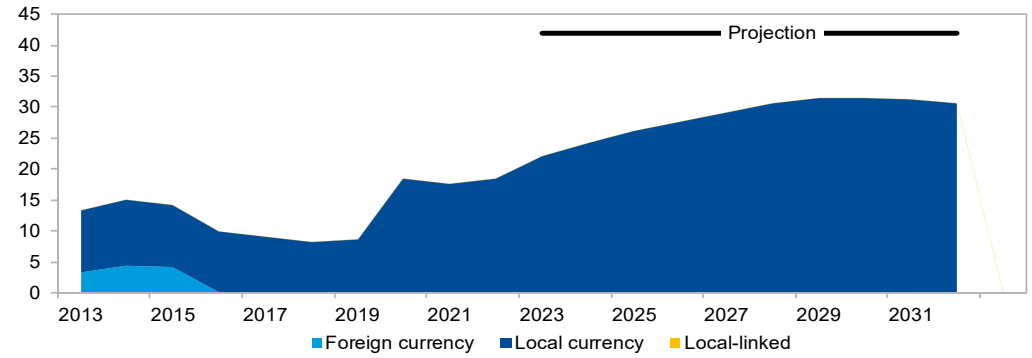
Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.

1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.

2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt ("with high probability" or "but not with high probability") is deleted before publication.

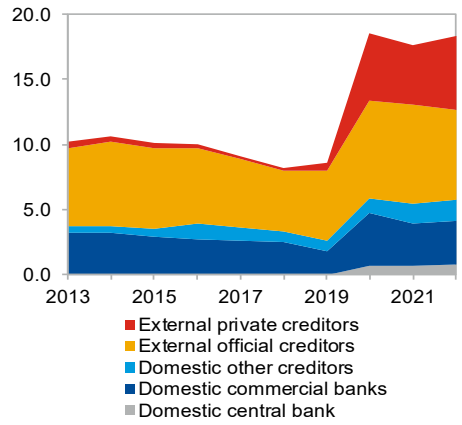
Annex VII. Figure 2. Estonia: Public Debt Structure Indicators

Debt by Currency (percent of GDP)



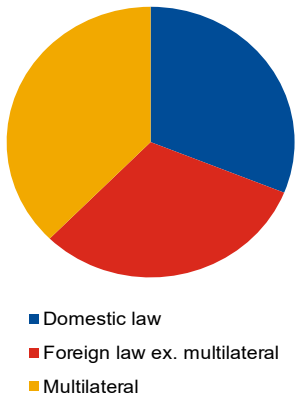
Note: The perimeter shown is general government.

Public Debt by Holder (percent of GDP)



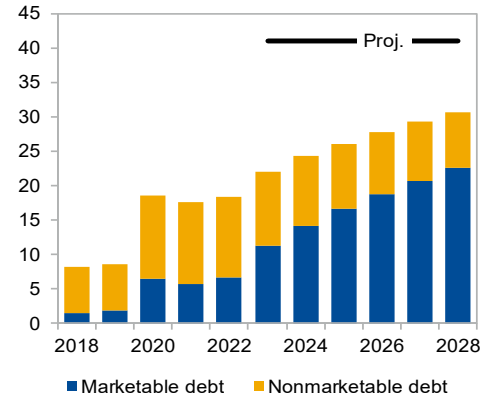
Note: The perimeter shown is general government.

Public Debt by Governing Law, 2022 (percent)

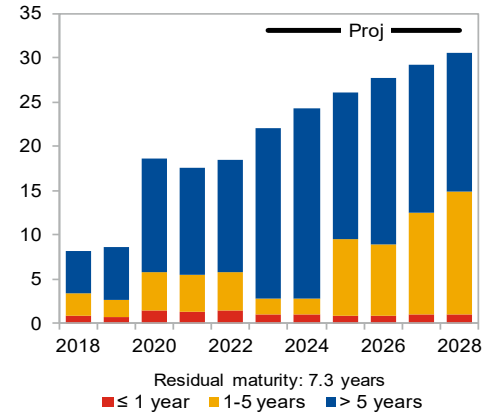


Note: The perimeter shown is general government.

Debt by Instruments (percent of GDP)



Public Debt by Maturity (percent of GDP)



Note: The perimeter shown is general government.

Commentary: General government debt—mostly euro-denominated—increased by about 10.0 percentages points since 2019, with most of the debt held by external creditors (eurobond issuances and International financial institutions). The average maturity of debt stood at 7.3 years in 2022 and expected to decline over time.

Annex VII. Figure 3. Estonia: Debt Coverage and Disclosures

							Comments
1. Debt coverage in the DSA: 1/			CG	GG	NFPS	CPS	Other	
1a. If central government, are non-central government entities insignificant?							n.a.	
2. Subsectors included in the chosen coverage in (1) above:								
			Subsectors captured in the baseline				Inclusion	
CPS	NFPS	GG: expected	CG	1	Budgetary central government		Yes	
				2	Extra budgetary funds (EBFs)		No	Not applicable
				3	Social security funds (SSFs)		Yes	
				4	State governments		Yes	
				5	Local governments		Yes	
				6	Public nonfinancial corporations		Yes	
				7	Central bank		Yes	
				8	Other public financial corporations		Yes	
3. Instrument coverage:							Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/	
4. Accounting principles:							Basis of recording		Valuation of debt stock			
							Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/	
5. Debt consolidation across sectors:								Consolidated	Non-consolidated			

Color code: chosen coverage | Missing from recommended coverage | Not applicable

Reporting on intra-government debt holdings

					Holder / Issuer	Budget. central govt	Extra-budget. funds	Social security funds	State govt.	Local govt.	Nonfin. pub. corp.	Central bank	Oth. pub. fin corp	Total
CPS	NFPS	GG: expected	CG	1	Budget. central govt									0.0
				2	Extra-budget. funds									0.0
				3	Social security funds									0.0
				4	State govt.									0.0
				5	Local govt.									0.0
				6	Nonfin pub. corp.									0.0
				7	Central bank									0.0
				8	Oth. pub. fin. corp									0.0
					Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.
2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.
3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.
4/ Includes accrual recording, commitment basis, due for payment, etc.
5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).
6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.
7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.

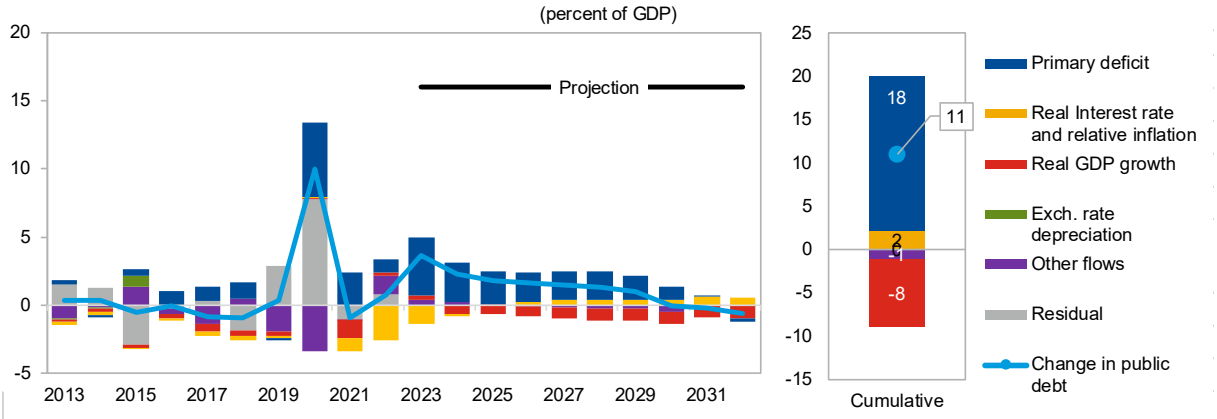
Commentary: The fraction of central government's debt held by central bank and social security funds is limited.

Annex VII. Figure 4. Estonia: Baseline Scenario

(Percent of GDP unless indicated otherwise)

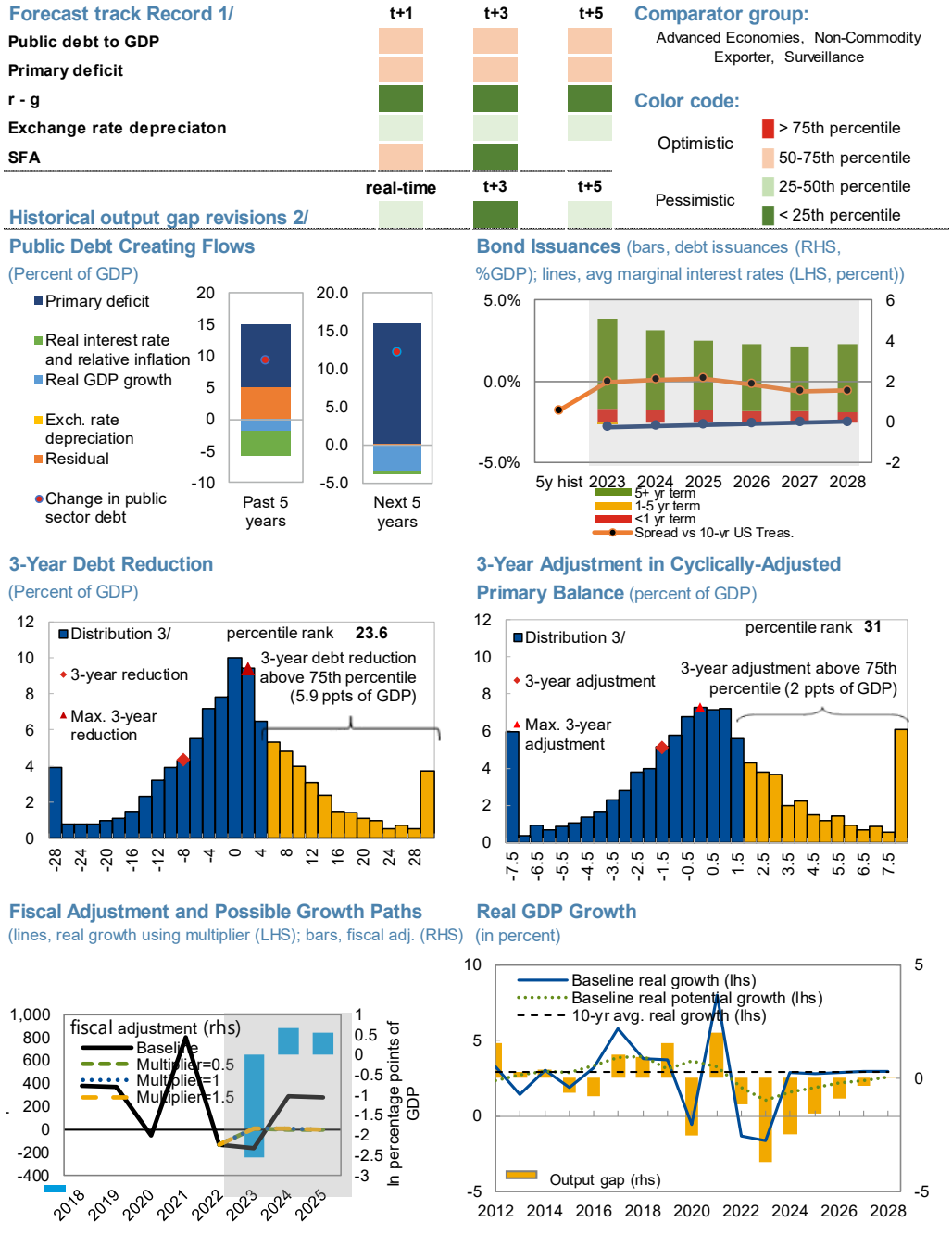
	Actual	Medium-term projection						Extended projection				
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Public debt	18.4	22.0	24.3	26.1	27.7	29.2	30.6	31.6	31.5	31.3	30.7	29.4
Change in public debt	0.8	3.6	2.3	1.8	1.6	1.5	1.4	1.0	-0.1	-0.2	-0.6	-1.3
Contribution of identified flows	0.0	3.6	2.3	1.8	1.6	1.5	1.4	1.0	-0.1	-0.2	-0.6	-1.3
Primary deficit	0.9	4.2	2.9	2.4	2.2	2.1	2.1	1.8	0.9	0.1	-0.3	-0.5
Noninterest revenues	38.5	38.5	39.7	40.5	40.7	40.8	40.8	39.1	41.0	41.2	40.7	40.4
Noninterest expenditures	39.4	42.8	42.6	42.9	42.9	42.9	42.9	40.8	41.9	41.4	40.4	39.9
Automatic debt dynamics	-2.3	-1.0	-0.8	-0.6	-0.5	-0.4	-0.5	-0.5	-0.5	-0.3	-0.3	-0.2
Real interest rate and relative inflation	-2.5	-1.3	-0.2	0.1	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6
Real interest rate	-2.5	-1.3	-0.2	0.1	0.3	0.4	0.4	0.4	0.4	0.6	0.6	0.6
Relative inflation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real growth rate	0.2	0.3	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9
Real exchange rate	0.0	…	…	…	…	…	…	…	…	…	…	…
Other identified flows	1.4	0.4	0.2	0.1	-0.1	-0.2	-0.3	-0.3	-0.5	0.0	0.0	-0.6
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other transactions	1.4	0.4	0.2	0.1	-0.1	-0.2	-0.3	-0.3	-0.5	0.0	0.0	-0.6
Contribution of residual	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs	2.0	4.6	4.3	3.9	3.9	3.9	4.0	3.7	7.9	1.9	4.7	3.9
of which: debt service	1.2	0.4	1.4	1.6	1.8	1.8	2.0	2.0	7.1	1.8	5.0	4.4
Local currency	1.2	0.4	1.4	1.6	1.8	1.8	2.0	2.0	7.1	1.8	5.0	4.4
Foreign currency	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Memo:												
Real GDP growth (percent)	-1.3	-1.6	2.9	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.0
Inflation (GDP deflator; percent)	16.6	9.2	3.5	2.9	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Nominal GDP growth (percent)	15.1	7.5	6.5	5.8	5.6	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Effective interest rate (percent)	0.0	1.4	2.5	3.1	3.7	3.7	3.7	3.7	3.7	4.2	4.2	4.5

Contributions to Change in Public Debt



Staff commentary: Public debt is expected to peak in 2029, before embarking on a downward trajectory, mainly driven by GDP growth and improvement in primary balance.

Annex VII. Figure 5. Estonia: Realism of Baseline Assumptions



Commentary: The realism analysis does not point to major concerns: past forecast errors do not reveal any systematic biases and the projected fiscal adjustment and debt reduction are well within norms. Real GDP growth and the primary decifit are expected to be the main drivers of debt reduction.

Source: IMF Staff.
1/ Projections made in the October and April WEO vintage.
2/ Data covering annual observations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.
3/ Starting point reflects the team's assessment of the initial overvaluation from EBA (or EBA-Lite).
4/ The Laubach (2009) rule is a linear rule assuming bond spreads increase by about 4 bps in response to a 1 ppt increase in the projected debt-to-GDP ratio.
5/ Calculated as the percentile rank of the country's output gap revisions (defined as the difference between real time/period ahead estimates and final estimates in the latest October WEO) in the total distribution of revisions across the data sample.

Annex VII. Figure 6. Estonia: Medium-Term Risk Analysis

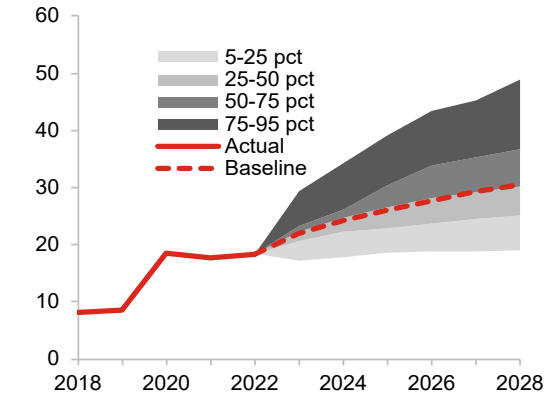
Debt Fanchart and GFN Financeability Indexes

(percent of GDP unless otherwise indicated)

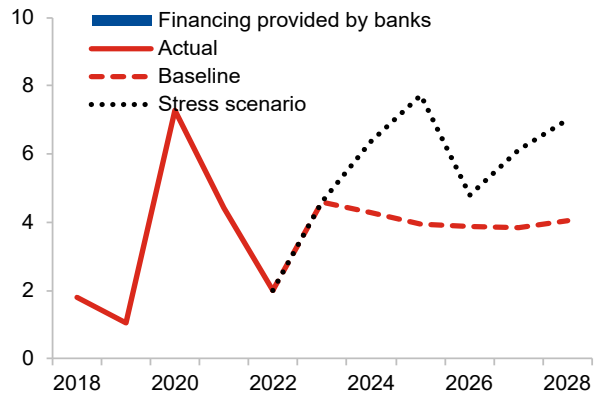
Module	Indicator	Value	Risk index	Risk signal	Adv. Econ., Non-Com. Exp, Program (0 25 50 75 100)
Debt fanchart module	Fanchart width	30.0	0.4	…	
	Probability of debt not stabilizing (pct)	98.5	0.8	…	
	Terminal debt level x institutions index	6.2	0.1	…	
	Debt fanchart index	**…**	**1.4**	**Moderate**	
GFN finance-ability module	Average GFN in baseline	4.1	1.4	…	
	Bank claims on government (pct bank assets)	2.6	0.8	…	
	Chg. in claims on govt. in stress (pct bank assets)	12.5	4.2	…	
	GFN financeability index	**…**	**6.4**	**Low**	

Legend: Interquartile range; Estonia

Final Fanchart (pct of GDP)



Gross Financing Needs (pct of GDP)

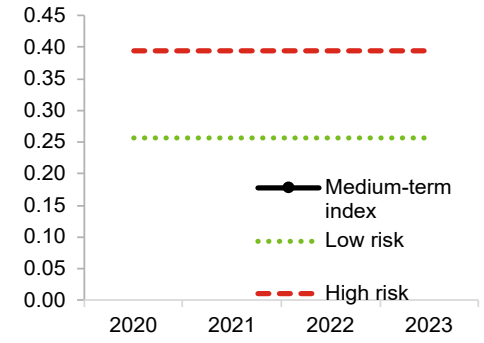


Triggered stress tests (stress tests not activated in gray)

Banking crisis | Commodity prices | Exchange rate | Contingent liab. | Natural disaster

Medium-Term Index

(index number)



Medium-Term Risk Analysis

	Low risk threshold	High risk threhsold	Weight in MTI	Normalized level
Debt fanchart index	1.1	2.1	0.5	0.3
GFN finaceability index	7.6	17.9	0.5	0.1
Medium-term index (MTI)	0.3	0.4	…	0.2, Low

Prob. of missed crisis, 2023-2028 (if stress not predicted): 9.1 pct.

Prob. of false alarm, 2023-2028 (if stress predicted): 48.9 pct.

Commentary: Of the two medium-term tools, the Debt Fanchart Module is pointing to moderate level of risk, while the GFN Financeability Module suggests low level of risk.

Annex VIII. Authorities' Response to Past IMF Policy Advice

	Key Recommendations of Past AIV	Recent actions taken
Fiscal	Efficiently use the fiscal space to meet essential spending needs created by the war and address inclusive growth challenges, while remaining vigilant to the risks of inflationary pressures. Energy price and social support measures should be well-targeted to low-income households without stifling price incentives. Carefully designed contingency plans are essential.	The fiscal stance was contractionary in 2022. Temporary energy subsides to support households' energy bill have expired in March 2023. Measures to address the cost-of-living challenges targeted low-income households and pensioners, except for family benefits which appear to have been less targeted.
	Further enhancements to fiscal transparency would raise the efficiency of Recovery and Resiliency Fund-supported public investment.	Fiscal transparency was enhanced, including through the publication of the first fiscal risk report.
	Plans to roll back fiscal accommodation over the medium term should internalize evolving public spending priorities and be supplemented with mechanisms to increase fiscal policy countercyclicality.	Plan to roll back fiscal accommodation are constrained by defense and cost of living measures, but are supported by newly adopted revenue measures.
Macro-financial policies	The planned tightening of macroprudential policies is appropriate, but careful monitoring of housing market developments is needed. Enhanced supervisory vigilance is required given the new risks caused by the war. Vulnerability assessments, monitoring, and contingency plans should prioritize oversight of war-related exposures and cybersecurity.	The BoE has further increased the CCyB rate by 0.5 percentage points effective December 2023. It has assessed borrower-based requirements (LTV, DTI, and DSTI limits) as still appropriate, and is closely monitoring financial sector's developments.
	Continue to strengthen AML-CFT framework. Enhance the capacity and sanctioning powers of AML/CFT supervisors in line with the ML/TF risks.	The financial intelligence unit (FIU) staffing and resource were substantially increased. The Moneyval assessment has reiterated the needs to enhance sanctioning powers and to clarify division of responsibility.
Structural policies	Bolster inclusive growth, by enhancing active labor market policies, effectively integrating refugees from the war in Ukraine, and further reducing old-age poverty, social inequality, and gender gaps.	High inflation and energy costs have led to deterioration in social indicators in 2022. The integration of refugees is proceeding well, but the labor market has remained tight and skill shortage is still high.
	Enhance energy security by investing in and incentivizing alternative energy supply infrastructure.	Energy security was strengthened, including through the diversification of sources of gas supplies and investment in energy infrastructure.
	Operationalizing the achievement of climate targets, adopting a comprehensive and predictable carbon pricing strategy as the centerpiece to achieving emissions targets. Consolidating Estonia's digitalization advantages.	Green-house gas emissions increased in 2022, driven by higher reliance on oil-shale for energy production. The implementation of the RRF in 2022 was delayed. Further effort is needed to improve connectivity and SMEs' access to digital technologies.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

July 10, 2023

Prepared By

European Department

CONTENTS

FUND RELATIONS

(As of May 31, 2023)

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

General Resources Account

	SDR Million	Percent Quota
Quota	243.6	100.00
Fund holdings of currency	177.89	73.03
Reserve Tranche Position	65.73	26.98

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	295.44	100.00
Holdings	262.41	88.82

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 Rate Arrangements: The currency of Estonia is the euro. The exchange rate arrangement of the euro area is free floating. Estonia participates in a currency union (EMU) with 19 other members of the EU and has no separate legal tender. The euro, the common currency, floats freely and independently against other currencies.

Estonia has accepted the obligations under Article VIII, Sections 2(a), 3 and 4 of the IMF'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

Article IV Consultation: Estonia is on the 12-month consultation cycle. The last Article IV consultation was concluded on September 2, 2022. 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): The amendments to the AML/CFT regulation that came into force in March 2022 aim to strengthen the supervision of virtual asset service providers. The MONEYVAL report on Estonia, published in January 2023, comprehensively assessed Estonia's compliance with the Financial Action Task Force's recommendations. The report highlighted positive areas such as effective international cooperation, use of financial intelligence, and implementation of the United Nations' financial sanctions. Nonetheless, it also emphasized several areas in need of strengthening, such as a deeper understanding of money laundering (ML)/terrorist financing (TF) risks, improvements in ML and TF investigations and prosecutions, a more robust system for confiscating the proceeds of crime, a stronger approach to the private sector's implementation of AML/CFT preventative measures, and enhanced supervision and transparency of beneficial ownership. Based on these assessment results, Estonia was placed under an enhanced follow-up process which involves a more intensive process of follow-up, for countries with significant deficiencies.

The IMF Technical Assistance (TA) Report on Estonia outlined TA provided to the Nordic Baltic central banks during September 2021-November 2022 to strengthen AML/CFT systems, especially in light of international money laundering scandals. The TA project used data analysis to understand ML/TF threats, analyze high-risk financial flows, review the AML/CFT supervisory landscape, and assess potential implications for financial stability. Recommendations for Estonia included strengthening its ML/TF risk assessment, enhancing the sanctioning powers of supervisors, and clarifying the allocation of supervisory responsibilities, particularly regarding the supervision of virtual asset service providers.

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, 2000–23				
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
FAD	Fiscal Transparency Evaluation	Technical Assistance	December 2020	Ministry of Finance
LEG	Corporate Insolvency Law	Technical Assistance	May 2018 – April 2021	Ministry of Justice
STA	BOP and Prices statistics	Regional training	May 2017 – April 2023	Bank of Estonia
LEG	AML/CFT	Regional TA	September 2021- November 2022	Bank of Estonia

STATISTICAL ISSUES

(As of June 23, 2023)

I. Assessment of Data Adequacy for Surveillance
General: Estonia's data provision to the Fund is adequate for surveillance purposes.
National Accounts: The national accounts are compiled by Statistics Estonia 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 2015, using double deflation. The authorities updated the reference year for the chain linked series from 2010 to 2015 and revised the national accounts time series in August 2019. The revision took place in the context of recommendations made during the Eurostat's gross national income verification cycle and constituted reviewing previous calculations, introducing new source data, and improving the methodology. The methodology for benchmarking the quarterly estimates to the annual estimates was improved to address the problem whereby revisions in the annual estimates were reflected in the estimates for the first quarter (a step problem). Statistics Estonia has started to publish flash estimates of quarterly GDP since 2023.
Price Statistics: The consumer price index and components are published monthly, on the fifth working day after the reference period. The weights are updated annually based on household budget surveys. Owner-occupied housing is excluded. Industrial producer price, export price, and import price indexes are also compiled monthly and disseminated within one month after the end of reference period. A services producer price index is disseminated quarterly. All price indexes are compiled in accordance with international methodological standards.
Government Finance Statistics: 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 one month after the reference period. 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. Comprehensive annual data on central and general government operations (accrual basis) are compiled according to the *ESA2010* methodology, which are also reported for dissemination in the IMF's *GFS* database. These data include the general government's statement of operations and the financial 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*, and quarterly debt data are reported to the joint World Bank and IMF's Public Sector Debt Statistics database.
Monetary and Financial Statistics: The Bank of Estonia (BoE) compiles monetary and financial statistics consistent with the IMF's *Monetary and Financial Statistics Manual and Compilation Guide*. Aggregate financial data are compiled by the BoE and reported monthly. The majority of statistics are disseminated on the Bank of Estonia's webpage on the 20th 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. **Financial Soundness Indicators (FSIs):** The BoE compiles quarterly data for 16 of the 18 core FSIs and 6 of the 12 additional FSIs for deposit-takers for dissemination on the IMF's FSI website. Estonia reports data on several indicators in the **Financial Access Survey (FAS)**, including two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs).
External Sector Statistics: 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)*. Import/export data are available forty days after the end of the reference month. The Data Template on International Reserves and Foreign Currency Liquidity is disseminated monthly, within five banking days.

II. Data Standards and Quality	
Estonia adhered to the Special Data Dissemination Standard Plus (SDDS Plus) – the highest tier of the IMF's Data Standards Initiatives – on January 11, 2022, and posts its metadata on the Fund's Dissemination Standards Bulletin Board (DSBB). Estonia's latest SDDS Annual Observance Report is available on the DSBB.	A data ROSC report was published in November 2001 and updated in June 2002. The 2009 fiscal transparency ROSC indicated that Estonia met nearly all of the requirements of the transparency code and approached best international practice in some areas.

Table 1. Estonia: Common Indicators Required for Surveillance
As of June 23, 2023

	Date of latest observation	Date received	Frequency of Data[8]	Frequency of Reporting[8]	Frequency of publication[8]
Exchange Rates[1]	June 22, 2023	June 23, 2023	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[2]	May 2023	June 7, 2023	M	M	5D
Reserve/Base Money	April 2023	June 13, 2023	M	M	9D
Broad Money	April 2023	May 30, 2023	M	M	4W
Central Bank Balance Sheet	April 2023	June 13, 2023	M	M	9D
Consolidated Balance Sheet of the Banking System	April 2023	May 30, 2023	M	M	4W
Interest Rates[3]	June 2023	June 21, 2022	M	M	D/M
Consumer Price Index	May 2023	June 7, 2023	M	M	5D
Revenue, Expenditure, Balance and Composition of Financing[4]—General Government[5]	Q1/2023	June 22, 2023	Q	Q	85D
Revenue, Expenditure, Balance and Composition of Financing[4]—Central Government	April 2023	June 22, 2023	M	M	1M
Stocks of Central Government and Central Government-Guaranteed Debt[6]	Q1/2023	June 22, 2023	Q	Q	1Q
External Current Account Balance	Q1/2023	June 13, 2023	Q	Q	6W
Exports and Imports of Goods and Services	April 2023	June 9, 2023	M	M	40D
GDP/GNP	Q1/2023	May 31, 2023	Q	Q	2M
Gross External Debt	Q1/2023	June 12, 2023	Q	Q	1Q
International Investment Position[7]	Q1/2023	June 12, 2023	Q	Q	1Q

[1] With the adoption of the euro as from 1 January 2011, the Bank of Estonia has ceased to quote and publish the daily official exchange rates since the determination of the exchange rate of the euro against third currencies is the responsibility of the European Central Bank.
[2] 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.
[3] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds. Key ECB interest rates and yields on government securities are disseminated daily by the European Central Bank.
[4] Foreign, domestic bank and domestic nonbank financing.
[5] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[6] Including currency and maturity composition.
[7] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[8] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A); Not Available (NA).