INTERNATIONAL MONETARY FUND

IMF Country Report No. 22/289

REPUBLIC OF ESTONIA

2022 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE REPUBLIC OF ESTONIA

September 2022

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 2022 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 August 29, 2022, following discussions that ended on May 18, 2022, 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 June 27, 2022.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement** by the Executive Director for the Republic of Estonia.

The documents listed below have been or will be separately released.

Selected Issues

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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PRESS RELEASE

PR22/300

IMF Executive Board Concludes 2022 Article IV Consultation with Republic of Estonia

FOR IMMEDIATE RELEASE

Washington, DC – **September 2, 2022:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the Republic of Estonia.

Russia's war in Ukraine and the upsurge in inflation have significantly slowed Estonia's strong recovery from the COVID-19 shock. Economic activity and the health system have been broadly resilient to COVID-19 and have progressively adapted to the pandemic, despite the high caseload from the recent Omicron wave. The sharp output rebound in 2021 was mostly driven by large policy support, pension savings withdrawals, and strong foreign investment. However, the economy is vulnerable to fallout from the war in Ukraine and the related sanctions, although direct exposures to Russia and Ukraine through trade, services, and financial channels appear to be contained. Economic activity has held up in the first quarter of 2022, displaying a solid output growth despite early headwinds from the war. In parallel, inflation has continued to surge, reflecting high imported energy and food prices, growing domestic demand, spillover effects on other prices, and supply chain disruptions. In parallel, the arrival of Ukrainian refugees seems to have slightly eased labor shortages.

Economic growth is expected to slow this year and recover over the medium term, but downside risks are high. Growth is expected to weaken to 1¼ percent in 2022, owing to trade disruptions, a drag from higher energy prices, lower confidence, and lingering supply bottlenecks. Growth is projected at 2.2 percent in 2023, and over the medium term it would gradually recover to its potential clip of around 3½ percent. Inflation is expected to start easing in the second half of this year but is projected to remain well in double digits on average this year, before falling markedly from 2023. The balance of risks to growth is tilted to the downside, primarily due to ongoing uncertainty and spillovers from the war, potential spillovers from trading partners and sanctions, and the normalization of monetary policy. Persistent supply shortages combined with upside surprises in domestic demand, and the associated entrenching of elevated inflation could create risks of a wage-price spiral and start to erode competitiveness. On the upside, good implementation of the Resilience and Recovery Plan (RRP) would support growth.

Executive Board Assessment[2]

Executive Directors agreed with the thrust of the staff appraisal. They welcomed Estonia's strong economic rebound from the pandemic on the back of sound macroeconomic fundamentals and an effective policy response. Directors highlighted, however, that the

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[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.

spillovers from Russia's war in Ukraine are increasingly weighing on Estonia's economic activity and have clouded the outlook with downside risks, including the possibility of weaker growth and higher inflation. Against this backdrop, Directors agreed that policies should continue to tackle the challenges brought on by the war, while being mindful of the inflation-related challenges to safeguard macro-financial stability. Enhancing energy security and reinvigorating structural reforms to maintain competitiveness and bolster inclusive growth are also paramount.

Directors welcomed the use of the fiscal space to meet the considerable spending needs arising from the war in Ukraine. Going forward, they stressed that fiscal policy should be agile and responsive to changing conditions, which requires enhanced contingency planning. In particular, should inflation fail to decline as expected in the near-to-medium term, Directors agreed that a stronger fiscal consolidation may prove necessary to preserve macroeconomic stability. Under such a scenario, they recommended that additional spending be prioritized and targeted. Directors noted that medium-term fiscal consolidation should be mindful of evolving public spending priorities. In addition, they recommended increasing fiscal policy countercyclicality, enhancing public project management, and advancing institutional reforms. Directors commended Estonia's adherence to the SDDS-plus standard.

Directors welcomed the resilience of the financial sector and stressed the importance of closely monitoring new risks created by the war in Ukraine and from potential cyberattacks. Given the upward momentum in house prices, Directors welcomed the tightening of the macroprudential policy stance and highlighted the need to continually assess housing market conditions. While commending recent supervisory and legislative reforms to strengthen the AML/CFT framework, Directors called for further scaling up the capacity and powers of AML/CFT supervisors.

Directors emphasized the importance of reinvigorating structural reforms to promote dynamic and inclusive growth, including through active labor market policies and efforts to integrate refugees. Noting that Estonia's social policies have effectively kept inequality on a declining path, Directors encouraged further actions to address social gaps that could be exacerbated by high food and energy prices. They also called for further efforts to ensure energy security and for accelerating the green and digital transitions.

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

Estonia: Selected Macroeconomic and Social Indicators, 2019-27

(Units as indicated)

	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Est.	Projections				
National income, prices, and wages									
GDP (nominal; billions of Euro)	27.7	26.8	30.7	35.1	37.9	40.4	43.0	45.6	48.3
Annual change (in percent)	7.4	-3.2	14.3	14.5	8.0	6.6	6.4	6.0	6.0
Real GDP growth (year-on-year in percent) 1/	4.1	-3.0	8.3	1.2	2.2	3.8	3.6	3.3	3.3
Private consumption	3.9	-2.7	6.6	2.5	2.5	3.5	3.5	3.5	3.5
Gross fixed capital formation	6.1	19.9	3.3	-8.0	4.0	6.0	6.5	6.0	5.5
Exports of goods and services	6.5	-5.0	19.8	-1.4	4.4	3.4	3.4	3.3	3.4
Imports of goods and services	3.8	0.9	20.7	-5.8	4.2	4.4	4.4	4.1	3.9
Average HICP (year-on-year change in percent)	2.3	-0.6	4.5	16.8	6.7	2.5	2.4	2.4	2.4
GDP deflator (year-on-year change in percent)	3.2	-0.3	5.5	13.1	5.7	2.7	2.7	2.6	2.6
Average monthly wage (year-on-year growth in percent)	7.4	2.9	6.9	9.5	8.0	6.0	5.0	4.8	4.5
Unemployment rate (ILO definition, percent, pa)	4.4	6.8	6.2	7.2	6.9	6.6	6.2	5.5	4.8
Average nominal ULC (year-on-year growth in percent)	5.5	5.7	-1.1	7.8	6.8	3.1	1.6	2.0	1.7
General government (ESA10 basis; percent of GDP)									
Revenue	39.6	40.3	40.0	38.7	39.1	39.7	40.1	40.2	40.3
Expenditure	39.4	45.9	42.3	43.3	43.0	42.9	42.8	42.4	42.1
Financial surplus (+) / deficit (-)	0.1	-5.6	-2.4	-4.6	-3.9	-3.2	-2.6	-2.2	-1.8
Structural balance	-0.5	-5.1	-3.8	-4.7	-3.8	-3.3	-2.8	-2.3	-1.8
Total general government debt	8.6	19.0	18.1	20.9	23.7	25.9	27.4	28.5	29.0
Net government debt 2/	-2.2	3.0	4.6	9.1	12.8	15.7	17.8	19.4	20.5
External sector (percent of GDP)									
Merchandise trade balance	-3.4	-0.6	-4.3	-5.2	-5.1	-5.4	-5.6	-5.8	-5.9
Service balance	7.5	1.0	4.5	7.1	7.3	7.0	6.7	6.5	6.4
Primary income balance	-1.9	-0.9	-1.9	-1.9	-1.6	-1.4	-1.3	-1.2	-1.0
Current account	2.5	-0.3	-1.6	0.1	0.6	0.2	-0.1	-0.4	-0.4
Gross external debt/GDP (percent) 3/	76.3	91.1	86.8	78.4	75.2	73.5	72.0	70.9	69.9
Exchange rate (US$/Euro - period averages)	1.12	1.14	1.18	...	...	...	...	...	...
Real effective exchange rate (annual changes in percent)	-0.2	0.7	1.7	...	...	...	...	...	...
Nominal effective exchange rate (annual changes in percent)	-0.3	2.6	0.5	...	...	...	...	...	...
Money and credit (year-on-year growth in percent)									
Credit to the economy	3.9	3.8	6.5	...	...	...	...	...	...
Output gap (in percent of potential output)	2.1	-3.1	1.2	-0.1	-0.5	0.1	0.3	0.2	0.0
Growth rate of potential output (in percent)	4.0	2.2	3.8	2.6	2.6	3.1	3.4	3.4	3.5

Social Indicators (reference year):
Population (2021, pa): 1.33 million; Per capita GDP (2020): $23,050; Life expectancy at birth: 82.7 (female) and 74.2 (male);
Poverty rate (share of the population below the established risk-of-poverty line): 22.2 percent; Main exports: machinery and appliances.

Sources: Estonian authorities; Eurostat; and IMF staff estimates and projections.
1/ Statistics Estonia revised National Accounts series in August 2019 inter alia shifting reference year to 2015 and improving the methodology.
2/ Includes the Stabilization Reserve Fund (SRF).
3/ Includes trade credits.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2022 ARTICLE IV CONSULTATION

June 27, 2022

KEY ISSUES

Context. Estonia's economy is vulnerable to the fallout from the war in Ukraine given its geographical proximity to Russia, the geopolitical context, and high passthrough from global energy prices to domestic inflation. Although direct exposures to Russia and Ukraine through trade, services, and financial channels appear to be contained, the war is already significantly affecting economic confidence. Nevertheless, economic activity has progressively adapted to the pandemic, rebounding strongly in 2021, and as of mid-2022, remaining resilient to the headwinds from the war. Inflation has surged into double digits and is increasingly broad-based.

Outlook and risks. The war in Ukraine has made the outlook more uncertain and re-shaped the risk landscape. Growth is projected to fall to 1.2 percent in 2022 before reverting to an estimated potential clip of 3½ percent in the medium term, supported by Estonia's strong fundamentals and economic flexibility. Inflation is set to ease going forward but will remain above pre-pandemic levels through 2023. Risks are tilted to the downside and are dominated by the fallout from the war, with a possibility of yet-weaker growth and higher inflation, bringing the associated policy challenges.

Policy Recommendations

Fiscal policy. Estonia's fiscal space should be efficiently used to meet essential spending needs created by the war and address inclusive growth challenges, including those posed by higher inflation. While accommodation of such spending in 2022 necessitates an expansionary fiscal stance, policymakers should be vigilant to the risks of potential economic overheating exacerbating inflationary pressures. Going forward, energy price and social support measures should be well-targeted to low-income households without stifling price incentives. Because of the uncertain situation, carefully designed contingency plans are essential. Meanwhile, further enhancements to fiscal transparency would raise the efficiency of Recovery and Resiliency Fund-supported public investment. Plans to roll back fiscal accommodation over the medium term should take account of fiscal space, internalize evolving public spending priorities, and be supplemented with mechanisms to increase fiscal policy countercyclicality.

Structural reforms. To bolster inclusive growth, the authorities should enhance active labor market policies that would include integration of the refugees from the war in Ukraine and further reduce old-age poverty, social inequality, and gender gaps. The agenda should also enhance energy security by investing in and incentivizing alternative energy supply infrastructure, operationalizing the achievement of climate targets, and consolidating Estonia's digitalization advantages.

Macro-financial policies. The financial sector remains resilient, but 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 planned tightening of macroprudential policies is appropriate, but careful monitoring of housing market developments is needed. AML-CFT measures are being strengthened, but it will be important for the capacity and sanctioning powers of AML/CFT supervisors to be enhanced in line with the ML/TF risks.

Approved by
Philip Gerson (EUR) and Johannes Wiegand (SPR)

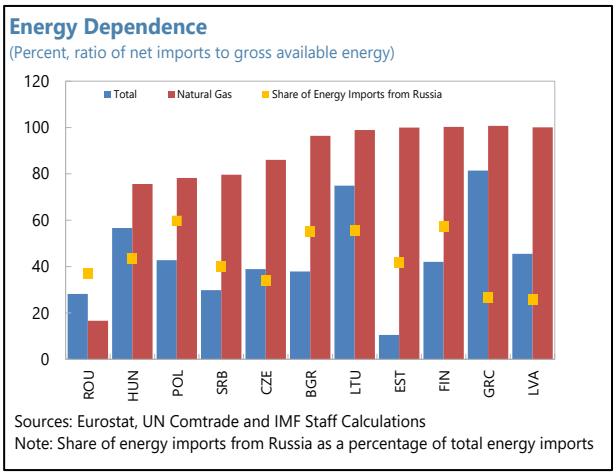
Discussions were held in Tallinn between May 4 and May 18, 2022. The staff team comprised Cheikh Gueye (head), Bogdan Lissovolik, Wim Fonteyne, Neree Noumon (EUR), and Jeong Dae Lee (MCD). Sadhna Naik and Rafaela Jarin (EUR) assisted the mission. Raido Kraavik (OED) participated in the discussions. The mission met with Finance Minister Keit Pentus-Rosimannus, Bank of Estonia Governor Madis Müller, other senior officials from the government and representatives from the fiscal council, parliament, private sector, banks, and the civil society.

CONTENTS

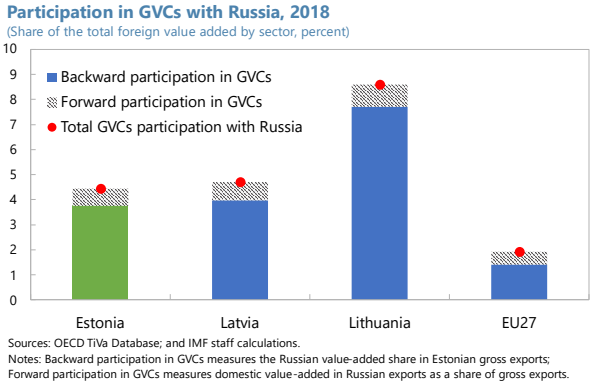
ANNEXES

CONTEXT

1. Estonia's economy is vulnerable to the fallout from the war in Ukraine. Geographical proximity to Russia, ongoing geopolitical tensions in the broader region, and high passthrough effects from international energy prices to inflation are sources of vulnerabilities. However, trade, financial, and other economic linkages with Russia and Ukraine are relatively contained. Russia has remained a key source of energy imports, but effective dependence on imported energy is modest, reflecting large re-exports of Russian energy and relatively significant reliance on own shale oil.[1]



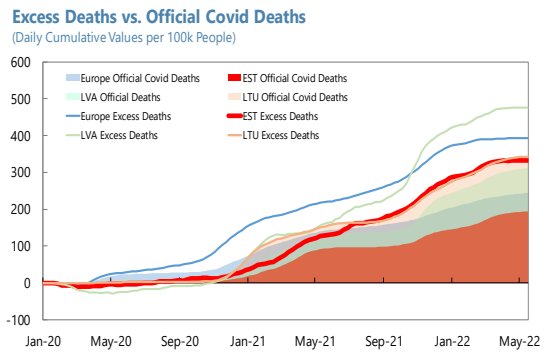
Text Figure 1. Exposure to Russia



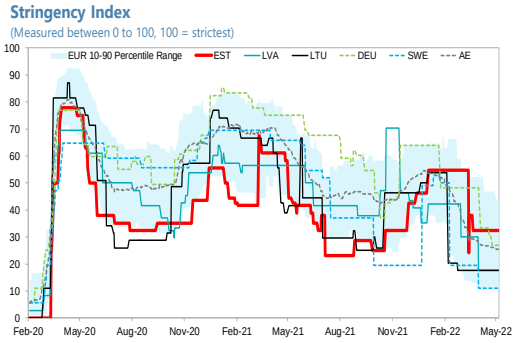
2. The economy and the health system have navigated the pandemic relatively well. Despite strong periodic surges of COVID-19 cases as elsewhere in Europe, hospitalizations and severe health outcomes have been relatively contained. Official restrictions on activity, while well-timed and calibrated, have been among the lowest among peers, and mobility indicators have been progressively less sensitive to the successive pandemic waves. However, at 65 percent, the vaccination rate lags the EU average.

[1] A yet-fuller picture of direct and indirect exposure would need to incorporate Estonia's net imports of energy from other countries that depend on Russian energy supply, but these additional exposures are also relatively contained (mainly involving electricity imports from Finland).

Text Figure 2. COVID-19 Cases and Deaths, January 2020–May 2022



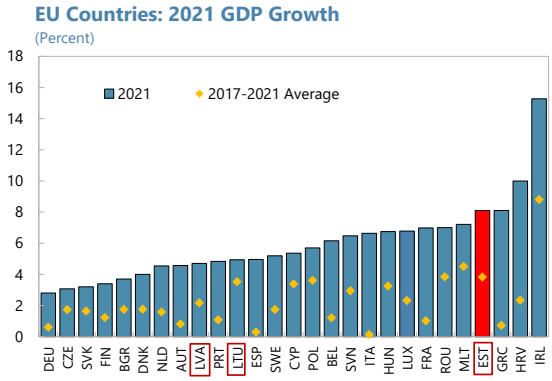
Source: The Economist



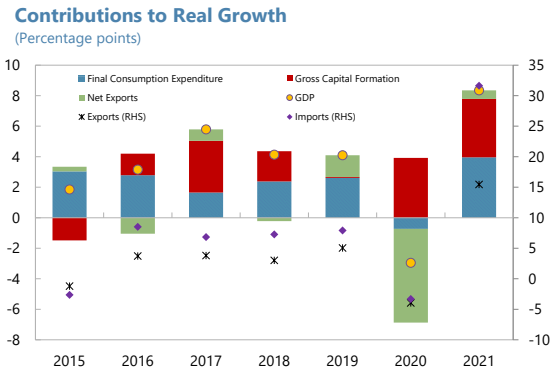
Source: Oxford COVID-19 Database

3. Strong fundamentals support Estonia's resilience despite some political headwinds. Estonia's solid economic track record is rooted in well-functioning market-based mechanisms, flexible labor markets, a business-friendly investor climate, and efficient and highly-digital government services. EU and euro area memberships are strong anchors, underpinning continual progress in strengthening institutions. On June 3, 2022, the Prime Minister requested dismissal of Ministers who represent the governing coalition's junior partner (Center Party) over a political deadlock and announced negotiations to form a new coalition with two smaller parties. The government dissolution's policy impact is expected to be limited, given strong consensus on the response policies to the fallout from war in Ukraine. The next parliamentary elections are due in March 2023.

Text Figure 3. GDP Growth by Country and Demand Components



Source: World Economic Outlook

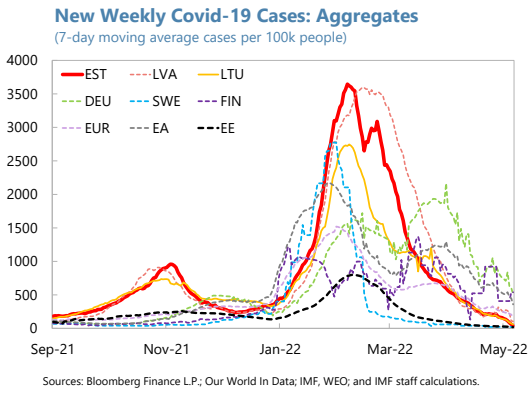


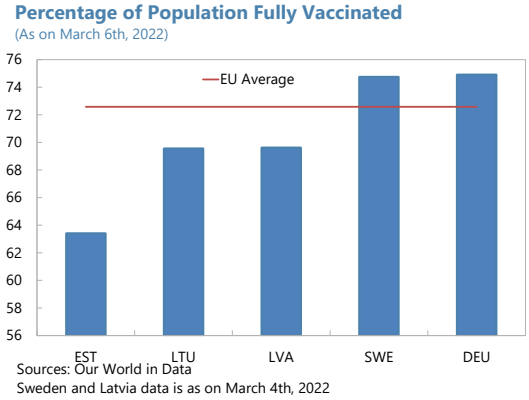
Sources: Statistics Estonia; and IMF Staff Projections

ECONOMIC DEVELOPMENTS: MULTI-FACETED CHALLENGES OF ECONOMIC RECOVERY

4. The immediate public health challenges posed by the COVID-19 pandemic have receded. The Omicron wave of early-2022 caused an unprecedented spike in cases but fewer severe infections. With COVID-19 cases easing to relatively low levels, the government removed remaining restrictions on activity in March/April. In parallel, it re-calibrated its vaccination strategy to focus more on risk groups, while setting sub-targets on booster shot coverage to address the issue of waning immunity.

Text Figure 4. COVID-19 Waves and Vaccines

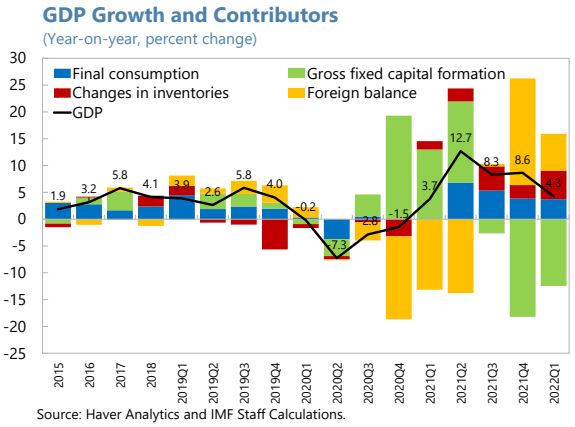


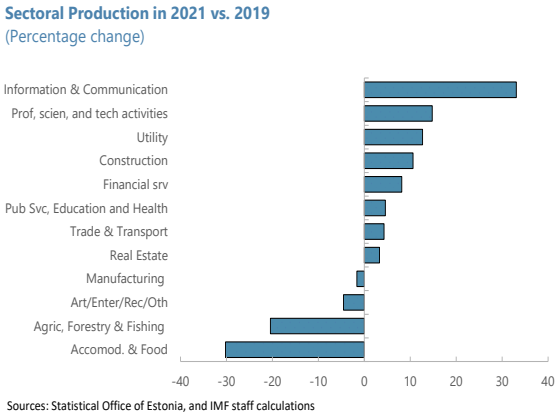


5. The post-pandemic recovery was remarkably strong. After an output contraction of 3 percent in 2020, growth surged to 8¼ percent in 2021, driven by a solid recovery of consumption (by 6½ percent), continued strong investment, and buoyant exports (20 percent in real terms). The output rebound was fueled by COVID-19 policy support, pillar II pension system withdrawals, and buoyant foreign investment. [2] On the supply side, sectors that were least affected by the pandemic (ICT and manufacturing) saw strong growth, while the pandemic-hit services sectors (accommodation, food, and recreation) struggled to recover. Growth declined but was better than expected in 2022:Q1, in part reflecting a rush on the part of firms to execute transactions with Russia on existing contracts.

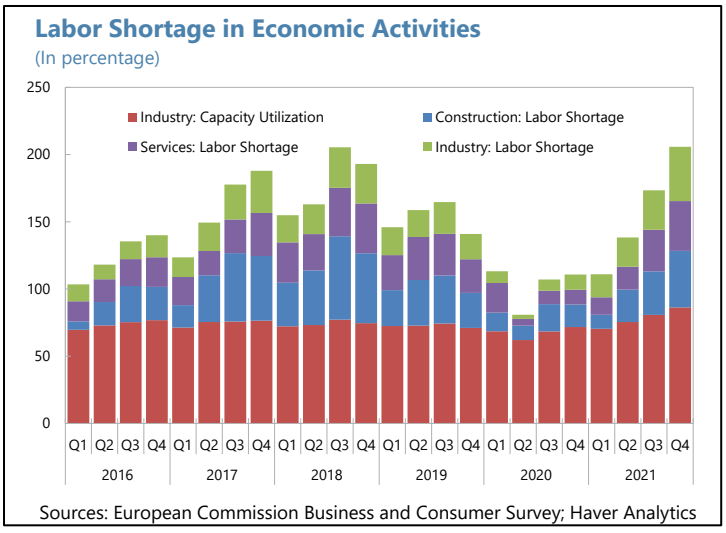
[2] A modification of the second pillar switched participation from mandatory to voluntary, allowing participants to withdraw accumulated savings before retirement starting from September 2021. Some 4 percent of GDP was withdrawn in 2021 and further (much more modest) periodic withdrawals are set to continue.

Text Figure 5. GDP Growth and Sectoral Production

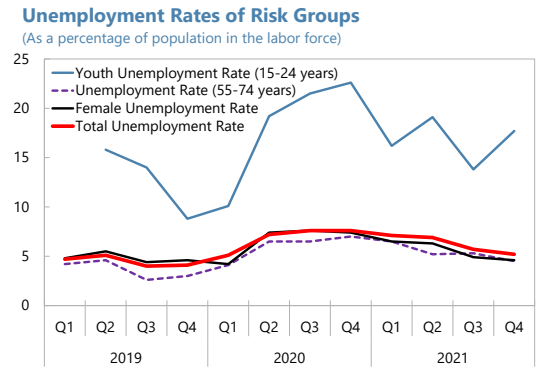




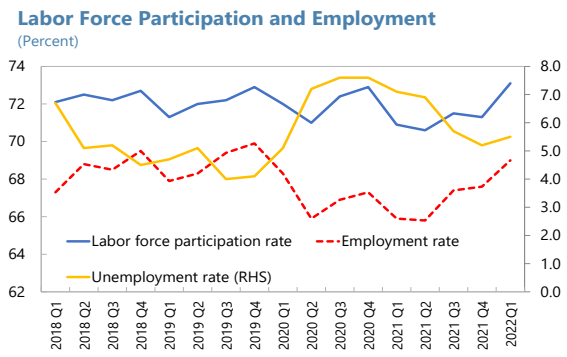
6. The labor market has also been recovering. After peaking at 7.7 percent in 2020:Q3, the unemployment rate declined to 5.5 percent in 2022:Q1. The recovery in employment and labor force participation was initially gradual, particularly among low-skilled young workers in service sectors, older male workers, and women. However, with waning pandemic risk and restrictions, employment and labor force participation recovered strongly in 2022:Q1, reaching pre-pandemic levels. Moreover, high job vacancies and strong nominal wage growth (11 percent in March 2022) pointed to broad-based labor shortages. The arrival of Ukrainian refugees (see Annex III) appears to have slightly eased labor shortages in some sectors as of May, but the war negatively affected employment expectations, especially in manufacturing and construction.



Text Figure 6. Labor Market Developments



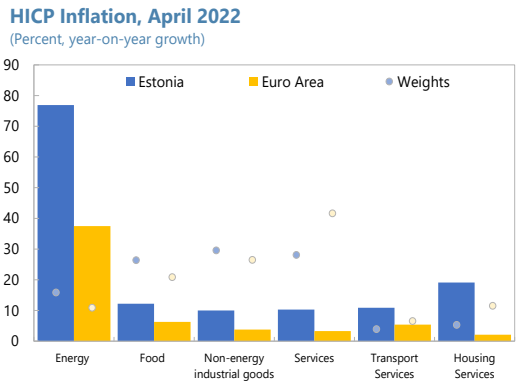
Sources: Eurostat



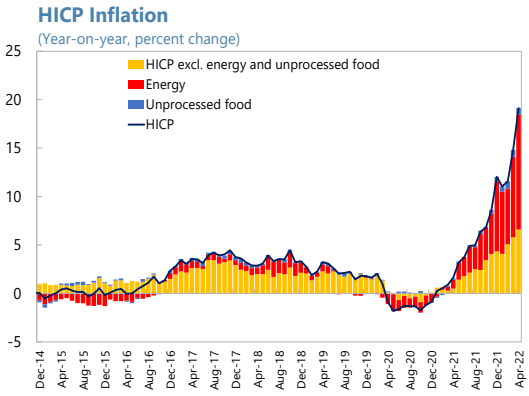
Source: Statistics Estonia.
Note: Based on persons aged 15-74 years.

7. Inflation has surged well into double digits. Headline inflation reached 20 percent y/y in May 2022. More than one-half of inflation is explained by energy prices, which have a relatively high weight in the index, with a large and rapid passthrough (SIP on Inflation Developments in Estonia) from global energy prices. Moreover, inflation is increasingly broad-based, with food prices further pushed up by the war and core inflation, which includes processed food prices, reaching 10.4 percent in April. Accelerating core inflation reflects passthrough effects from higher energy prices (e.g., as reflected in large increases in the prices of housing and transport services) but also growing domestic demand, which is contributing to the growth of food and some services components. While exposure to manufacturing supply chain price pressures is relatively contained, the rapid PPI inflation (33.7 percent in May 2022) points to potentially significant supply-side price pressures.

Text Figure 7. Inflation Developments

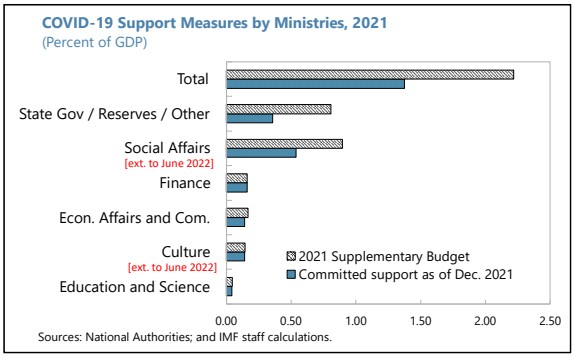


Source: Eurostat

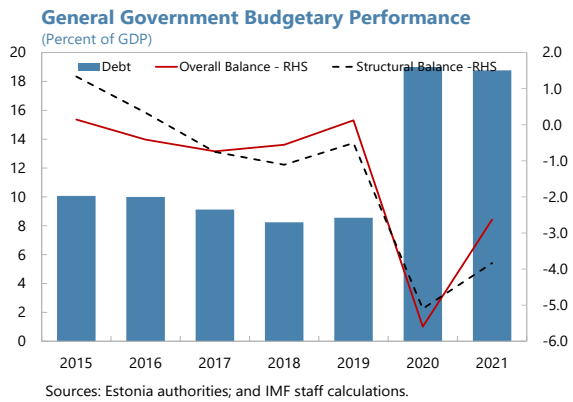


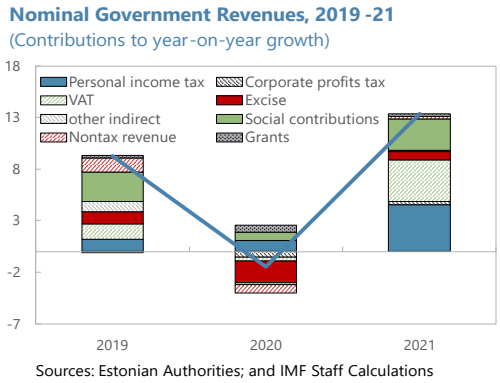
Sources: Statistical Office of Estonia, Haver Analytics, and IMF staff calculations.

8. The public debt ratio nearly stabilized in 2021 while the fiscal space remains significant. The 2021 budget deficit narrowed to 2.4 percent of GDP, reflecting a broad-based rebound in tax revenues and the expiration of most pandemic support measures. The lower fiscal deficit and the surge in nominal GDP helped reduce the public debt ratio to 18.1 percent of GDP, still the lowest in the EU (see Annex II). Net public debt fell to 4.6 percent of GDP. The implementation of Estonia's Recovery and Resilience Plan (RRP), which prioritizes the green and digital transitions, has commenced.[3] Higher constructions costs are estimated to have led to cost overruns of about 27 percent on public projects financed by EU Funds (see Annex IV).



Text Figure 8. General Government Fiscal Performance



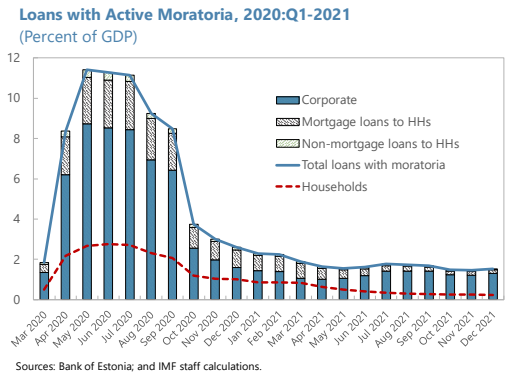


9. The financial sector has been resilient. Bank liquidity, capital, and profitability have remained strong despite the expiration of most moratoria, forbearance, and government support measures (Annex VI). Credit growth has recovered to positive levels in all main segments, led by real estate. While capital is well above regulatory thresholds, it declined during 2021 reflecting the recovery in lending and sizable transfers of dividends to foreign (Nordic) parent banks. NPLs have remained on a declining trend (at 1 percent at end-2021). The authorities estimate that the housing market was moderately overvalued in 2021, while house price growth accelerated further in early-2022, reflecting a combination of strong demand and limited supply. In March 2022, the government tightened the eligibility criteria of the housing loan support program to better target support. The

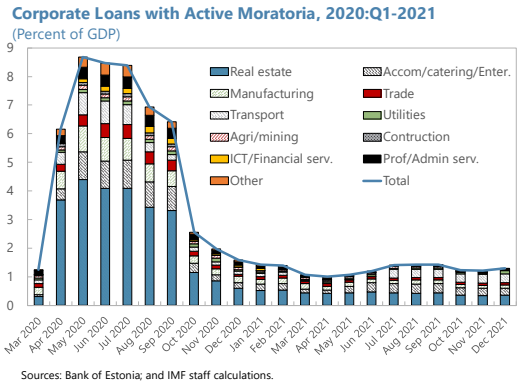
[3] Estonia's RRP is expected to be updated to integrate the REPowerEU Plan objectives, in line with proposed amendments to RRF regulation (May 2022).

central bank has announced an increase in the countercyclical capital buffer, moving it from zero to 1 percent effective in December 2022.

Text Figure 9. Loans with Active Moratoria



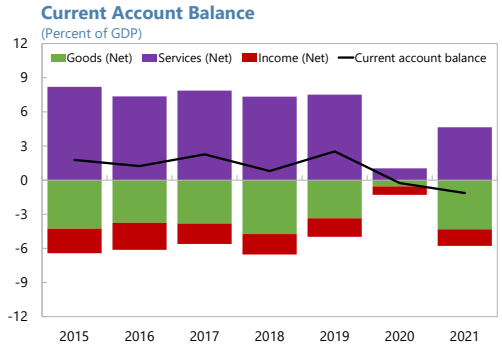
Sources: Bank of Estonia; and IMF staff calculations.



Sources: Bank of Estonia; and IMF staff calculations.

10. The external position remains substantially stronger than implied by medium-term fundamentals and desirable policies (Annex I). The current account deficit was estimated at 1.6 percent of GDP last year, mainly reflecting a deterioration in the goods balance as imports rebounded from compressed 2020 levels. Both exports and imports of goods and services recovered strongly, with large increases in prices, but also strong volumes. The services balance included temporary flows of FDI-financed imports of computer software services of 4¼ percent of GDP, as well as receipts for an exceptional fee for intra-firm transfer of intellectual property rights of around ¾ percent of GDP, with a net deficit impact of 3½ percent of GDP. The preferred EBA-lite methodology suggests a CA gap of 4.2 percent of GDP, after adjusting for cyclical and one-off factors, and a real effective exchange rate (REER) undervaluation of about 8 percent, consistent with past consultations' assessments (see Annex I). Going forward, structural reforms and public investment catalyzed by EU funds should help safeguard Estonia's external competitiveness.

Text Figure 10. External Position



Sources: Estonian authorities; and IMF staff calculation.

Estonia: EBA-lite Model Results, 2021

	CA model 1/	REER model 1/
	(in percent of GDP)	
CA-Actual	**-1.6**	
Cyclical contributions (from model) (-)	-0.3	
COVID-19 adjustor (-) 2/	-0.3	
Additional temporary/statistical factors (-)	-3.5	
Natural disasters and conflicts (-)	-0.2	
Adjusted CA	**2.7**	
CA Norm (from model) 3/	**-1.5**	
Adjustments to the norm (-)	0.0	
Adjusted CA Norm	**-1.5**	
CA Gap	**4.2**	**-2.6**
o/w Relative policy gap	3.5	
Elasticity	-0.53	
REER Gap (in percent)	**-7.9**	**4.8**

1/ Based on the EBA-lite 3.0 methodology

2/ Additional cyclical adjustment to account for the temporary impact of the tourism (0.3 percent of GDP).

3/ Cyclically adjusted, including multilateral consistency adjustments.

OUTLOOK AND RISKS

11. The war in Ukraine is set to slow output recovery. Growth is expected to fall to 1.2 percent this year, owing to a decline in confidence, a drag from higher energy and other imported input prices, and supply side disruptions. Manufacturing, transportation, construction, and agriculture sectors are particularly vulnerable to the effects of the war. The revised forecast for 2022 also reflects a negative carry-over effect from the one-off exports of software services in 2021. The output effects of the war (1.2 percentage points) would be mitigated by increased fiscal support, (improving growth by about 1 percentage point). An inflow of around 50,000 Ukrainian refugees (mostly women and children) is assumed. The output gap is expected to turn slightly negative. Unemployment will increase in 2022, albeit moderately, with the employment recovery of early-2022 partly offsetting upticks in unemployment from (i) lower growth and (ii) the entry of Ukrainian refugees (whose employability is initially reduced) in the labor market.

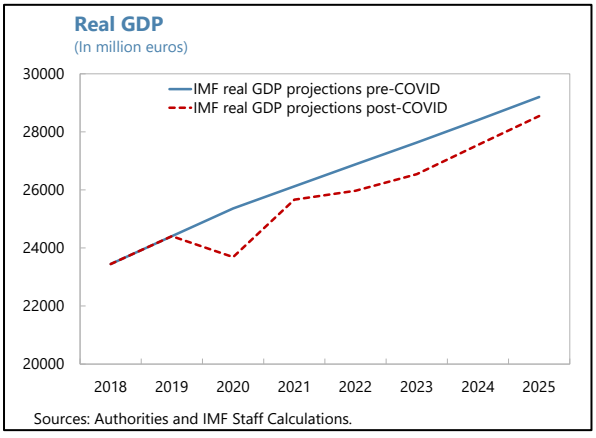
Estonia: Summary Medium-Term Macroframework

	2021	2022	2023	2024	2025	2026	2027
Real GDP growth (percent)	8.3	1.2	2.2	3.8	3.6	3.3	3.3
Output gap (percent)	1.2	-0.1	-0.5	0.1	0.3	0.2	0.0
Inflation (percent)	4.5	16.8	6.7	2.5	2.4	2.4	2.4
Unemployment rate (percent)	6.2	7.2	6.9	6.6	6.2	5.5	4.8
CAB (percent of GDP)	-1.6	0.1	0.6	0.2	-0.1	-0.4	-0.4
Fiscal balance	-2.4	-4.6	-3.9	-3.2	-2.6	-2.2	-1.8
Structural balance (percent of GDP)	-3.8	-4.7	-3.8	-3.3	-2.8	-2.3	-1.8
General government debt (percent of GDP)	18.1	20.9	23.7	25.9	27.4	28.5	29.0

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

12. Over the medium term, staff's baseline assumes that growth will gradually recover to its potential clip of around 3½ percent. Growth would be supported by EU fund inflows, notably from the RRF, as well as Estonia's robust institutions and economic flexibility. While until recently scarring effects and concerns appeared to be receding with the strong post-COVID recovery, the war and related supply disruptions and uncertainty are impacting negatively economic growth and therefore are projected to lead to higher economic scarring (in terms of permanent effects of the two shocks on GDP relative to pre-2020 projections).

- **Inflation is projected to remain higher for longer.** The additional significant price increases (e.g., energy and food) triggered by the war in Ukraine would imply double digit headline inflation in 2022, though it will ease with the projected fall of energy prices. Staff assumes that the core inflation will also fall over 2022–23 as the energy price declines put downward pressure on some services prices and monetary policy normalization by the ECB helps anchor expectations and limit the risk of a wage-price spiral. Inflation is projected to be modestly above the ECB's 2 percent target after 2023 due to continued price level convergence.



Sources: Authorities and IMF Staff Calculations.

- **The near term external current account is expected to be close to balance.** The reversal of the one-off deterioration in the services balance of 2020–21 is projected to improve the current account in 2022. In outer years, additional imports from EU fund inflows and the growth recovery are projected to slightly reduce the external balance (see Annex I).

13. Risks have clearly shifted to the downside. The war additionally entails several highly uncertain risks: (i) disruptions in energy supply, including a possible shut-off of Russian gas, (ii) possible cyberattacks, (iii) potential spillovers from the affected trading partners and sanctions; and (iv) less orderly migrant flows. Monetary policy normalization and yet-tighter global financial conditions entail additional risks. The situation is likely to be fluid and conducive to higher systemic fallout from transactional risks, including due to corporate and individual counterparty and related AML/CFT exposures. Attempts to evade sanctions placed on Russia may create additional risks for Estonian financial institutions. Other risks include further surprises from the pandemic and an entrenching of higher inflation, if a wage-price spiral emerges. On the upside, good implementation of the Resilience and Recovery Plan (RRP) would support growth. Since most risks have significant fiscal implications, staff discussed fiscal contingency plans with a particular focus on the budget and energy sector policies and related inflation concerns (see the fiscal policy and structural sections below).

Authorities' Views

14. The authorities agreed with the staff's outlook and risk assessment. They estimated that, despite relatively modest trade and other linkages with Russia and Ukraine, the war in Ukraine would affect Estonia's economy significantly and through multiple channels. While they projected a deceleration of inflation in 2023 in line with the expected evolution of global commodity prices, they noted that inflation would weigh on real consumption and GDP. The authorities agreed that risks to growth were skewed to the downside and stressed upside risks to inflation, given that it was becoming increasingly broad based. They were concerned that possible further acceleration of wage growth could entrench core inflation and cause a sustained deterioration in external competitiveness. Based on the downside risk profile, they highlighted the need to factor uncertainty in policies through careful contingency plans.

Box 1. Estonia: Risk Assessment Matrix[1]

Source of Risks, Likelihood, and Time Horizon	Impact on Estonia	Recommended Policy Response
High (short to medium term) **Russia's invasion of Ukraine leads to escalation of sanctions and other disruptions.** Sanctions on Russia are broadened to include oil, gas, and food sectors. Russia is disconnected almost completely from the global financial system and large parts of the trading system. This, combined with Russian countersanctions and secondary sanctions on countries and companies that continue business with Russia, leads to even higher commodity prices, refugee migration, tighter financial conditions, and other adverse spillovers, which particularly affect LICs and commodity-importing EMs.	**High** The war in Ukraine and Estonia's geopolitical tensions with Russia increase likelihood trade and financial sector disruptions and confidence shocks	Diversify trade, particularly imports of energy. Develop contingency plans, including to mitigate the risk of a gas shut-off by Russia. Accelerate investments in energy efficient and renewable sources of energy. Step up AML/CFT risk monitoring.
High (short term) **Rising and volatile food and energy prices.** Commodity prices are volatile and trend up amid supply constraints, war in Ukraine, export restrictions, and currency depreciations. This leads to short-run disruptions in the green transition, bouts of price and real sector volatility, food insecurity, social unrest, and acute food and energy crises (especially in EMDEs with lack of fiscal space).	**High** War in Ukraine will cause high and volatile food and energy prices in the region.	Participate in European policy responses. Diversify energy and food supply. Incentivize domestic production of food and renewable energy.
Medium (short term) **Abrupt growth slowdown in China.** A combination of extended COVID-19 lockdowns, rising geopolitical tensions, a sharper-than-expected slowdown in the property sector, and/or inadequate policy responses result in a sharp slowdown of economic activity, with spillovers affecting other countries through supply chain disruptions, trade, commodity-price, and financial channels.	As an open economy, Estonia would be affected. However, limited complex production processes and industrial clusters reduce the likelihood of large supply chain disruptions.	Participate in global and European policy responses. Manage risk through supply diversification.
Medium (short to medium term) **Outbreaks of lethal and highly contagious COVID-19 variants.** Rapidly increasing hospitalizations and deaths due to low vaccine protection or vaccine-resistant variants force more social distancing and/or new lockdowns. This results in extended supply chain disruptions and a reassessment of growth prospects, triggering capital outflows, financial tightening, currency depreciations, and debt distress in some EMDEs.	**Medium** Relatively low level of vaccinations in Estonia implies a high impact, especially from the standpoint of downside risks. At the same time, Estonia's significant policy space mitigates the risks. Estonia's strong financial system and macroprudential buffers mitigate financial vulnerabilities.	Participate in global and European policy responses. Ramp up implementation of the vaccination strategy and other public health measures. Provide economic support in line with Estonia's significant fiscal and other policy space. Mitigate "social scarring" through targeted steps to reduce inequality and gender gaps.

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

Box 1. Estonia: Risk Assessment Matrix (Concluded)		
Medium (medium term) **De-anchoring of inflation expectations in the U.S. and/or advanced European economies.** Worsening supply-demand imbalances, higher commodity prices (in part due to war in Ukraine), and higher nominal wage growth lead to persistently higher inflation and/or inflation expectations, prompting central banks to tighten policies faster than anticipated. The resulting sharp tightening of global financial conditions and spiking risk premia lead to lower global demand, currency depreciations, asset market selloffs, bankruptcies, sovereign defaults, and contagion across EMDEs.	**Medium** Estonia's membership in the euro-area and limited evidence of a wage-price spiral mitigate risks of de-anchoring. On risks of tighter financial conditions and contagion, these will be mitigated by Estonia's membership in the euro-area, the role of euro as a reserve currency, and the potential back-stopping from the EU and ECB.	Participate in the ECB policy discussions and responses. In the event of overheating, pursue tighter fiscal and macroprudential policies. Limit volatility by smoothing extreme energy price increases. Maintain sound fiscal position with well-anchored public debt and ample fiscal liquidity and reserves.
High (short term to medium term) **Geopolitical tensions and deglobalization.** Intensified geopolitical tensions, security risks, conflicts, and wars cause economic and political disruptions, fragmentation of the international monetary system, production reshoring, a decline in global trade, and lower investor confidence.	**High** Estonia's geopolitical tensions with Russia are high due to Estonia's strong support of Ukraine and could be exacerbated by worsening of the war in Ukraine and spillovers.	Deploy additional discretionary fiscal support. Prioritize such support in key security-related areas. Further enhance the anti-corruption and AML/CFT frameworks to protect the financial sector.
Medium (short term) **Cyberthreats.** Cyberattacks on critical physical or digital infrastructure (including digital currency platforms) trigger financial instability or widespread disruptions in socio-economic activities.	**High** Estonia's geopolitical tensions with Russia and being subjected to cyber-attacks in the past and its significant reliance on ICT processes and innovation, while appropriate per se, make it susceptible to such attacks.	Enhance preparedness for cyberattacks through extensive risk monitoring in cooperation with private and public sector stakeholders.
Country-specific risks		
High (short to medium term) **Disorderly migration flows**	**High** The flow of refugees could further increase if the war in Ukraine escalates. Estonia can be a magnet for migrants given the population's fluency in languages spoken by the migrants.	Deploy additional discretionary fiscal support to integrate migrants into the society and address priority social concerns. Calibrate structural reforms to the migrants' characteristics to facilitate their employment.

POLICY DISCUSSIONS

Discussions focused on three areas: (i) fiscal policy to mitigate shocks and rebalance spending priorities; (ii) structural policies to support inclusive growth and diversify energy supply; and (iii) financial sector policies to safeguard financial stability.

15. Estonia's policy space and EU/ECB backstopping are major advantages to be leveraged in dealing with shocks. After a successful experience with responding to the COVID-19 shock, Estonia's fiscal space should be readily re-deployed to address emerging challenges, including (i) addressing the economic and social impact of rising inflation; (ii) integrating refugees; and

(iii) over the medium term, ensuring that the green and digital transitions remain on track, while addressing structural skill mismatches and financial stability priorities.

A. Re-Orienting Fiscal Policy

16. The supplementary 2022 Budget refocuses fiscal policies on the challenges created by the war in Ukraine, and—with the original budget—entails a sizable fiscal stimulus. The original 2022 budget targeted a deficit of 2.1 percent of GDP. In response to the war in Ukraine the supplementary budget passed in May 2022 entails additional spending of 2.5 percent of GDP, relatively equally allocated to energy security, internal security, and the integration of refugees. The amended 2022 budget targets a deficit of 5.3 percent of GDP, implying a fiscal stimulus of around 1 percent of GDP, and includes several priorities:

- **Social spending and temporary protection of refugees** (0.8 percent of GDP). While the original 2022 budget includes labor market reallocation measures, skill-enhancing training programs, pension increases, and health measures, the supplementary budget aims at facilitating the integration of refugees through the provision of social security, accommodation, education, childcare, schooling, and language training (see Annex III).

- **Support to mitigate higher energy costs.** The energy subsidy package (about 0.8 percent of GDP), adopted at the turn of the year, expired in April (see text table).[4] The supplementary budget includes more targeted measures to low-income households, via an increase (by €50 per person per month) in the subsistence allowance.

Estonia: Support measures to mitigate high energy prices, October 2021-April 2022
(Percent of 2022 GDP)

Measures	Cost EUR mln	Cost (Percent of GDP)	Period covered
All consumers			
Compensation of 50 pct of electricity network fee for all consumers	88.3	0.3	Oct 2021 - March 2022
Compensation of 100 pct of gas network fee for all consumers	25.1	0.1	Dec 2021 - March 2022
Compensation of the 65pct increase in the price of district heating compared to the price in October 2021 for household consumers .	14.0	0.0	Feb-March 2022
Low-income consummers			
Compensation of 80 pct of increase in energy prices for low-income households	79.1	0.2	Sept 2021 - March 2022
Price ceiling on energy price			
Price ceiling for household electricity consumers 12 cents/kWh, for consumption up to 650 kWh per month	21.0	0.1	Jan-March 2022
Price ceiling for household gas consumers 6.5 s kWh, up to 2.75 MWh per month	8.5	0.0	Jan - March 2022
Support to bussinesses/Operators			
Reimbursement of "other 50%" of electricity network charges to business customers	45.0	0.1	Jan-March 2022
Support to natural gas network operators and cogeneration of natural gas	4.0	0.0	March-April 2022
Total cost of the support package	**285**	**0.8**	

Sources: Estonian Authorities; and IMF staff calculations.

- **Defense spending**. The original 2022 defense budget, which had already been increased to 2.1 percent of GDP, was enhanced by the supplementary budget package (by 0.7 percent of GDP), focusing on wartime emergency capacity and cyber security.

- **Tax measures.** The original 2022 budget extends the 2020 excise duty cuts to 2023. The supplementary budget further cuts the excise duty on the diesel used in agriculture to the minimum level allowed in the EU until end-2022 to improve food security.

[4] The measures were financed from reserves and proceeds from issuing CO2 emission certificates.

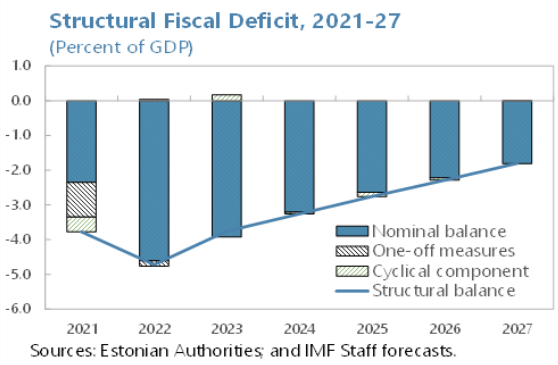
- **Spending on improving productivity and health.** The original 2022 Budget envisions enhanced spending on R&D (1 percent of GDP), as well as expenditures on health, vaccinations, and testing.

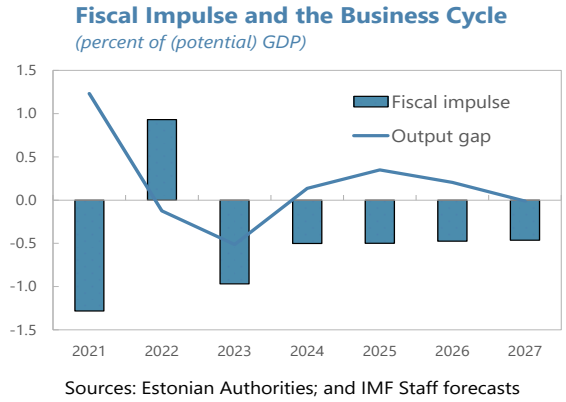
- **Contingency plans.** The supplementary budget includes contingency measures aimed at containing risks from a natural gas shut-off by Russia through (i) a joint investment in an LNG terminal with Finland (EUR 30mn); (ii) the establishment of a central state gas reserve (20 percent of annual gas consumption) costing about 0.5 percent of GDP; and (iii) investment in small-scale renewable energy solutions and interconnection capacity.

17. Despite higher spending, strong fiscal revenue should help reduce the deficit relative to budgeted levels. Staff's updated macroeconomic assumptions imply a lower deficit than in the 2022 amended budget (by 0.3 percent of GDP). Revenues are expected to be higher (by 1.4 percentage points of GDP), mostly driven by stronger VAT and excise revenues (by 0.5 percentage points of GDP) and personal income tax revenue reflecting stronger nominal wage growth and private consumption. Staff forecasts expenditure to be higher than in the amended budget (by 1.0 percentage point of GDP), reflecting additional pressures on the spending from higher inflation and cost overruns, including on construction projects. There are also substantial risks that additional spending pressures could stem from a Russian gas shut-off, especially if alternative supply options cannot be achieved fully.

18. Fiscal spending should be efficient in meeting the urgent needs while ensuring macroeconomic stability. As there are significant expected headwinds from the war and the output gap is estimated to be in (slightly) negative territory, and inflation so far being largely externally driven, staff supports the expansionary fiscal stance entailed by the amended budget (about 1 percent of GDP stimulus). However, in the context of real-time output gap uncertainty and persisting risks of economic overheating, fiscal policy should remain agile to respond to changing conditions: a tighter stance and saving higher revenues could usefully contain demand and limit risks from a wage-price spiral, should high inflation fail to come down rapidly as expected. To be consistent with macroeconomic stability, any envisioned spending increases should be carefully designed to be well-targeted to support the vulnerable and efficient so as to help contain inflationary pressures (as is the case of the established gas reserves, spending on which represents a fifth of supplementary budget).

Text Figure 11. General Government Structural Balance

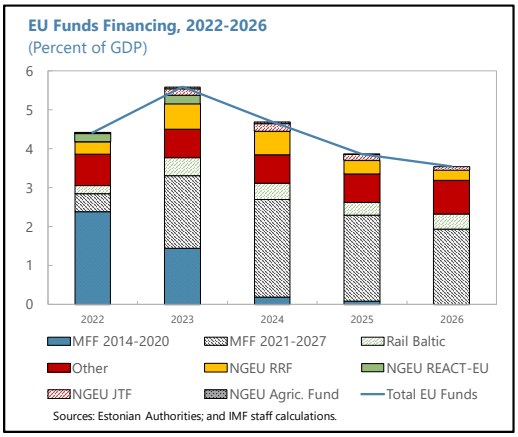




19. Over the medium term, the authorities should take advantage of their fiscal space to address policy priorities in a sustainable manner. These priorities include: (i) safeguarding essential current spending and boosting public investment; (ii) sustaining inclusive growth and energy security; and (iii) the green-digital transition:

- **Current expenditures** are projected to gradually decline as a share of GDP, while accommodating essential social outlays. In particular: (i) energy and refugee-related costs as a share of GDP are expected to moderate from in 2023, while spending on active labor market policies is projected to continue to rise; (ii) nominal public wage bill growth would remain above 6 percent annually, partly reflecting the need to build skills and capacity; and (iii) social benefits are expected to gradually increase as a share of GDP from 2023 and stabilize over the medium term, to accommodate needed spending on the elderly and announced enhancements to social protection.[5]

- **Investments.** The authorities' medium-term fiscal plans are focused on frontloading capital spending, which, in line with the EU's RRF and structural fund disbursement path, is expected to peak in 2023 and slowly decline thereafter.[6] Staff projects a more backloaded path with investments steadily increasing in line with absorptive capacity, reaching 7.4 percent of GDP in 2025 and then declining as major security-related and infrastructure projects are completed. The final estimated total RRF allocation over 2021–2026 (2.8 percent of 2022 GDP) supports the green transition, the digital advantage, and



[5] SIP, Article IV consultation 2018 on Efficiency of Spending in Estonia.

[6] Estonia's Resilience and Recovery Plan (RRP) had the first tranche disbursed in late-2021, with about half of the total envelope expected to be disbursed by 2023.

social resilience. Staff estimates that the cumulative growth impact of the RRF is about 3.2 percentage points over 2021–26, based on the estimated average multiplier of 0.9.[7]

20. Further management and institutional upgrades would help implement the efficient scaling up investments in the context of high uncertainty and would contain the potential for cost overruns. The planned frontloaded execution of investment projects calls for improvements in spending efficiency to boost fiscal multiplier effects. In particular, the implementation of the PIMA recommendations would further enhance long-term planning and project implementation, the timely and efficient implementation of the Recovery and Resilience Plan (RRP), and the absorption of the EU Funds. Heightened uncertainty from the war in Ukraine puts a premium on further enhancing transparency, better defining priorities, and improving the management of fiscal risks.[8] In addition to recent enhancements in the dissemination of granular fiscal information, further progress is needed to ensure regular disclosures of fiscal risks.

21. The scaling back of fiscal support post-pandemic should consider the changing priorities in public expenditure while enhancing the countercyclicality of fiscal policies. The authorities' stability program assumes that the national fiscal rules will resume from 2023, to reduce the structural deficit by 0.5 percentage point annually, which corresponds to a structural budget deficit target of 2 percent of GDP in 2026, achieving structural balance by 2030. Given Estonia's still-low public debt, staff incorporates a somewhat more expansionary medium-term fiscal path, for additional effective spending programs in achieving the goals of energy security, inclusive growth, and green-digital transition. Staff projections suggest that a medium-term structural deficit of 1.8 percent of GDP (by 2027) would be an appropriate objective that keeps debt at below 30 percent of GDP. Without prejudging the outcome of the ongoing reform of the EU fiscal pact, a key priority for Estonia would be to enhance its automatic stabilizers, which are among the lowest in the EU. The ongoing reform of unemployment benefits that links them to the cycle should be accelerated.

Authorities' Views

22. The authorities stressed that fiscal policy needed to respond to the urgent new priorities within an efficient and sustainable medium-term framework. Accordingly, the 2022 supplementary budget was built on three pillars—energy security, refugee integration, and security/resilience—that were dictated by the war in Ukraine. The authorities fully agreed with the need to increase targeting of social support to low-income households, including regarding measures to address the effects of high energy prices. They pointed to the increase in the subsistence allowance as being in line with the enhanced focus on such targeting. They added that the goal of inclusive growth was further supported by the recent tax and spending measures to support pensioners. The authorities emphasized the contingency measures contained in the 2022

[7] The size of the multiplier also reflects the near-term negative output gap and the expected improvement public investment efficiency over the medium term.

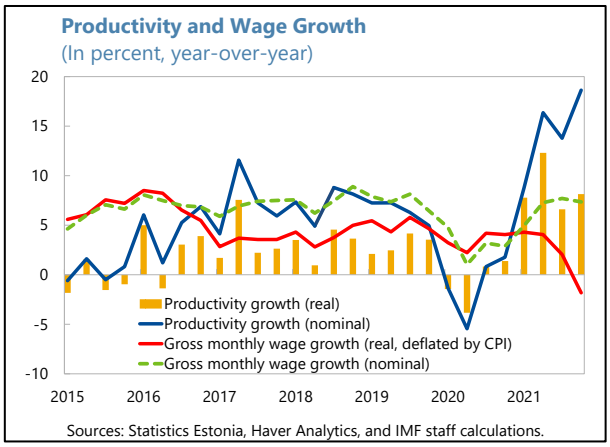
[8] The 2021 IMF's Fiscal Transparency Evaluation found fiscal transparency institutions and governance procedures to be strong.

supplementary budget, including funding for gas reserves and the LNG terminal, to help mitigate the risk of a shut-off of Russian gas. Going forward, they stressed their commitment to medium-term fiscal consolidation and the goal of structural fiscal balance. The central bank emphasized the need to contain inflation as a more immediate rationale for fiscal prudence.

23. The authorities agreed that the goals of fiscal sustainability and efficiency should be underpinned by institutional and structural fiscal upgrades. They were undertaking a review of investment projects given the rising construction costs, with a view to their improved prioritization and efficiency in leveraging EU funds. They highlighted that their recent adherence to the SDDS-plus standard would further support fiscal transparency and pointed to the recent spending review that incorporates most IMF technical assistance recommendations on public investment management. They noted other initiatives to rationalize spending, such as the ongoing pension system review and potential scope for tax policy adjustments to increase the tax base and support inclusive growth, should the future political consensus permit to do so.

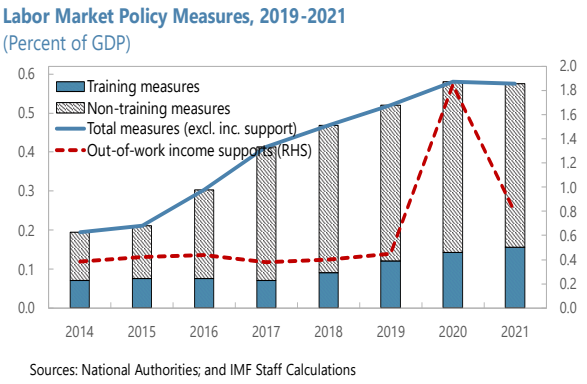
B. Re-Invigorating Structural Reforms and Inclusive Growth

24. Active labor market policies (ALMP) should be bolstered to address labor shortages and boost skills and productivity, helping to contain price pressures. Labor shortages are a significant challenge, especially in skill-intensive sectors such as ICT and healthcare. Given the acute skill mismatches, well-tailored training could foster efficient absorption of workers and their reallocation across sectors. While Estonia's ALMP spending (as a share of GDP) has increased in recent years towards the EU average, training for young workers and those with lower qualifications could be further enhanced, drawing on best practices (e.g., Germany's "future starter" program).[9] Estonia's digital advantage is expected to facilitate labor reallocation due to enhanced opportunities for remote work. In line with the Estonia 2035 strategy, policies should also facilitate the development of skills needed for the green transition and the digital revolution. Productivity gains from more efficient labor reallocation would be critical to safeguard competitiveness in the face of likely continued upward pressures on wage growth.

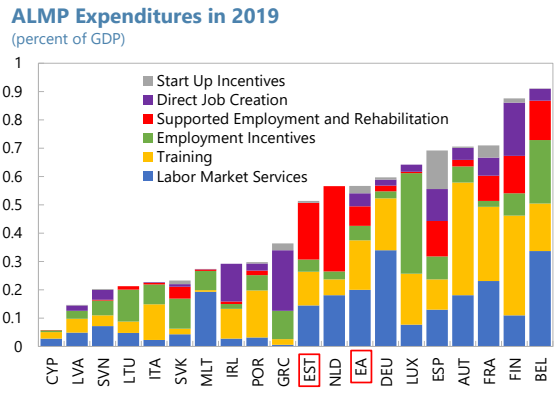


[9] The German *Zukunftsstarter* ("future starter") initiative is aimed at increasing qualification levels among young adults (25 to 35) who have no vocational degree or have been working in a job that does not require such a degree for several years. It provides them with the opportunity to take up a first apprenticeship or to complete a vocational qualification.

Text Figure 12. Structural Change in the Labor Market and Labor Market Policies



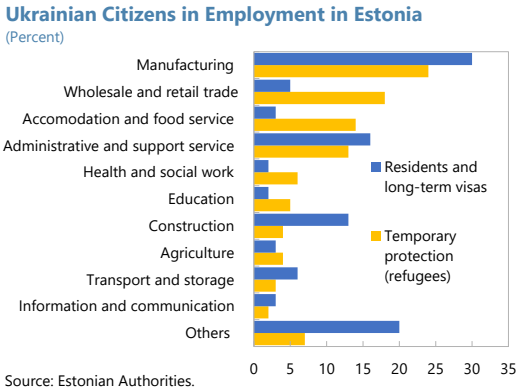
Sources: National Authorities; and IMF Staff Calculations



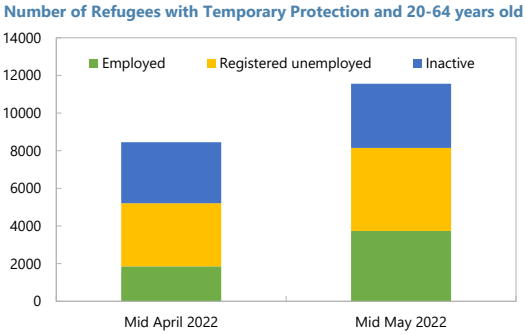
Source: Eurostat

25. Workers' inflows could be further facilitated, including through policies to better integrate Ukrainian migrants and refugees. The inflows of migrant workers have recently recovered following the pandemic-induced sharp decline but remain insufficient to significantly address labor shortages. In 2021, the issuance of residence permits for employment increased the most in the ICT and construction sectors. A smooth integration of the Ukrainian refugees could contribute to ease labor shortages, and this will require stepped-up targeted skill and language training (Annex III). Progress in this area would also require a review of residence and labor regulations and immigration quotas. In May, Estonia adopted amendments to the Aliens Act and the Act on Granting International Protection to Aliens, to make migration from non-EU countries more flexible.

Text Figure 13. Ukrainian Workers and Refugees

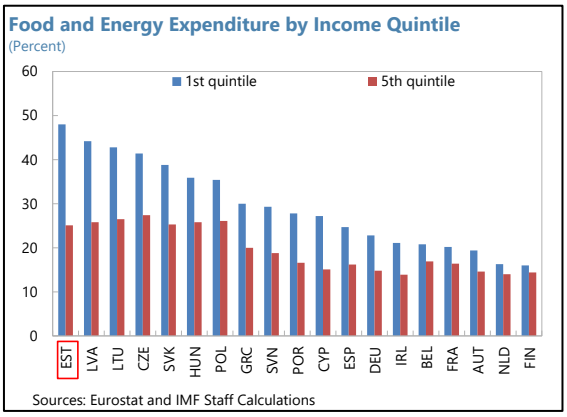


Source: Estonian Authorities.
Note: Only sectors with more than 1% has been shown.

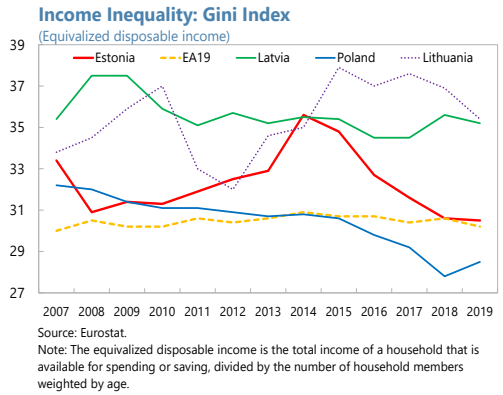


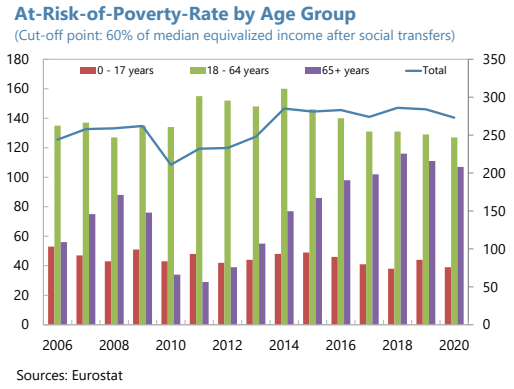
Source: Estonian Authorities.

26. Policies should re-double their focus on reducing poverty and inequality, while further addressing Estonia's large and evolving social needs. Recent progress in reducing inequality reflected the effectiveness of the pandemic support measures and gains from recent reforms. Despite continued improvement in social indicators, there are lingering weaknesses (e.g., old-age poverty) and growing challenges due to the impact of higher inflation, energy costs, and the inflow of refugees. In particular, given the high share of food and energy expenditure, the impact of inflation in Estonia would be highly regressive, in general and compared to peers. The still-elevated old-age poverty is set to be partially mitigated by recent pension increases and the planned income tax exemption for pensioners in 2023. Going forward, policies should efficiently focus on pockets of social vulnerabilities and internalize the impact of higher inflation and energy costs. Addressing the expected difficult social conditions of the incoming refugees from Ukraine is another critical inclusive growth issue.

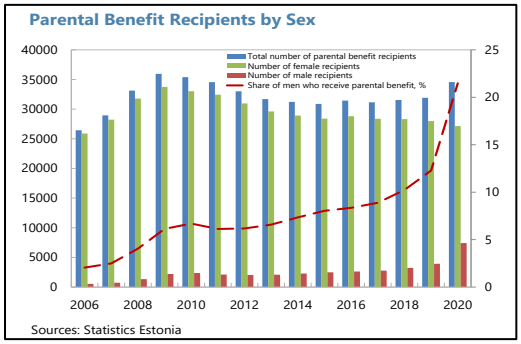


Text Figure 14. Inequality and Poverty



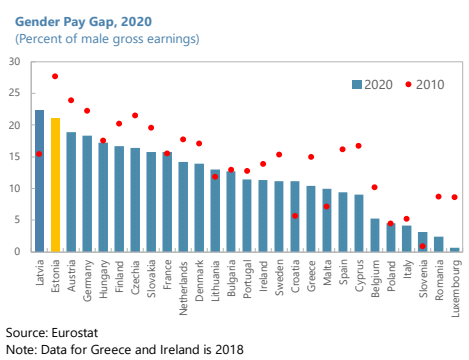


27. Further reducing Estonia's gender pay gap (GPG) would require persevering with multi-faceted action. Estonia has recently improved its GPG ranking among EU countries, notably owing to enhancements to parental benefits since 2018 that have promoted a better work-life balance and more equitable care-load. Gender segregation in education and the labor market is also being reduced through nudging programs that eliminate "glass walls and ceilings" in the ICT sector (2019–21), support stereotype-free career choices (2020–22) and enhance gender balance in STEM and EHW (2022+). However, the motherhood penalty remains very high, as women

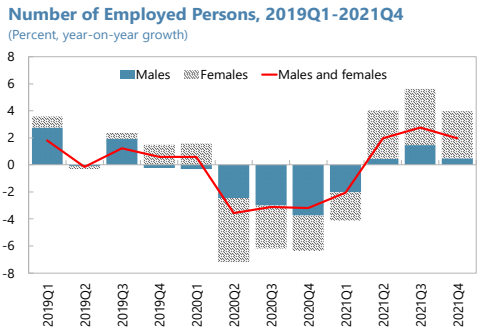


suffer a lasting income drop of about 33 percent after giving birth to their first child. Compliance with the planned EU Pay Transparency Directive, enhanced child-care, and long-term care services would be critical to a faster reduction in the GPG.[10] The upcoming Welfare Development Plan will provide a framework to monitor progress and implement follow-up and contingency measures.

Text Figure 15. Gender Pay Gap

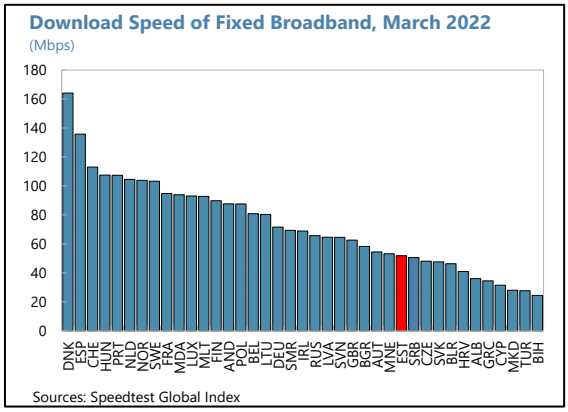


Source: Eurostat
Note: Data for Greece and Ireland is 2018



Sources: Haver Analytics, Estonian Statistical Office, IMF staff calculations.

28. Estonia should build on its global leadership in digitalization. Estonia remains a notable global leader in e-government, and its further digitalization agenda aims at upgrading cybersecurity capabilities and broadband corridors, as well as reinforcing data governance and core IT services. The RRP would provide needed resources, investment support, and digital skills training to address remaining gaps, such as digital capacity in SMEs and rural connectivity. Although Estonia's broadband network coverage is wide and expanding, its speed lags the EU target of the gigabit society.[11] The planned roll-out of 5G bands should be accelerated to meet the goals of covering major cities by 2023 and transport corridors by 2025.



Sources: Speedtest Global Index

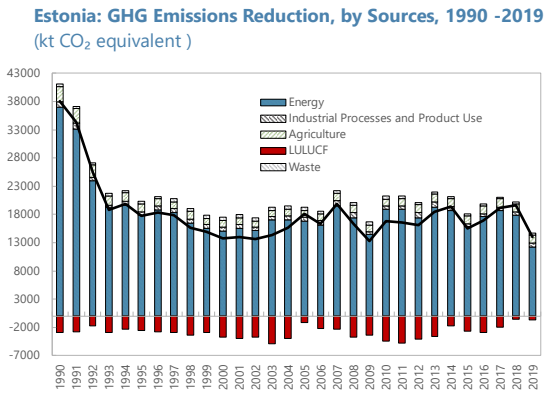
29. Climate mitigation and energy strategies need to internalize new national security priorities. Estonia's European Green Deal commitment to achieve climate neutrality by 2050 hinges on the phasing-out of the domestic oil shale sector. These plans should be harmonized with the new overriding priority of reducing dependence on imported energy from Russia, through investments in green energy generation, gas reserve build-up, and energy supply diversification. While natural gas accounts for less than a tenth of Estonia's energy mix, contingency planning for supply disruption

[10] European Commission 2021

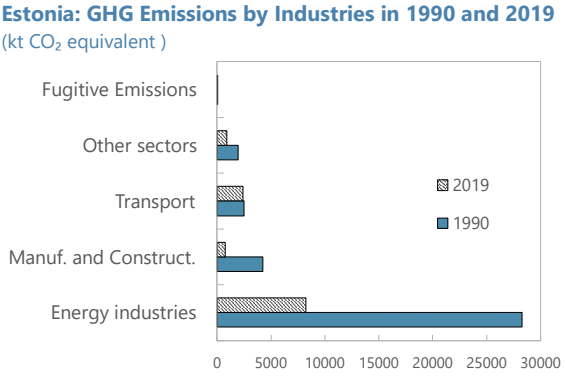
[11] The gigabit society targets 100 Mbps speed.

should be supplemented by close coordination with Baltic and Nordic neighbours whose energy systems are closely integrated. To address the risk of high gas prices delaying the phasing out of electricity generation from highly carbon-intensive oil shale, a priority is to increase electricity produced from renewable sources and related transmission capacity (Annex V). While Estonia has made progress towards its GHG reduction targets, continued investment in energy efficiency in the building and transport sectors would be important. A greater quantification and operationalization of final and intermediate targets would ensure a balanced reduction of GHG across sectors. Most importantly, a comprehensive and predictable carbon pricing strategy should be the centerpiece for credibly achieving emissions targets (SIP on climate policy in Estonia).

Text Figure 16. Estonia's Green House Gas Emissions Reduction



Source: UNCCC; IMF Staff Calculations



Source: UNCCC; IMF Staff Calculations

Authorities' Views

30. The authorities emphasized their pro-active approach to furthering an inclusive growth agenda. They agreed on the importance of active labor market policies (ALMPs) for the low-skilled and pointed to recent increases in ALMP spending on training and its increased uptake recently. The authorities aim to continue to promote better gender balance in the ICT sector and in STEM education. They are working to decrease the Gender Pay Gap to 5 percent by 2035, including through actions to enhance the transparency of pay even before the adoption of the EU's Pay Transparency Directive. While rapid testing has helped to keep schools open, the authorities are assessing learning losses during the pandemic and introducing measures to bridge learning gaps. As regards Ukrainian refugees, the authorities are combining short-term social support measures (e.g., housing and medical care) with efforts to facilitate their integration into the Estonian labor market and educational system.

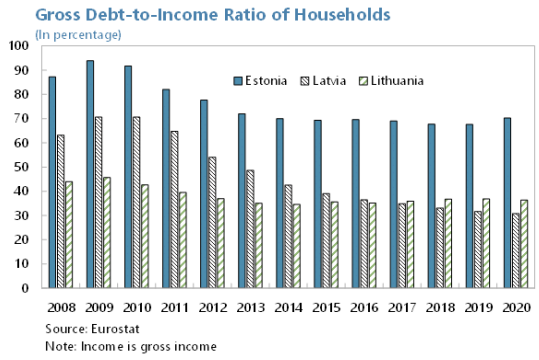
31. The authorities unveiled plans to accelerate the green-digital transition. They highlighted projects to accelerate investments in energy efficiency, renewable energy, and connectivity in line with the REPowerEU Plan. They re-affirmed their strong commitment to the green

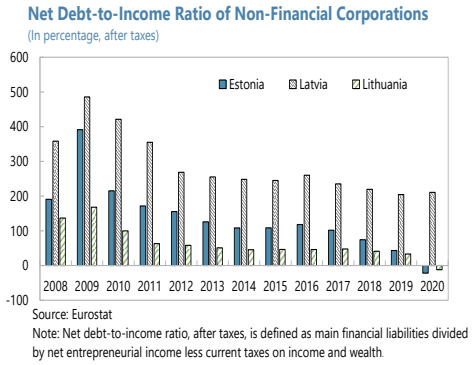
transition, reassuring that a temporary increase in electricity production from oil-shale would be implemented in a way that would be fully consistent with the climate objectives. Meanwhile, the recently finalized Digital Agenda 2030 revives Estonia's digital ambitions, with a focus on the digital state, cyber security, and connectivity. They added that key achievements so far included elimination of legal obstacles and feasibility of activation of 5G earlier than expected, by end-2022.

C. Securing Financial Stability and Integrity

32. Supervisors should continue to be vigilant given the new risks caused by the war. Bank capital buffers were further bolstered during the 2021 Supervisory Review and Evaluation Process cycle. While corporate and household balance sheets are robust and direct exposures of the financial sector to Russia, Ukraine and Belarus are limited, the full extent of the indirect links and the associated risk factors, including from the implementation of sanctions and countersanctions, are harder to assess (Annex VI). Therefore, supervisors should remain focused on conducting comprehensive and frequent bank portfolio reviews and risk assessments and should integrate them with updated stress-testing scenarios.[12] Smaller banks, which have experienced a higher increase in risk exposures, should be closely monitored to ensure they are well-capitalized. The effects of high inflation on credit risk and bank funding should also be monitored. Vulnerability assessments, monitoring, and contingency plans should internalize the risks from the war and particularly prioritize cybersecurity.

Text Figure 17. Corporate and Household Debt

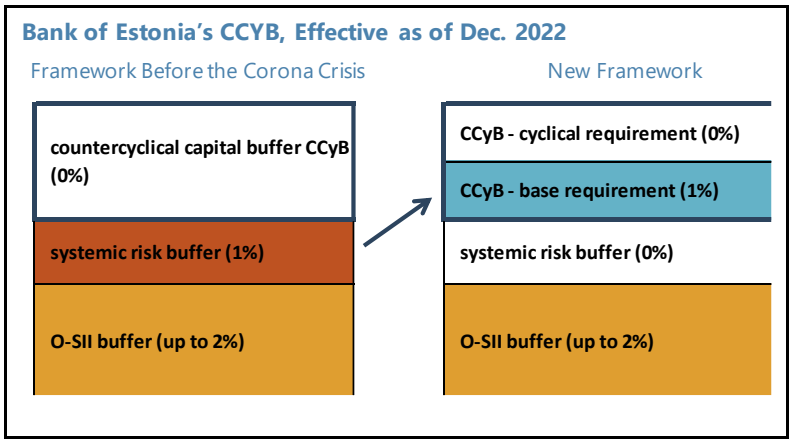




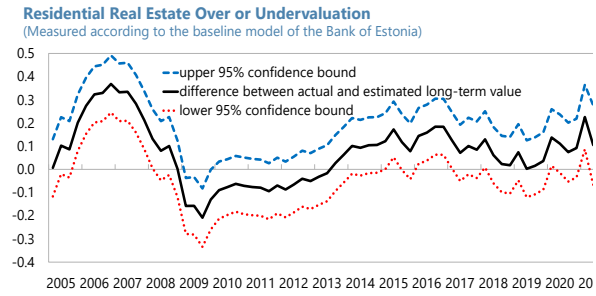
33. The macroprudential stance is appropriate, but careful monitoring of housing market developments is needed. The new countercyclical buffer framework, which will take effect in December 2022, entails a tighter effective stance. This appears appropriate given the continued

[12] The authorities estimate that a complete loss of exports to Russia, Ukraine, and Belarus, would cause the 60-day overdue loan ratios to increase from 0.3 to 0.8 percent, which would be orders of magnitude less than observed during the global financial crisis.

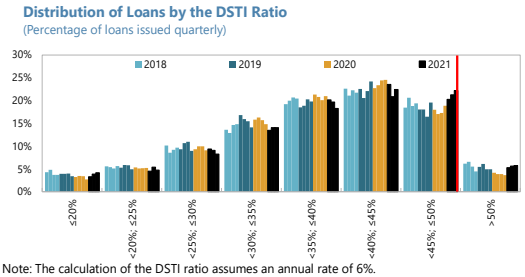
upward momentum in house prices and credit, which was sustained even during the early phase of the war in Ukraine. The case for further macroprudential action should be continually re-assessed in line with cyclical and housing market conditions, which would depend on the evolution and impact of the war in Ukraine and for now is subject to large uncertainty. The monitoring of the housing market and related lending should pay particular attention to riskier loans such as those with debt-service-to-income ratios close to the regulatory limit. The government's recent tightening of the eligibility criteria of the housing loan support program in March 2022 is a welcome step.



Text Figure 18. Macroprudential Developments in the Housing Market



Note: Value of 0.1 denotes overvaluation of 10 percent.
Sources: Bank of Estonia; and Statistics Estonia.



Note: The calculation of the DSTI ratio assumes an annual rate of 6%.
Source: Estonian Financial Supervision Authority; and Bank of Estonia.

34. AML-CFT measures are being strengthened through legislative and supervisory actions, but the capacity of AML/CFT supervisors needs to be enhanced in line with the ML/TF risks. The rapid rise of virtual asset service providers (VASPs) entails substantial ML/FT risks and supervisory challenges, as highlighted by the 2020 National Risk Assessment. The amendments to the AML/CFT law which came into force in March 2022 aim to strengthen the supervision of VASPs. The law on crypto-assets and crowdfunding services to be considered by parliament in the fall is expected to limit the risks in the Fintech sector, in line with the EU proposal on markets in crypto-assets (MiCA). The Moneyval assessment is ongoing, and its results are expected at around the end of the year. In that context, the staff sees the ongoing strengthening of the Financial Intelligence Unit (FIU) staffing and capacity as appropriate, and capacity in other agencies should also be continually enhanced. This should be complemented with adequate powers for the AML/CFT supervisors to issue effective, proportionate and dissuasive sanctions.

Authorities' Views

35. The authorities agreed that while the financial system's buffers remained strong, enhanced supervisory vigilance was needed. They were continually monitoring and assessing sectoral exposures to the risks related to the war in Ukraine. They saw no major issue at this juncture with the increased dividend pay-outs by foreign-owned banks, as these institutions remained very well capitalized and profitable, but constant close monitoring is necessary as risks are increasing. Although the implementation of sanctions poses challenges for banks, the authorities expect them to succeed without major damage to their business. On macroprudential policy, the authorities were pro-actively evaluating risks from accelerating credit and rising housing prices and intended to reassess the need for prudential action in H2 2022 as the impact of the war in Ukraine on the underlying trends becomes clearer. The authorities expressed a firm commitment to further improving their AML/CFT framework, including notably the supervision of VASPs and risks emerging from the fintech sector. They agree that this will require further capacity improvements in all relevant agencies and strengthened supervisory powers to impose sanctions. The authorities are continually upgrading their capacity to address cybersecurity threats.

STAFF APPRAISAL

36. The economy has rebounded strongly from the pandemic but is facing war-related headwinds. While direct exposures to the countries involved in the war in Ukraine through trade, services, and financial channels appear to be contained, Estonia's geographical proximity to Russia increases its vulnerabilities. The recent surge in inflation, which is becoming more broad-based, is amplifying the policy challenges. At the same time, the arrival of a significant number of Ukrainian refugees presents both challenges and opportunities for inclusive growth. Estonia's external sector is assessed to have been substantially stronger than implied by medium-term fundamentals and desirable policies in 2021.

37. The outlook has become less favorable and is subject to downside risks. The war is expected to weaken economic activity due to trade disruptions, higher energy prices, lower confidence, and supply bottlenecks. Growth is expected to gradually recover starting from 2023. Inflation is projected to ease over 2022–23 and return to more normal levels by 2024. The balance of risks to growth is tilted to the downside, primarily due to the uncertainty and spillovers from the war. External risks include yet-higher import prices, tighter global financial conditions, disruptions in energy supply, possible cyberattacks, new virulent COVID-19 strains, and potential adverse spillovers from trading partners and sanctions. Risks to inflation are tilted to the upside, reflecting both the external factors and the potential of inflation becoming more entrenched in the event of a wage-price spiral.

38. Fiscal space should be pro-actively and efficiently used to address new and long-standing challenges. Estonia has deployed its considerable fiscal space this year to improve security

and resilience, alternative energy supply, and the integration of refugees. The authorities are also focused on maintaining progress on the broader priorities of inclusive growth and economic efficiency, in the context of new challenges such as high inflation. Accordingly, their intention to target measures that mitigate the effects of higher energy prices to low-income households, while allowing price signals to operate, is welcome. Fully reaping the growth benefits from investment and improving absorption of the EU funding would require advancing planned project management and institutional reforms and efficient prioritization of public projects in response to surging costs of construction. Contingency planning should be a continual policy priority. Plans to roll back fiscal accommodation over the medium term should take account of fiscal space, internalize evolving public spending priorities, and be supplemented with mechanisms to increase fiscal policy countercyclicality. Should inflation fail to decline as expected, a more rapid and sizable fiscal consolidation may prove necessary to preserve macroeconomic stability.

39. Structural policies should further catalyze dynamic and inclusive growth while helping to contain price pressures. Well-tailored active labor market policies and other training programs are needed to reduce skills mismatches, foster an efficient reallocation of workers, and smoothly integrate Ukrainian refugees. While social policies have so far been effective in keeping inequality on a declining path, social gaps, including still-elevated old-age poverty, could be exacerbated by high food and energy prices. The recent increases in the subsistence allowance and the planned basic tax allowance for pensioners will support vulnerable households and the elderly. Continual monitoring of—and prompt further action to address—inequality and gender gaps is essential. Estonia's impressive gains in digital transition can be further consolidated and leveraged for increasing productivity, which is essential to safeguard competitiveness given the accelerating wage growth. Estonia adherence to SDDS-plus in January 2022, the highest tier of the Data Standards initiative, will promote data transparency and support the reform agenda.

40. The new task of securing alternative energy supplies should be pro-actively harmonized with climate commitments. Improving the security of energy supply requires prompt infrastructure investments and effective coordination with Baltic and Nordic peers, whose energy markets are closely integrated. In parallel, Estonia's European Green Deal commitment to achieve climate neutrality by 2050 should be safeguarded and operationalized, including through advancing the restructuring of the oil shale sector and accelerating green energy projects. While the envisioned investment in energy efficiency in the building and transport sectors would be important steps in supporting climate mitigation efforts, a comprehensive and predictable carbon pricing strategy remains critical to achieving the climate targets.

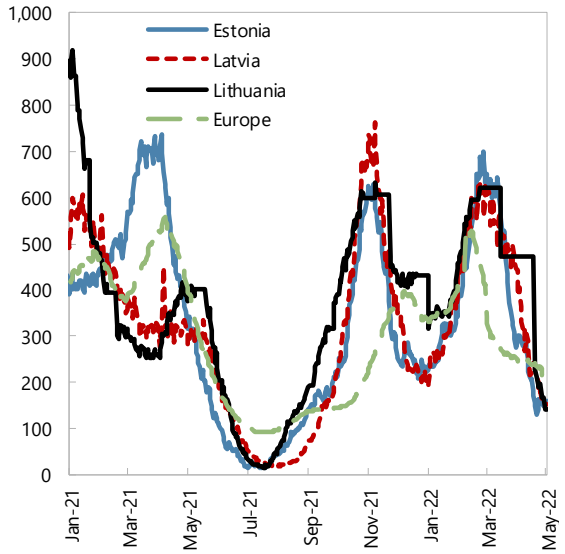
41. Financial supervisors and macroprudential policymakers should redouble vigilance and internalize new risks. The banking sector has remained stable and profitable and direct exposures of the financial sector to Russia, Ukraine, and Belarus appear to be limited. However, given the deterioration of the broad risk landscape, supervisory monitoring and vulnerability assessments should be intensified and tailored to the rising security risks, notably cybersecurity. The tightening of the countercyclical buffer is appropriate given the sustained upward momentum in house prices and

credit. The macroprudential policy stance should be continually re-assessed in line with cyclical and housing market conditions. AML-CFT measures are being strengthened through supervisory and legislative, but the supervisory capacity and powers of AML/CFT supervisors, particularly in the context of the risks posed by the Fintech sector, should be enhanced in line with the ML/TF risks.

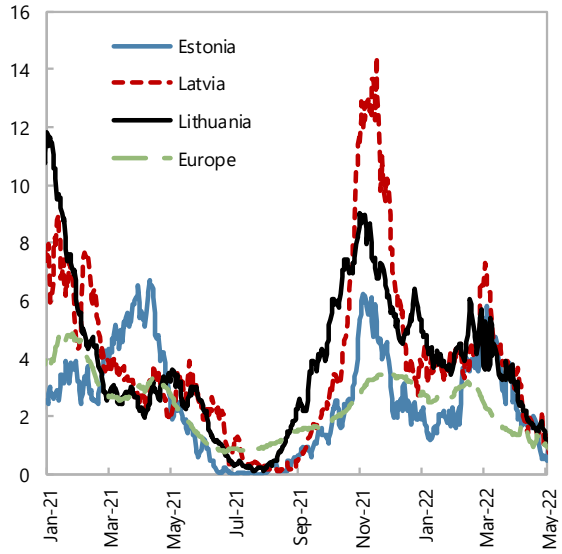
42. It is recommended that the next Article IV consultation be completed on the standard 12-month cycle.

Figure 1. Estonia: COVID-19 Developments, 2021–22

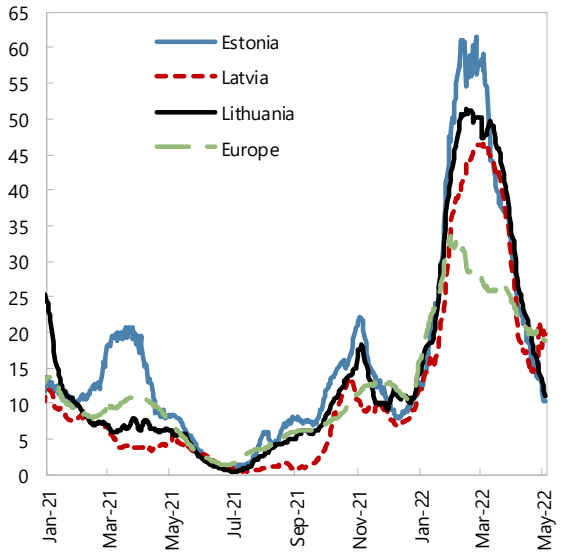
Daily Covid-19 Hospitalizations
(Patients per 1 million people; weighted by population)



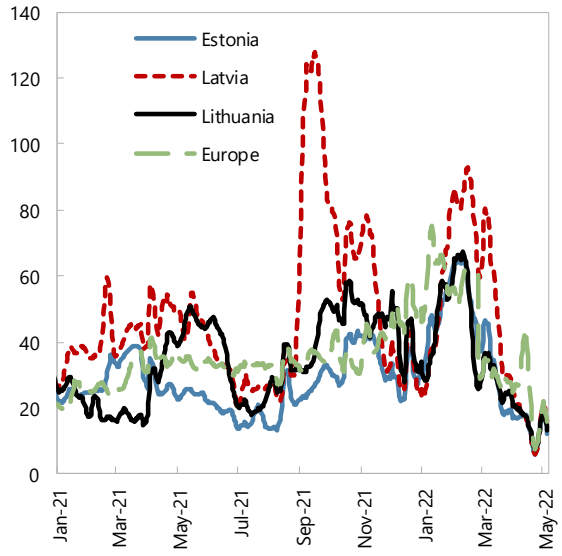
New Weekly Covid-19 Deaths
(7-day moving average cases per 100k people)



Positive Tests Rate
(7-day average positive tests rates; simple average)

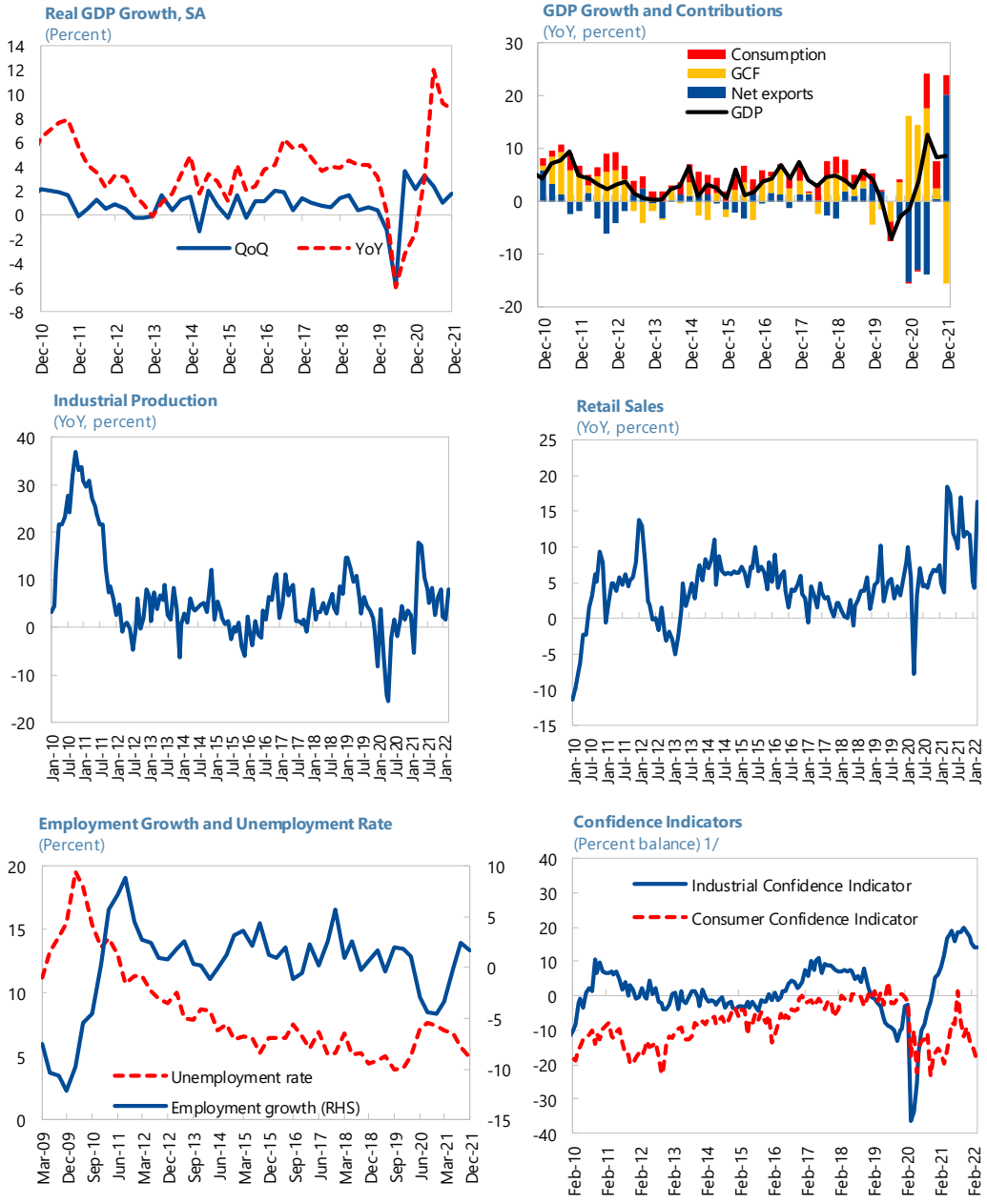


Weekly Covid-19 Tests
(7-day average tests, in thousands per 1 million people)



Sources: Bloomberg Finance L.P.; Our World in Data; IMF, WEO; and IMF Staff calculations

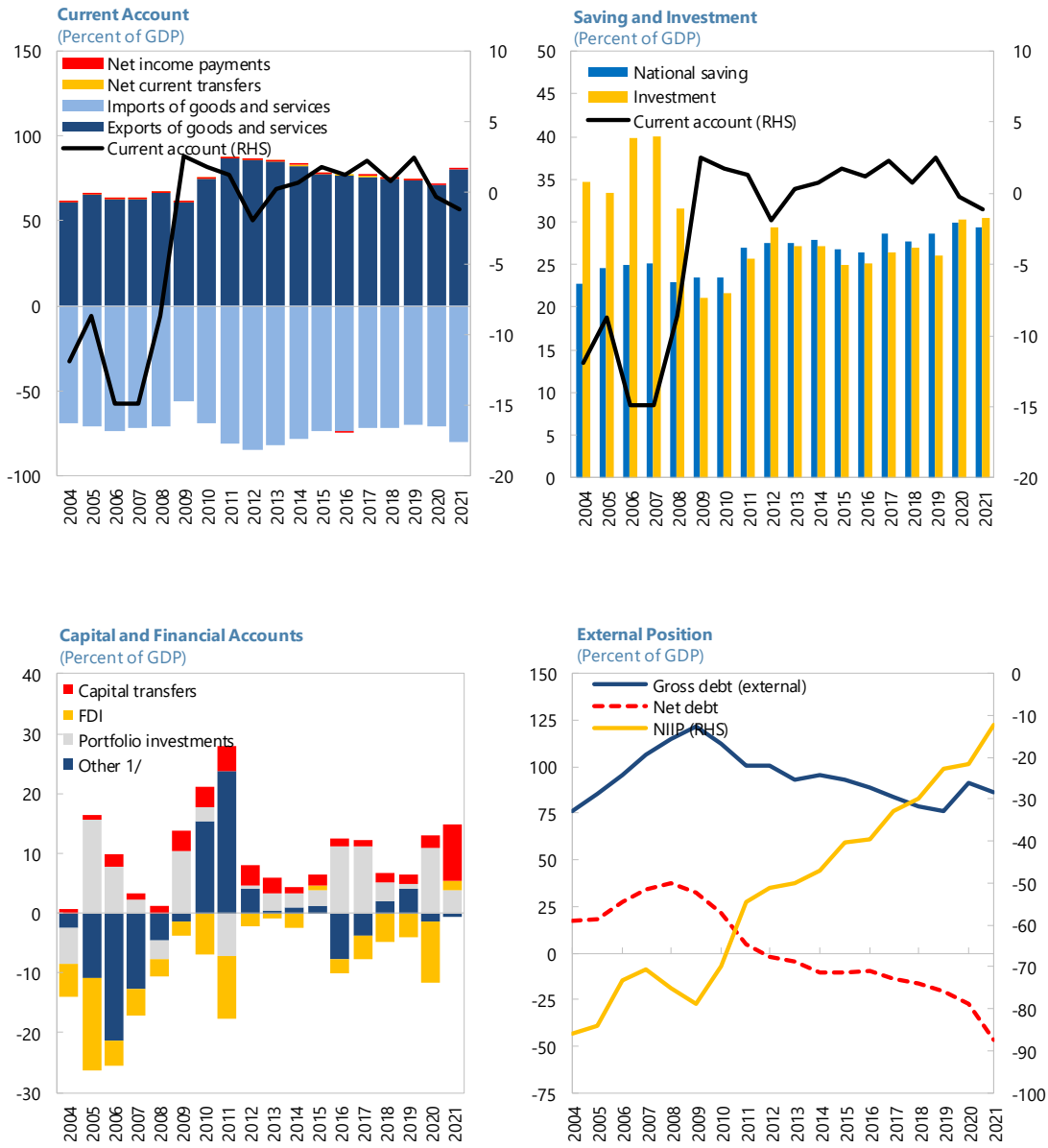
Figure 2. Estonia: Real Sector Developments, 2009–22



Sources: Haver; and national authorities.

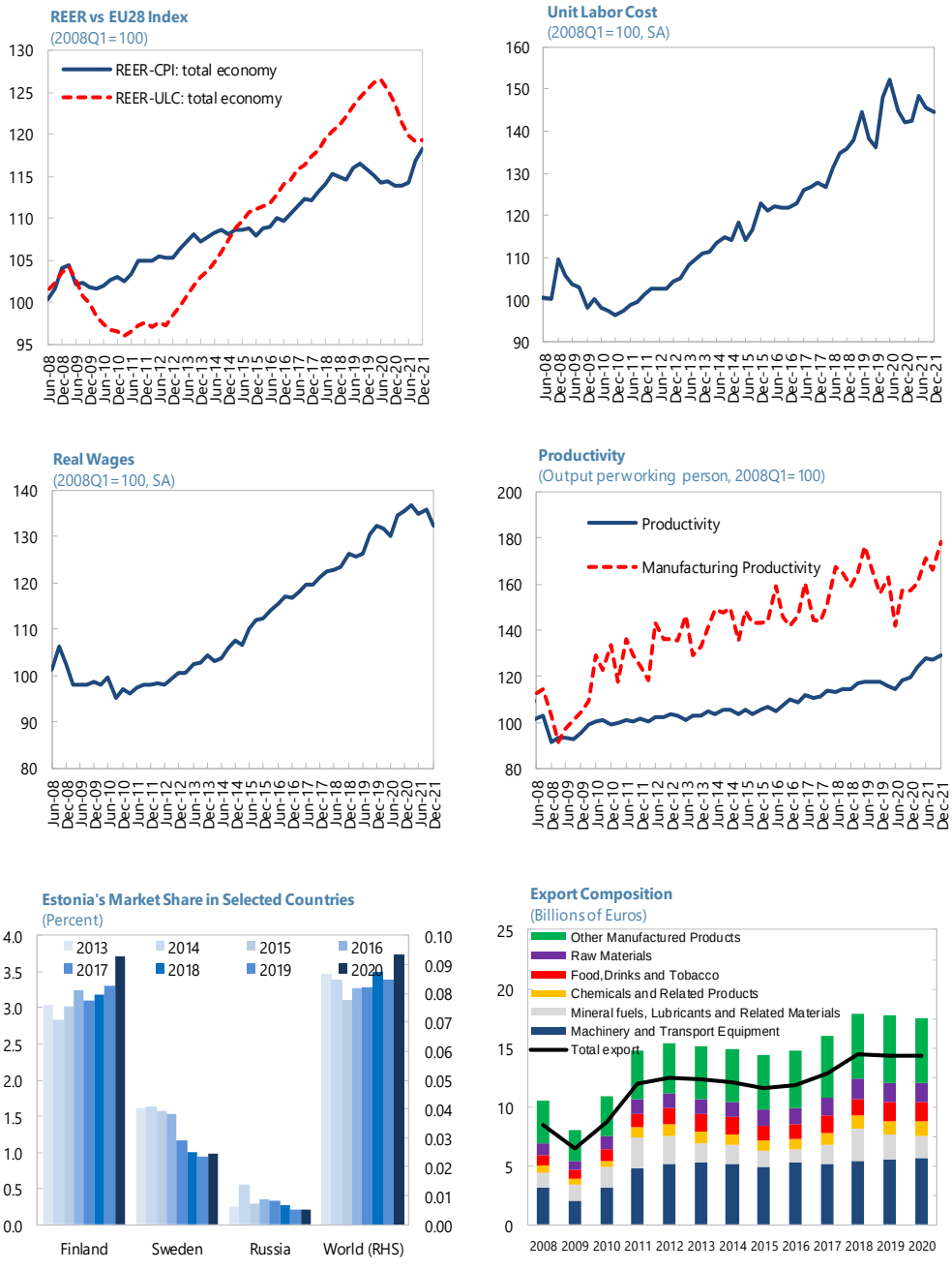
1/ Balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

Figure 3. Estonia: External Developments, 2004–21



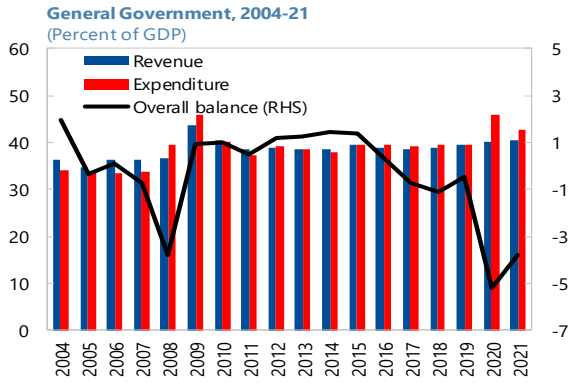
Sources: Haver; Statistics Estonia; and IMF staff calculations.
1/ Other is defined as the sum of financial derivatives, and other investments.

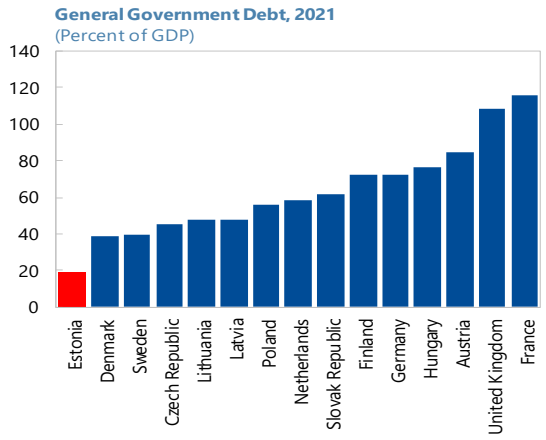
Figure 4. Estonia: External Competitiveness, 2008–21

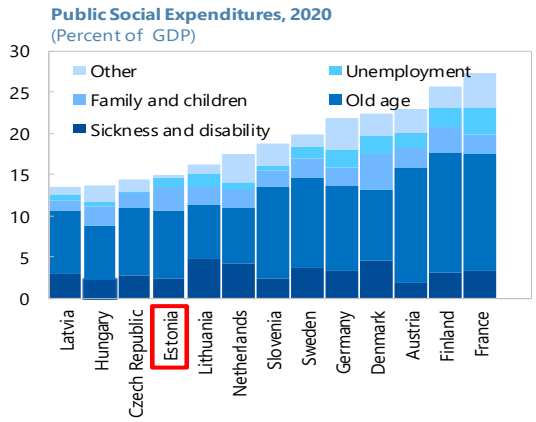


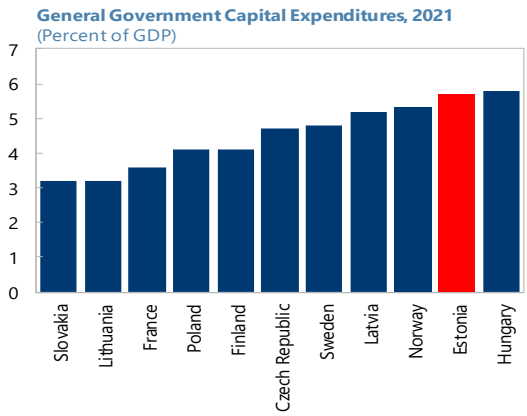
Sources: DOTS; Haver; WEO; and EU Commission.

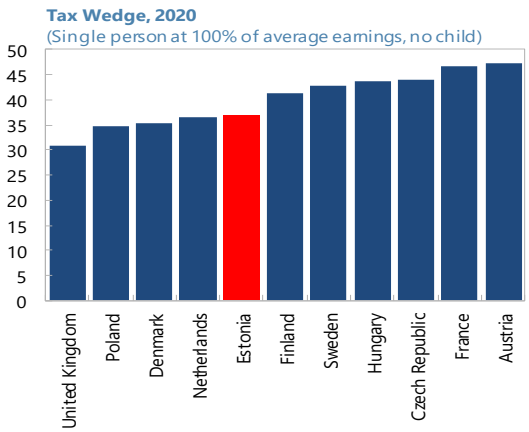
Figure 5. Estonia: Fiscal Developments and Structure, 2004–21

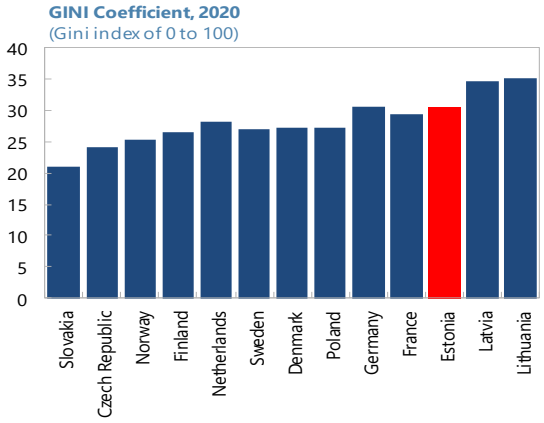






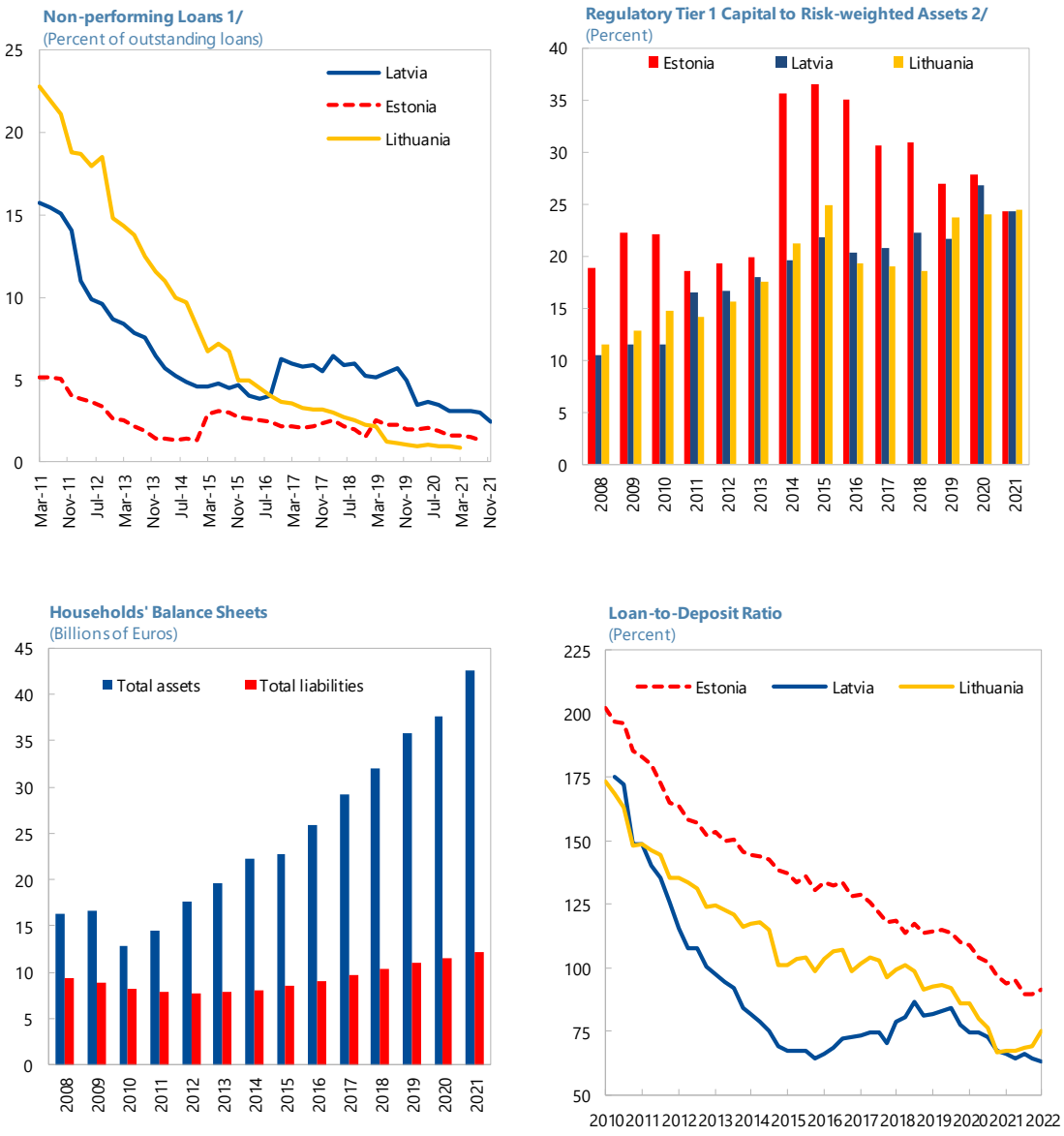






Sources: WEO; Eurostat; and OECD.

Figure 6. Estonia: Financial Sector Developments, 2008–22



Sources: Haver; national authorities; and IMF staff calculations.
1/ In Lithuania, NPLs include impaired loans and loans past due by 60 days but not impaired; in Latvia, NPLs are loans overdue by more than 90 days; in Estonia, they are loans overdue by more than 60 days.
2/ Latest data available for Lithuania is 2021Q1.

Figure 7. Estonia: Public Sector Debt Sustainability Analysis—Baseline Scenario

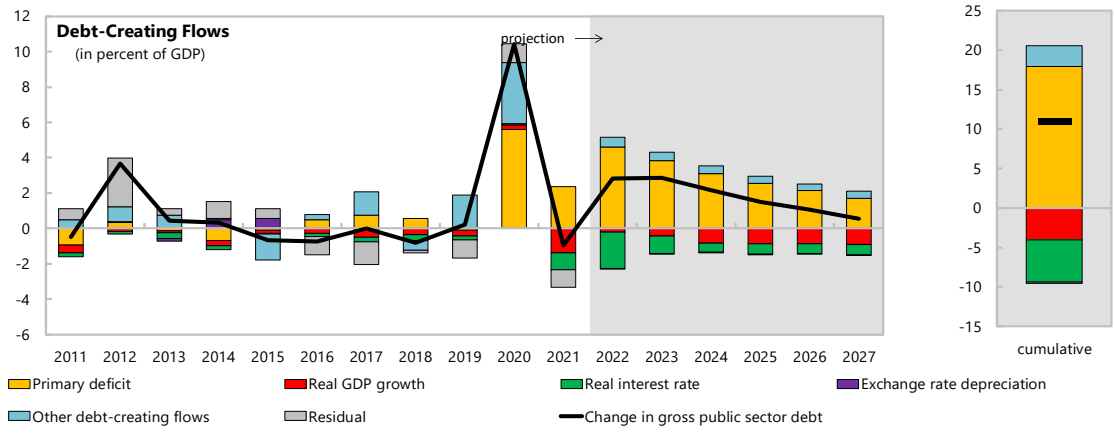
(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

	Actual			Projections						As of May 31, 2022		
	2011-2019 [2/]	2020	2021	2022	2023	2024	2025	2026	2027	Sovereign Spreads		
Nominal gross public debt	9.1	19.0	18.1	20.9	23.7	25.9	27.4	28.5	29.0	EMBIG (bp) 3/		82
Public gross financing needs	2.0	9.7	10.0	6.0	5.7	3.4	3.0	2.5	2.1	5Y CDS (bp)		68
Real GDP growth (in percent)	3.8	-3.0	8.3	1.2	2.2	3.8	3.6	3.3	3.3	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	3.4	-0.3	5.5	13.1	5.7	2.7	2.7	2.6	2.6	Moody's	A1	A1
Nominal GDP growth (in percent)	7.3	-3.2	14.3	14.5	8.0	6.6	6.4	6.0	6.0	S&Ps	AA-	AA-
Effective interest rate (in percent) [4/]	0.8	0.4	0.2	0.2	0.8	0.6	0.5	0.5	0.4	Fitch	AA-	AA-

Contribution to Changes in Public Debt

	Actual			Projections							
	2011-2019	2020	2021	2022	2023	2024	2025	2026	2027	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	0.2	10.4	-0.9	2.8	2.9	2.2	1.5	1.1	0.6	11.0	
Identified debt-creating flows	0.0	9.4	0.0	2.9	2.9	2.2	1.5	1.1	0.6	11.2	
Primary deficit	0.0	5.6	2.4	4.6	3.8	3.1	2.6	2.1	1.7	18.0	-1.1
Primary (noninterest) revenue and grants	38.8	40.2	39.9	38.6	39.1	39.6	40.1	40.2	40.3	237.9	
Primary (noninterest) expenditure	38.8	45.8	42.3	43.2	42.9	42.7	42.7	42.3	42.0	255.9	
Automatic debt dynamics [5/]	-0.4	0.3	-2.3	-2.2	-1.4	-1.3	-1.4	-1.4	-1.5	-9.4	
Interest rate/growth differential [6/]	-0.5	0.3	-2.3	-2.2	-1.4	-1.3	-1.4	-1.4	-1.5	-9.4	
Of which: real interest rate	-0.2	0.1	-1.0	-2.1	-1.0	-0.5	-0.6	-0.6	-0.6	-5.3	
Of which: real GDP growth	-0.3	0.3	-1.4	-0.2	-0.4	-0.8	-0.9	-0.9	-0.9	-4.1	
Exchange rate depreciation [7/]	0.1	0.0	0.0	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.4	3.5	0.0	0.5	0.5	0.4	0.4	0.4	0.4	2.6	
Currency and deposits (negative)	0.4	3.4	0.0	0.5	0.5	0.4	0.4	0.4	0.4	2.6	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2) (e.g., ESM and Euroarea loans)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	0.2	1.1	-1.0	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data.

3/ Long-term bond spread over German bonds.

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

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

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

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

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

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

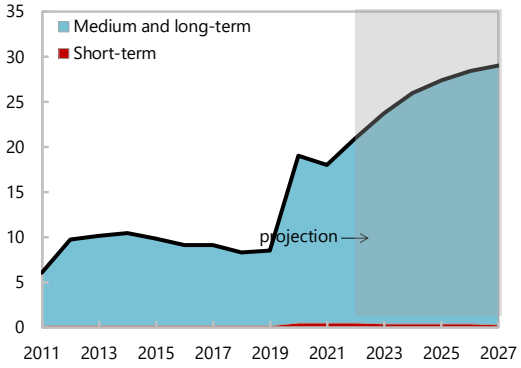
Figure 8. Estonia: Public Debt Sustainability Analysis—Composition of Public Debt and Alternative Scenarios

(in percent of GDP unless otherwise indicated)

Composition of Public Debt

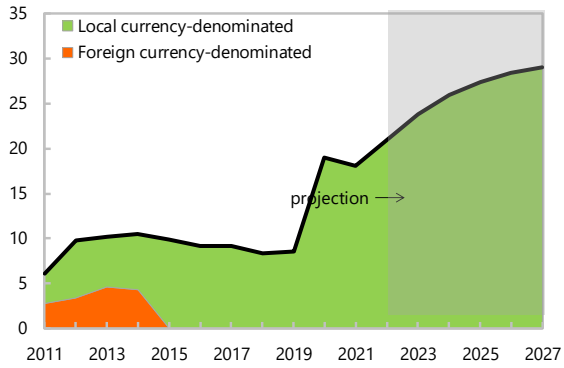
By Maturity

(in percent of GDP)

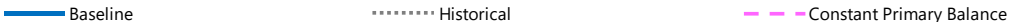


By Currency

(in percent of GDP)

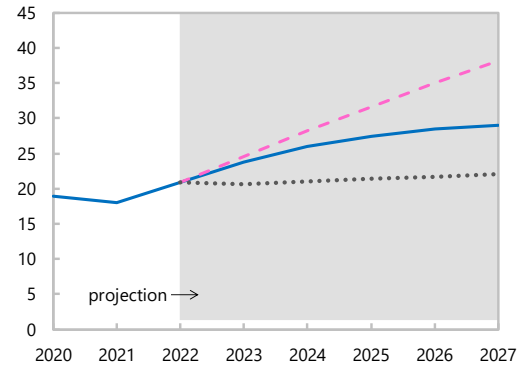


Alternative Scenarios



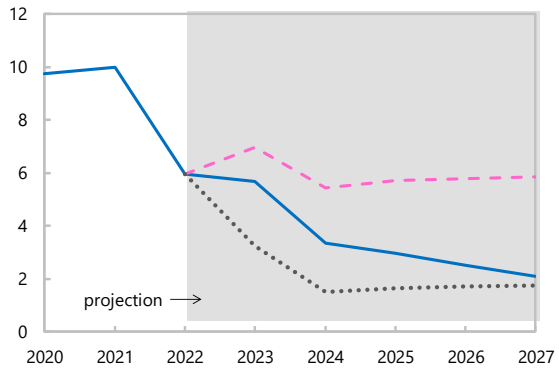
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

Baseline Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	1.2	2.2	3.8	3.6	3.3	3.3
Inflation	12.6	5.7	2.7	2.7	2.6	2.6
Primary Balance	-4.6	-3.8	-3.1	-2.5	-2.1	-1.7
Effective interest rate	0.2	0.8	0.6	0.5	0.5	0.5
Constant Primary Balance Scenario						
Real GDP growth	1.2	2.2	3.8	3.6	3.3	3.3
Inflation	12.6	5.7	2.7	2.7	2.6	2.6
Primary Balance	-4.6	-4.6	-4.6	-4.6	-4.6	-4.6
Effective interest rate	0.2	0.7	0.7	0.6	0.6	0.6

Historical Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	1.2	3.2	3.2	3.2	3.2	3.2
Inflation	12.6	5.7	2.7	2.7	2.6	2.6
Primary Balance	-4.6	-0.9	-0.9	-0.9	-0.9	-0.9
Effective interest rate	0.2	0.7	1.0	1.1	1.2	1.4

Source: IMF staff Calculations.

Table 1. Estonia: Selected Macroeconomic and Social Indicators, 2019–27
(Units as indicated)

	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Est.	Projections				
National income, prices, and wages									
GDP (nominal; billions of Euro)	27.7	26.8	30.7	35.1	37.9	40.4	43.0	45.6	48.3
Annual change (in percent)	7.4	-3.2	14.3	14.5	8.0	6.6	6.4	6.0	6.0
Real GDP growth (year-on-year in percent) 1/	4.1	-3.0	8.3	1.2	2.2	3.8	3.6	3.3	3.3
Private consumption	3.9	-2.7	6.6	2.5	2.5	3.5	3.5	3.5	3.5
Gross fixed capital formation	6.1	19.9	3.3	-8.0	4.0	6.0	6.5	6.0	5.5
Exports of goods and services	6.5	-5.0	19.8	-1.4	4.4	3.4	3.4	3.3	3.4
Imports of goods and services	3.8	0.9	20.7	-5.8	4.2	4.4	4.4	4.1	3.9
Average HICP (year-on-year change in percent)	2.3	-0.6	4.5	16.8	6.7	2.5	2.4	2.4	2.4
GDP deflator (year-on-year change in percent)	3.2	-0.3	5.5	13.1	5.7	2.7	2.7	2.6	2.6
Average monthly wage (year-on-year growth in percent)	7.4	2.9	6.9	9.5	8.0	6.0	5.0	4.8	4.5
Unemployment rate (ILO definition, percent, pa)	4.4	6.8	6.2	7.2	6.9	6.6	6.2	5.5	4.8
Average nominal ULC (year-on-year growth in percent)	5.5	5.7	-1.1	7.8	6.8	3.1	1.6	2.0	1.7
General government (ESA10 basis; percent of GDP)									
Revenue	39.6	40.3	40.0	38.7	39.1	39.7	40.1	40.2	40.3
Expenditure	39.4	45.9	42.3	43.3	43.0	42.9	42.8	42.4	42.1
Financial surplus (+) / deficit (-)	0.1	-5.6	-2.4	-4.6	-3.9	-3.2	-2.6	-2.2	-1.8
Structural balance	-0.5	-5.1	-3.8	-4.7	-3.8	-3.3	-2.8	-2.3	-1.8
Total general government debt	8.6	19.0	18.1	20.9	23.7	25.9	27.4	28.5	29.0
Net government debt 2/	-2.2	3.0	4.6	9.1	12.8	15.7	17.8	19.4	20.5
External sector (percent of GDP)									
Merchandise trade balance	-3.4	-0.6	-4.3	-5.2	-5.1	-5.4	-5.6	-5.8	-5.9
Service balance	7.5	1.0	4.5	7.1	7.3	7.0	6.7	6.5	6.4
Primary income balance	-1.9	-0.9	-1.9	-1.9	-1.6	-1.4	-1.3	-1.2	-1.0
Current account	2.5	-0.3	-1.6	0.1	0.6	0.2	-0.1	-0.4	-0.4
Gross external debt/GDP (percent) 3/	76.3	91.1	86.8	78.4	75.2	73.5	72.0	70.9	69.9
Exchange rate (US$/Euro - period averages)	1.12	1.14	1.18	...	...	...	...	...	...
Real effective exchange rate (annual changes in percent)	-0.2	0.7	1.7	...	...	...	...	...	...
Nominal effective exchange rate (annual changes in percent)	-0.3	2.6	0.5	...	...	...	...	...	...
Money and credit (year-on-year growth in percent)									
Credit to the economy	3.9	3.8	6.5	...	...	...	...	...	...
Output gap (in percent of potential output)	2.1	-3.1	1.2	-0.1	-0.5	0.1	0.3	0.2	0.0
Growth rate of potential output (in percent)	4.0	2.2	3.8	2.6	2.6	3.1	3.4	3.4	3.5

Social Indicators (reference year):
Population (2021, pa): 1.33 million; Per capita GDP (2020): $23,050; Life expectancy at birth: 82.7 (female) and 74.2 (male);
Poverty rate (share of the population below the established risk-of-poverty line): 22.2 percent; Main exports: machinery and appliances.

Sources: Estonian authorities; Eurostat; and IMF staff estimates and projections.
1/ Statistics Estonia revised National Accounts series in August 2019 inter alia shifting reference year to 2015 and improving the methodology.
2/ Includes the Stabilization Reserve Fund (SRF).
3/ Includes trade credits.

Table 2. Estonia: Summary of General Government Operations, 2019–27

(In percent of GDP)

	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Est.	Projections				
Revenue and Grants	39.6	40.3	40.0	38.7	39.1	39.7	40.1	40.2	40.3
Revenue	37.4	37.8	37.7	36.4	36.4	37.0	37.5	37.7	37.8
Tax revenue	21.6	21.4	22.2	21.5	21.3	21.5	21.8	21.9	22.0
Direct taxes	7.4	7.8	8.6	7.8	7.6	7.6	7.7	7.7	7.8
Personal income tax	5.5	6.2	7.0	6.3	6.0	6.0	6.1	6.0	6.1
Corporate profits tax	1.8	1.7	1.6	1.5	1.5	1.6	1.6	1.7	1.7
Indirect taxes	14.2	13.6	13.7	13.7	13.7	13.9	14.1	14.2	14.2
VAT	9.0	9.1	9.4	9.2	9.1	9.1	9.1	9.2	9.2
Excises	4.1	3.3	3.2	3.4	3.6	3.7	3.9	4.0	4.0
Other taxes (incl. land tax)	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Social contributions	12.0	12.7	12.2	11.6	11.8	12.1	12.2	12.2	12.3
Pension insurance (net)	5.8	6.1	5.9	5.7	5.8	6.0	5.9	5.9	5.9
Health insurance	4.5	4.7	4.5	4.4	4.3	4.3	4.5	4.4	4.5
Unemployment insurance tax	1.3	1.5	1.4	1.2	1.3	1.3	1.3	1.4	1.4
Other (incl. self employed)	0.3	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.5
Nontax revenue	3.8	3.6	3.2	3.3	3.3	3.4	3.6	3.6	3.6
O/w: Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	2.2	2.5	2.3	2.3	2.7	2.7	2.6	2.5	2.5
O/w: EU	1.9	2.2	2.0	1.9	2.4	2.5	2.5	2.4	2.4
Expenditure	39.4	45.9	42.3	43.3	43.0	42.9	42.8	42.4	42.1
Expense (current expenditure)	34.5	40.0	36.7	36.3	36.0	35.7	35.4	35.4	35.4
Compensation of employees	11.0	12.0	11.2	11.0	10.8	10.8	10.8	10.8	10.8
Wages and salaries	8.0	8.8	8.1	8.0	7.9	7.9	7.9	7.8	7.8
Employers' social contributions	2.9	3.3	3.0	3.0	3.0	3.0	3.0	2.9	2.9
Other goods and services	6.6	6.6	6.4	6.5	6.5	6.4	6.4	6.4	6.4
Transfers and subsidies	17.0	21.4	19.1	18.9	18.7	18.4	18.1	18.2	18.2
Subsidies	0.5	1.7	1.0	0.8	0.7	0.6	0.4	0.4	0.4
Transfers to households	14.3	16.5	15.3	15.1	15.2	15.3	15.3	15.5	15.5
Social benefits	12.3	14.1	12.8	12.7	12.7	12.8	13.1	13.2	13.2
Social transfers in kind	2.0	2.4	2.5	2.5	2.5	2.5	2.3	2.3	2.3
Other transfers	2.2	3.1	2.9	3.0	2.8	2.6	2.3	2.3	2.3
Property income	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
O/w: Interest	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Other current transfers	1.8	2.2	2.3	2.0	2.0	1.9	1.8	1.8	1.8
Capital transfers	0.4	0.9	0.6	0.9	0.7	0.6	0.4	0.4	0.4
Net acquisition of NFA (capital expenditure)	4.9	5.9	5.6	6.9	7.0	7.2	7.4	7.0	6.7
Acquisition	5.0	6.0	5.7	...	...	...	...	...	...
Disposal	-0.1	-0.1	-0.1	...	...	...	...	...	...
Financial surplus (+) / deficit (-)	0.1	-5.6	-2.4	-4.6	-3.9	-3.2	-2.6	-2.2	-1.8
One-off items	-0.1	0.5	1.0	0.2	0.0	0.0	0.0	0.0	0.0
Cyclical adjustment	0.7	-1.0	0.4	0.0	-0.2	0.0	0.1	0.1	0.0
Structural balance	-0.5	-5.1	-3.8	-4.7	-3.8	-3.3	-2.8	-2.3	-1.8
Financing (accrual basis)	-0.1	6.7	2.1	4.6	3.9	3.2	2.6	2.2	1.8
Net incurrence of liabilities	1.4	11.3	3.0	5.1	4.4	3.7	3.1	2.6	2.2
Net acquisition of financial assets	1.5	4.7	0.9	0.5	0.5	0.4	0.4	0.4	0.4
Other and Errors and Omissions	0.0	1.1	-0.3	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, 2016–21

(In millions of euros)

	2016	2017	2018	2019	2020	2021
Total Assets	**9,059**	**9,405**	**9,595**	**9,657**	**11,007**	**11,820**
Fiscal reserves	2,144	2,146	2,149	2,553	2,941	3,479
Currency and deposits	1,063	1,368	1,220	1,738	2,173	2,651
Securities other than shares, excl. financial derivatives	825	527	645	526	430	475
Short-term securities, excl. financial derivatives	470	270	256	242	214	132
Long-term securities, excl. financial derivatives	356	257	389	284	217	343
Financial derivatives	0	0	0	0	0	0
Other	256	252	284	290	338	353
Loans	706	713	724	719	997	1,011
Short-term	5	4	4	3	2	3
Long-term	701	708	720	716	995	1,009
Equity	5,186	5,539	5,585	5,225	5,718	5,917
Other	1,023	1,007	1,137	1,159	1,351	1,413
Total Liabilities 1/	**2,979**	**3,128**	**3,351**	**3,748**	**6,802**	**7,778**
Securities other than shares, excl. financial derivatives	221	264	194	248	2,261	2,001
O/W: Long-term securities, excl. financial derivatives	221	264	194	148	1,636	1,601
Loans	1,927	1,894	1,931	2,116	3,077	3,493
Short-term	7	8	5	4	2	3
Long-term	1,920	1,885	1,925	2,112	3,075	3,491
Other accounts receivable/payable	770	908	1,172	1,322	1,395	2,151

Source: Statistics Estonia.

1/ Including commitments under the European Financial Stability Fund.

Table 4. Estonia: Summary Balance of Payments, 2019–27

	2019	2020	2021	2022	2023	2024	2025	2026	2027
				Est.	Projections				
	(Millions of Euros)								
Current Account	700	-69	-497	41	220	91	-52	-185	-207
Primary Current Account 1/	2,867	1,663	1,971	2,533	2,713	2,584	2,440	2,308	2,285
Trade Balance	1,153	129	49	677	819	652	488	316	253
Exports of goods	13,340	13,387	16,323	18,373	18,959	19,800	20,759	21,722	22,730
Imports of goods	14,270	13,535	17,655	20,185	20,909	21,983	23,170	24,356	25,578
Services Balance	2,083	277	1,381	2,489	2,769	2,835	2,899	2,950	3,101
Exports of services	7,195	5,713	8,364	8,263	8,946	9,512	10,114	10,671	11,332
Imports of services	5,113	5,436	6,983	5,774	6,177	6,677	7,215	7,722	8,231
of witch: imports of computer services	576	2,208	2,461	...	...	...	...	...	...
Primary Income	-517	-248	-585	-657	-620	-583	-563	-525	-486
Receipts	1,650	1,485	1,883	1,836	1,872	1,910	1,929	1,967	2,007
Payments	2,167	1,732	2,468	2,492	2,492	2,492	2,492	2,492	2,492
Secondary Income	65	49	40	20	21	22	23	24	26
Capital Account	479	566	2,802	575	621	662	705	747	792
Net lending (+) / borrowing (-) balance	1,179	497	2,306	616	842	754	652	562	585
Financial Account	848	97	1,951	616	842	754	652	562	585
Direct investment	-1,088	-2,780	-464	-1,088	-1,110	-1,132	-1,240	-1,235	-1,230
Assets	1,629	275	5,521	1,629	1,662	1,695	1,729	1,763	1,799
Liabilities	2,718	3,055	5,985	2,718	2,772	2,827	2,969	2,998	3,028
Portfolio investment	198	2,891	2,257	1,890	1,701	1,608	1,521	1,438	1,373
Financial derivatives	-32	-46	-32	-28	-26	-23	-21	-19	-17
Loans and other investments (net) 2/	1,174	-306	-232	694	681	666	629	470	413
Change in reserves	596	338	421	-852	-405	-365	-237	-92	46
Errors and Omissions	-332	-400	-354	0	0	0	0	0	0
	(In percent of GDP, unless otherwise specified)								
Current Account	2.5	-0.3	-1.6	0.1	0.6	0.2	-0.1	-0.4	-0.4
Trade balance	4.2	0.5	0.2	1.9	2.2	1.6	1.1	0.7	0.5
Service balance	7.5	1.0	4.5	7.1	7.3	7.0	6.7	6.5	6.4
Primary income balance	-1.9	-0.9	-1.9	-1.9	-1.6	-1.4	-1.3	-1.2	-1.0
Secondary income balance	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net lending (+) / borrowing (-) balance	4.3	1.9	7.5	1.8	2.2	1.9	1.5	1.2	1.2
Exports of goods and services (growth in percent)	6.8	-7.0	29.3	7.9	4.8	5.0	5.3	4.9	5.2
Imports of goods and services (growth in percent)	4.5	-2.1	29.9	5.4	4.3	5.8	6.0	5.6	5.4
Net FDI from abroad	3.9	10.4	1.5	3.1	2.9	2.8	2.9	2.7	2.5
Total external debt 3/									
Gross	76.3	91.1	86.8	78.4	75.2	73.5	72.0	70.9	69.9

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, 2019–27

(Percent of GDP, unless otherwise indicated)

	2019	2020	2021	2022	2023	2024	2025	2026	2027
			Est.	Projections					
Real GDP growth (percent)	4.1	-3.0	8.3	1.2	2.2	3.8	3.6	3.3	3.3
Domestic demand real growth (percent)	2.8	3.3	7.7	-2.6	2.0	4.7	4.5	4.0	3.7
Final consumption real growth (percent)	3.8	-1.1	5.7	1.9	1.8	3.1	3.3	3.3	3.3
Capital formation real growth (percent)	0.2	14.4	11.9	-11.7	2.2	8.3	7.2	5.6	4.6
Fixed capital formation real growth (percent)	6.1	19.9	3.3	-8.0	4.0	6.0	6.5	6.0	5.5
Net exports contribution to real GDP (ppts)	2.2	-4.6	-0.9	3.8	0.3	-0.7	-0.8	-0.7	-0.4
Exports real growth (percent)	6.5	-5.0	19.8	-1.4	4.4	3.4	3.4	3.3	3.4
Imports real growth (percent)	3.8	0.9	20.7	-5.8	4.2	4.4	4.4	4.1	3.9
Statistical discrepancy contribution to real GDP (ppts)	-0.7	-1.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Gross saving	28.6	30.0	28.9	26.9	26.6	27.2	27.5	27.6	27.7
Private	23.6	29.7	25.6	24.6	23.6	23.2	22.8	22.8	22.8
Public	5.0	0.3	3.3	2.3	3.1	4.0	4.7	4.8	4.9
Investment	26.1	30.2	30.5	26.8	26.1	27.0	27.7	28.0	28.2
O/w: Fixed investment	25.4	30.7	28.6	26.1	25.8	26.2	26.7	27.1	27.5
Private	20.5	24.7	22.9	19.2	18.9	19.0	19.3	19.9	20.5
Public	5.0	6.0	5.7	6.9	7.0	7.2	7.4	7.2	7.0
Current account	2.5	-0.3	-1.6	0.1	0.6	0.2	-0.1	-0.4	-0.4
Memorandum items:									
Fiscal balance 1/	0.1	-5.6	-2.4	-4.6	-3.9	-3.2	-2.6	-2.2	-1.8
Revenues	39.6	40.3	40.0	38.7	39.1	39.7	40.1	40.2	40.3
Expenditure	39.4	45.9	42.3	43.3	43.0	42.9	42.8	42.4	42.1
Structural balance	-0.5	-5.1	-3.8	-4.7	-3.8	-3.3	-2.8	-2.3	-1.8
Total general government debt	8.6	19.0	18.1	20.9	23.7	25.9	27.4	28.5	29.0
Net non-debt creating capital inflows ("+" inflow)	12.2	24.3	36.0	14.8	13.4	12.6	12.1	11.4	10.7
Capital transfers 2/	1.7	2.1	9.1	1.6	1.6	1.6	1.6	1.6	1.6
Portfolio investment (net)	0.7	10.8	7.4	5.4	4.5	4.0	3.5	3.2	2.8
FDI liabilities	9.8	11.4	19.5	7.7	7.3	7.0	6.9	6.6	6.3
	2.3	-0.6	4.5	16.8	6.7	2.5	2.4	2.4	2.4
Unemployment rate (percent)	4.4	6.8	6.2	7.2	6.9	6.6	6.2	5.5	4.8
Average wage growth (percent)	7.4	2.9	6.9	9.5	8.0	6.0	5.0	4.8	4.5
Labor compensation share of GDP	48.9	51.8	48.6	46.4	46.9	47.0	46.5	46.2	45.8
Output gap (in percent of potential output)	2.1	-3.1	1.2	-0.1	-0.5	0.1	0.3	0.2	0.0
Growth rate of potential output (in percent)	4.0	2.2	3.8	2.6	2.6	3.1	3.4	3.4	3.5

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: Indicators of External Vulnerability, 2016–21

(Percent of GDP, unless otherwise indicated)

	2016	2017	2018	2019	2020	2021
External Indicators						
Exports of goods and services (year-on-year, percent)	4.8	7.9	6.4	6.8	-7.0	29.3
Imports of goods and services (year-on-year, percent)	5.3	7.1	8.5	4.5	-2.1	29.9
Current account balance	1.2	2.3	0.8	2.5	-0.3	-1.6
Capital and financial account balance	2.3	3.2	2.2	4.3	1.9	7.5
Total external debt 1/	88.7	83.4	78.2	76.3	91.1	86.8
Debt service to exports of GNFS	69.5	61.2	51.5	46.4	57.5	49.8
External interest payments to exports of GNFS (percent)	1.9	1.7	1.6	1.5	1.7	1.3
External amortization payments to exports of GNFS (percent)	67.7	59.4	49.5	44.3	55.7	48.2
Exchange rate (per US$, period average)2/	1.11	1.13	1.18	1.12	1.14	1.18
Financial Market Indicators						
Stock market index 3/	1076	1242	1163	1280	1344	2001
Foreign currency debt rating 4/	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 7. Estonia: Households, Financial Assets and Liabilities, 2015–21

(In millions of euros)

	2015	2016	2017	2018	2019	2020	2021
Total Assets	**22,741**	**25,904**	**29,266**	**32,025**	**35,755**	**37,605**	**42,521**
Currency and deposits	6,503	7,040	7,263	7,983	8,591	9,761	11,572
Securities other than shares	58	65	68	83	115	114	126
Shares and other equity	12,484	14,539	17,144	18,814	20,862	21,003	29,087
Insurance technical reserves	3,144	3,589	4,150	4,458	5,356	5,910	648
Other	552	671	641	687	831	817	1,088
Total Liabilities	**8,488**	**8,996**	**9,679**	**10,298**	**11,043**	**11,578**	**12,243**
Loans	7,934	8,404	9,045	9,585	10,283	10,786	11,412
Short-term	202	153	169	255	279	261	223
Long-term	7,732	8,251	8,876	9,330	10,003	10,525	11,188
Other	554	592	634	713	760	792	831
Net Financial Assets	**14,253**	**16,908**	**19,587**	**21,727**	**24,712**	**26,027**	**30,278**
Memorandum item							
Liabilities to gross wages and salaries ratio	116.3	115.9	114.6	112.3	109.9	112.4	110.8

Sources: Eesti Pank; and Statistics Estonia.

Table 8. Estonia: Financial Soundness Indicators, 2015–21

(Percent)

	2015	2016	2017	2018	2019	2020	2021
Capital adequacy							
Regulatory capital to risk-weighted assets	36.5	35.1	30.6	31.0	27.0	27.9	24.3
Regulatory Tier I capital to risk-weighted assets	36.0	34.5	30.1	30.4	26.6	27.3	23.5
NPLs net of provisions to capital	7.5	4.8	7.8	5.0	5.8	4.1	2.2
Asset composition and quality							
NPLs to gross loans (non-financial sector)	2.8	2.2	2.4	1.6	2.0	1.6	1.1
Sectoral distribution of loans to non-financial sector:							
Loans to households 1/	44.3	42.5	44.4	44.9	46.2	46.2	45.5
Loans to non-financial corporations 1/	41.4	40.8	37.7	37.5	35.9	35.7	35.4
Earnings and profitability							
Return on assets	2.1	2.5	2.2	2.0	1.4	1.1	1.2
Return on equity	6.8	13.9	11.4	10.8	8.8	7.3	9.4
Interest margin to gross income	57.0	54.5	57.9	59.8	59.2	60.7	62.6
Noninterest expenses to gross income	45.9	43.4	46.8	47.2	56.3	55.5	57.2
Liquidity							
Liquid assets to total short-term liabilities	29.2	31.5	28.1	26.4	25.0	30.6	31.0
Loans to deposits 1/	105.0	103.8	118.7	114.4	105.5	90.0	91.3

Sources: IFS database, Eesti Pank, and Financial Supervisory Authority.
1/ Data is as of 2021Q3.

Annex I. External Sector Assessment[1]

Overall Assessment: *Estonia's external position is substantially stronger than implied by medium-term fundamentals and desirable policies, despite a moderate current account deficit in 2021 that was explained by a temporary spike in imports of computer services. Over the medium term, the current account balance is expected to converge toward the norm. Estonia's net international investment position has been improving and is expected to follow a similar trajectory over the medium term.*

Potential Policy Responses: *In the short term, fiscal policy should continue to play a key role in responding to the pandemic and mitigating the impact from the war. Macroprudential policies should focus on preventing/containing real estate imbalances and reducing financial sector risks. Structural policies to increase productivity and the resilience of the economy to future shocks, including increasing capital investment and health spending, would help mitigate risks of long-term scarring. 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) continued to increase but remained negative at -13.3 percent of GDP in 2021. The NIIP increased by about 10 percent of GDP from 2019. The negative NIIP largely reflects the net inflow of FDI, followed by net inflow of other investments. After increasing in 2020 by 15 percentage points to 91 percent of GDP reflecting the impact of the COVID-19 shock, gross external debt returned to the declining trend in 2021, falling by 4 percentage points to about 87 percent of GDP. Government fiscal reserves remain large (at about 11 percent of GDP at end-2021).

Assessment. The current NIIP and its projected path do not imply risks to external sustainability or a need for a substantial CA adjustment. Estonia's NIIP compares favorably with many of its European peers, and further improvement, as expected, will enhance its resilience against shocks given aging-related pressures and the volatility of portfolio flows.

2021 (% GDP)	NIIP: -13.3	Gross Assets: 188.1	Debt Assets: 46.1	Gross Liab.: 201.4	Debt Liab.: 12.3

Current Account

Background. Estonia's current account (CA) was in a deficit position in 2021 (1.6 percent of GDP) for a second consecutive year (after many years of surpluses), due to an exceptional surge in software services imports. In 2021, both exports and imports of goods and services recovered sharply from the COVID-19 shock in 2020, with exports increasing by 29.3 percent, and imports by 29.5 percent. Imports included a large temporary component related to computer services in that occurred over 2020–21 (9½ percent of GDP over two years), linked to a foreign direct investment operation that acquired intangible fixed assets for the development of software. The goods trade balance was in a deficit of 4.3 percent of GDP. The services balance improved in 2021 relative to 2020, to 4.5 percent of GDP, but was lower than the 7.5 percent of GDP pre-pandemic average level of 2016–19.

Estonia: EBA-lite Model Results, 2021

	CA model 1/	REER model 1/
	(in percent of GDP)	
CA-Actual	**-1.6**	
Cyclical contributions (from model) (-)	-0.3	
COVID-19 adjustor (-) 2/	-0.3	
Additional temporary/statistical factors (-)	-3.5	
Natural disasters and conflicts (-)	-0.2	
Adjusted CA	**2.7**	
CA Norm (from model) 3/	**-1.5**	
Adjustments to the norm (-)	0.0	
Adjusted CA Norm	**-1.5**	
CA Gap	**4.2**	**-2.6**
o/w Relative policy gap	3.5	
Elasticity	-0.53	
REER Gap (in percent)	**-7.9**	**4.8**

1/ Based on the EBA-lite 3.0 methodology
2/ Additional cyclical adjustment to account for the temporary impact of the tourism (0.3 percent of GDP).
3/ Cyclically adjusted, including multilateral consistency adjustments.

[1] Prepared by Bogdan Lissovolik.

- **Assessment. The CA position in 2021 is substantially stronger than implied by fundamentals and desirable policies.** The EBA-lite CA methodology suggests that Estonia has a multilaterally consistent CA deficit norm of 1.5 percent of GDP (text table). However, in 2021, its adjusted current account, net of cyclical and one-off factors, was in a surplus of 2.7 percent of GDP. This leads to a CA gap of 4.2 percent of GDP. The estimated policy gap is 3½ percent of GDP, partly explained by the need to reduce the fiscal deficit while increasing public health spending. Going forward, the current account dynamics would be shaped by two countervailing forces. On the one hand, the temporary factors that increased computer services imports in 2020–21 are expected to unwind and push the current account back into surpluses. On the other hand, there would be an increase in public and private investment catalyzed by continued reforms and the planned scaling up of public investment to deal with the aftermath of the COVID-19 shock and the new security challenges associated with the war in Ukraine. Staff expects that in the long term the latter force would cause that the current account balances to gradually decline.

Real Exchange Rate

Background. Both real and nominal effective exchange rates appreciated moderately in 2021. The nominal effective exchange rate appreciated by 0.5 percent, while the real effective exchange rate (REER) appreciated by 1.7 percent. The nominal appreciation was driven by the strengthening of the euro against the currencies of major trading partners, while Estonia's higher inflation than in its main trading partners contributed to the higher real appreciation. The ULC-based real exchange rate measures have depreciated in 2021 reflecting strong productivity growth in 2021.

Assessment. The EBA-lite REER method suggests that REER gap is consistent with overvaluation (which is consistent with the results of the previous year assessment but contrasts with a REER undervaluation of about 8 percent implied by the CA model). In line with previous Article IV consultations, the CA model is the preferred model for the overall assessment, given its more robust results relative to those of the EBA-lite REER model for Estonia. ULC-based and nonprice competitiveness indicators also point to stronger competitiveness in 2021 that the price-based REER indicators suggest. In this context, the ULCs, productivity trends, and nonprice competitiveness have to be continually monitored.

Capital and Financial Accounts: Flows and Policy Measures

Background. There was a large increase in the capital account surplus due to a large intra-group transfer of property rights. The financial account (BPM6 methodology) increased from 0.4 percent of GDP in 2020 to 6.4 percent of GDP in 2021. Direct investment inflows were the main drivers of this change, mainly reflecting an increase in direct investment abroad, through intra-group debt, related to the ICT sector.

Assessment. Risks related to capital flows are assessed to be small.

FX Intervention and Reserves Level

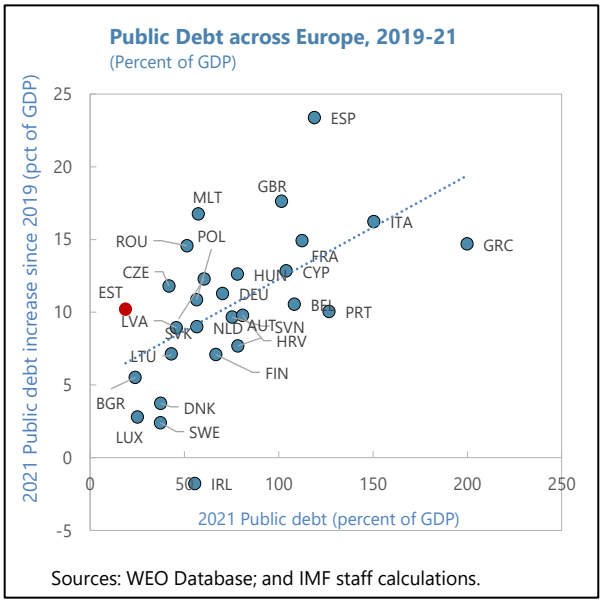
Background. The Euro has the status of a global reserve currency. Thus, reserves held by euro area economies are typically low by standard metrics (7 percent of GDP for Estonia as of end-2021).

Assessment. Reserve level is assessed to be adequate.

Annex II. Debt Sustainability Analysis[1]

The fallout from the war in Ukraine is putting renewed pressures on government expenditures to address the resulting security, refugees, and energy challenges, and is expected to widen the deficit and increase debt in 2022. Meanwhile, in 2021, Estonia's debt-to-GDP ratio slightly declined, reflecting the waning of the pandemic, the expiration of most pandemic support measures, and strong revenue performance. The lower-than-expected 2021 budget deficit also helped support liquidity reserves, which was associated with a relatively small net debt (4.6 percent of GDP in 2021), also reflecting the government's fiscal discipline. In the medium term, debt will continue to rise albeit at a slower pace in the outer years. Overall financial risks are expected to remain negligible, firmly underpinned by strong fiscal institutions and sound financial management.

1. Estonia's debt slightly moderated in 2021, supported by the expiration of most COVID-19 support measures and strong revenue performance. The narrowing of fiscal deficit to 2.4 percent in 2021 from 5.6 percent in 2020, has prompted a substantial moderation in borrowing in 2021, with new borrowings amounting to 2.6 percent of GDP (EUR 780 million) compared with 9.3 percent of GDP in 2020.[2] Accordingly, in 2021, the general government debt declined by 0.9 percentage point of GDP to 18.1 percent of GDP (Text Chart 1), as the contribution of the nominal debt increase (+1.6 percentage points) was more than offset by the contribution of GDP growth (- 2.6 percentage points). Nevertheless, Estonia's public debt remained among the lowest in the Europe, and mostly consisted of longer-term instruments.[3] On the asset side, the government's fiscal reserves remained broadly stable when compared to the end-2021 level, with net government debt remaining low (4.6 percent of GDP). As of end-2021, financial reserves stood at EUR 2.1 billion (6.8 percent of GDP), of which the liquidity reserve balance (5.4 percent of GDP) was larger than projected and above the required level.



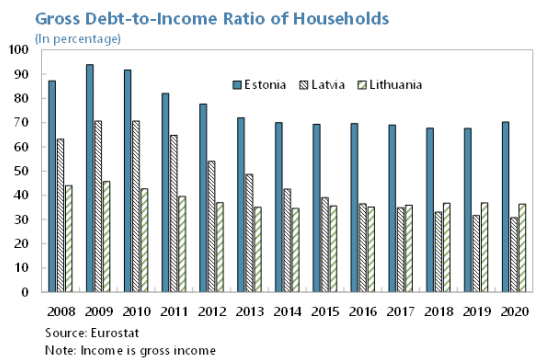
Sources: WEO Database; and IMF staff calculations.

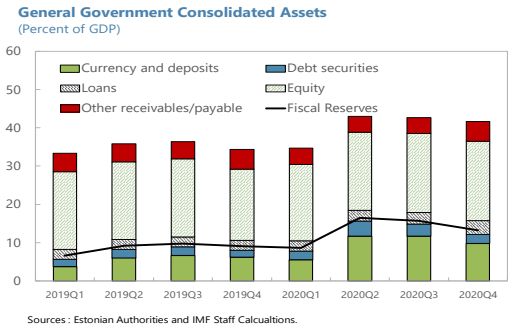
[1] Prepared by Neree Noumon.

[2] 2021 new borrowings consisted of (i) issuance of T-bills 400 million (ii) EUR 230 million from SURE loan facility; and (iii) EUR 150 million loan from Council of Europe development Bank. Estonia's outstanding debt obligations also includes two European Investment Bank loans, one loan from Nordic Investment Bank, and one Eurobond.

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

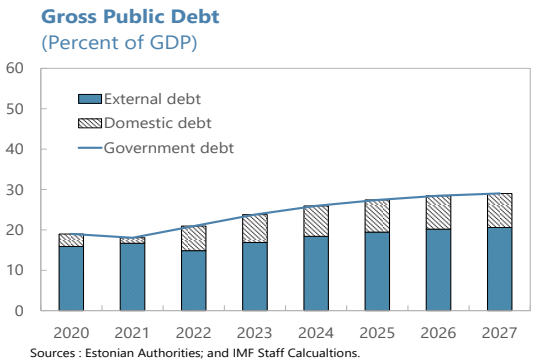
Text Figure 1. Estonia: Gross Public Debt

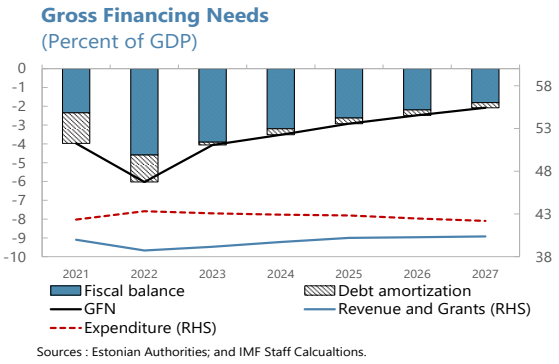




2. The 2022 debt is expected to increase as the fallout from the war in Ukraine leads to higher spending to address the security, refugees, and energy shocks. The original 2022 budget (2.1 percent of GDP) was amended by a supplementary budget to address the security, energy and refugee challenges triggered by the war in Ukraine. [4] Staff estimates that the deficit will widen to 4.6 percent of GDP and will required a higher level of borrowing than originally planned. Debt is forecasted to increase to 20.9 percent of GDP in 2022, financial reserves would decrease to 4.3 percent of GDP.

Text Figure 2. Estonia: Evolution of Gross Public Debt over 2020–26





3. The debt accumulation is expected to decelerate in the outer years, reflecting critical spending and the fiscal deficit convergence toward debt-stabilizing levels. The fiscal deficit is

[4] Initial 2022 borrowing plans included: (i) issuance of T-bills (EUR 400 million); (ii) drawdowns of EUR 50 million of loan facility from CEB; (iii) EUR 120 million of loan facility from EIB; and a potential Eurobond in 2022:Q4.

expected to gradually narrow to 1.8 percent of GDP in 2027, while accommodating for spending to boost social safety nets, energy security, security and resilience, as well as the green and digital transition. Accordingly, gross financing needs are expected to narrow to 2.1 percent of GDP in 2027, from 6.0 percent of GDP in 2022. Estonia's debt-to-GDP ratio is expected to increase from 20.9 percent of GDP in 2022 to 29.0 percent of GDP in 2027.

4. Financial risks remain low, supported by sound risk management principles. The Treasury's asset-liability management (ALM) principles, which 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] The interest rate risk has remained low, sustained by the interest rate risk management principles modified in June 2020.[6] Currency risks related to the MoF's debt obligations are equally limited since all obligations are denominated in euros.[7] Similarly, refinancing risks are contained by the financial risk management rules requiring: (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.[8] Finally, credit risk is mitigated by the requirement to invest financial reserves only in highly rated assets.

[5] The ALM principles were modified in June 2020 to delink the 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 weighted average interest re-fixing period of total debt was 4.7 years at end-2021 and is projected to reach 5.3 years at end-2022.

[7] The State Treasury can do on-lending and also borrow in foreign currency provided that the total foreign currency exposure does not exceed 1 percent of the Liquidity Reserve.

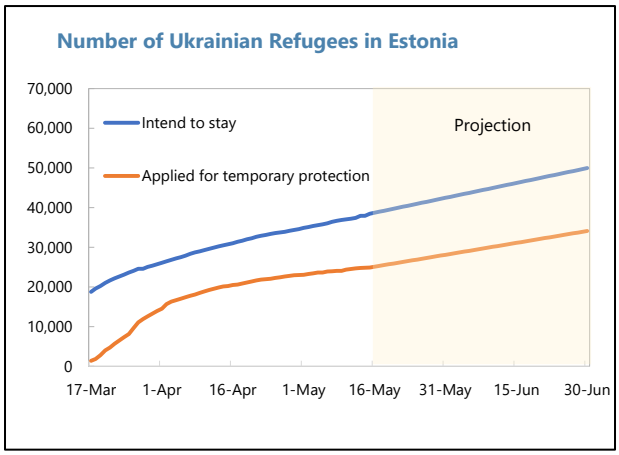
[8] The average term to maturity stood at 7.3 years at end-2021 and was comparable to the EU average (8.5 years as of end-2021).

Annex III. The Economic Impacts of Ukrainian Refugees[1]

Refugees of the war in Ukraine could have important economic effects on the host country due to their large size and temporary protection status, which entitles them to the same social benefits and access to the labor market as native residents. In Estonia, refugee arrivals are expected to increase labor supply and ease labor shortages in certain sectors. The net fiscal contribution of refugees is expected to be negative in the near term, though integration of a relatively young population could be beneficial in the long run. Active labor market policies and other support measures (e.g., language training, skills recognition, childcare) could support high-quality integration and deliver a high fiscal return.[2]

A. Recent Developments

1. Estonia has received a large influx of refugees, equivalent to 3 percent of the total population, as of mid-May.[3] The government expects this figure to rise to nearly 4 percent of the population, or 50,000 refugees, this year. Prior to the war, there were about 30,000 Ukrainian citizens in Estonia (as residents or on long-term visa) and their families and relatives could be joining them. A fast-growing economy and flexible entry rules (e.g., for refugees entering from Russia without all the identity documents) may have also attracted refugees. Two-thirds of the arrivals who intend to stay have applied for temporary protection.



2. The supplementary budget includes various provisions for the refugees. The government has allocated €243 million (0.8 percent of GDP) for the initial costs relating to hosting refugees, including housing, health care, education (including childcare), employment, and social benefits. This translates to per capita cost of about €5,500 (assuming 50,000 arrivals), though the eventual cost may turn out to be higher.[4] A third of total is for education, from pre-primary to vocational education and training, with per pupil costs that are higher than for the native population due to extra support and language learning. Another third is related to the provision of temporary

[1] Prepared by Jeong Dae lee

[2] Unless otherwise indicated, refugee statistics are as of mid-May 2022.

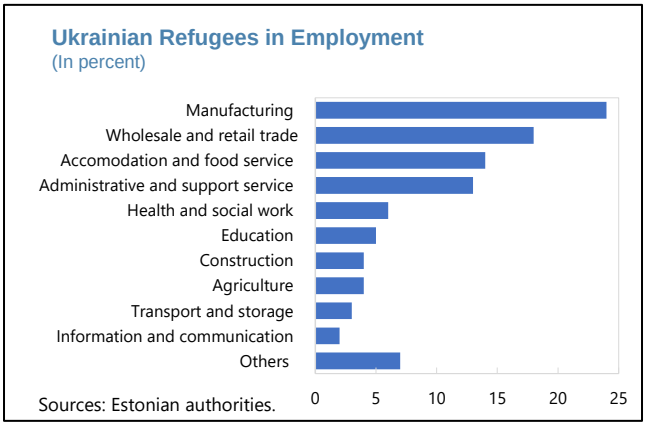
[3] Refers to refugees who have declared their intension to stay in Estonia; excludes those who are transiting.

[4] Existing estimates of the annual cost per refugee ranges between €9,000 to €25,000 (at 2022 prices). For instance, converting and adjusting (for inflation and income), Ruist (2015) estimates of public costs refugees in the context of Sweden in 2007 would translate to about €10,000.

protection services, in particular health care, employment, and social benefits.[5] Other costs include primary reception costs and housing related costs.[6]

3. Integration into the labor market and educational system is progressing. Among those with temporary protection, half are of working age (20 to 64), a third are minors and the rest are elderly. The working age refugees are mostly women, and more than two-thirds are active in the labor market. The employment rate stood at 32 percent in mid-May, having risen by 10 percentage points since mid-April. Meanwhile, a third of all minors were registered in local schools, while others took online classes through the Ukrainian educational system. Estonian authorities are encouraging all to enroll in the local school system from the fall semester.

4. Refugees are finding employment in various sectors, but often below their skill levels. Among refugees registered with the Unemployment Insurance Fund, 60 percent had an advanced (tertiary) level of education (compared to 43 percent among employed residents). The majority had previous work experience, nearly half in high-skilled occupations, including as managers and professionals.[7] However, possibility due to language barriers, qualification recognition issues, and lack of information, more than two-thirds are being employed as unskilled workers, sales workers, and machine operators, and only few as skilled workers.[8]



B. Potential Economic Impacts

5. Refugee arrival is expected to ease labor shortages. Some 12,000 refugees, equivalent to nearly 2 percent of Estonia's labor force, could be joining the labor market this year.[9] At the same time, high job vacancies and solid nominal wage growth point to broad-based labor shortages. Therefore, additional labor supply could be beneficial. The literature also highlights that the net

[5] Unemployment allowances are paid to refugees registered as unemployed, and funds are also provided for the payment of work ability allowance. Social benefits include subsistence benefit, parental benefit for parents of children up to 1.5 years of age, child allowance, and allowance for a family with many children paid through local governments. Funds have been provided to support the elderly refugees to ensure an income in the amount of the national pension and to pay social tax for people of retirement age.

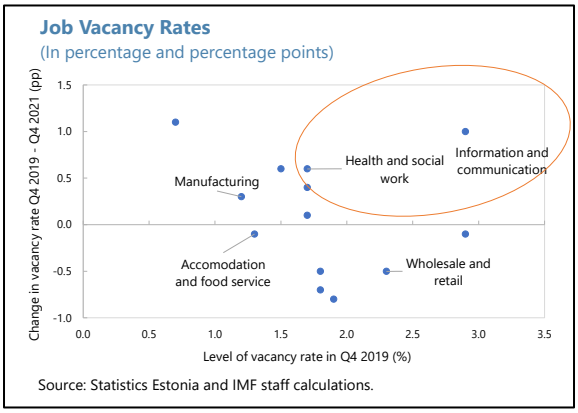
[6] The government provides short-term housing and a one-off allowance to cover the costs of the lease contract.

[7] This is consistent with ILO (2022), which, for a global sample of Ukrainian refugees in neighboring countries, estimates that two-thirds of those who had worked prior to the war had an advanced (tertiary) level of education and half were employed in high-skilled occupations.

[8] Only 0.2 percent speak Estonian and 12 percent speak English, though nearly all speak Russian.

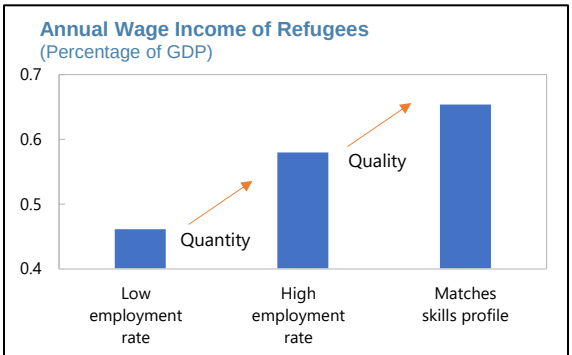
[9] This assumes 50,000 arrivals, 70 percent apply for temporary protection, half of them are working age (20 to 64), and 70 percent are active in the labor market.

effect on wages and employment of natives could be null or even positive, as immigrants increase demand for local goods and services and therefore labor demand, while often taking jobs that are different and complementary to (rather than in competition with) those of natives (Koczan and others, 2021).



Source: Statistics Estonia and IMF staff calculations.

6. High-quality integration could increase growth benefits… Slow integration (low employment rate) or low-quality integration (high employment rate but with substantial "skills downgrading") would lower the growth benefits compared to an environment in which most refugees find employment and in occupations that match their skills profile. The educational and professional background of the refugees suggest that employment in higher-pay sectors such as health and social work and information and communication should be higher than the current employment pattern. Such a labor reallocation could increase the annual wage income of refugees by 0.2 percent of GDP relative to the slow integration scenario.

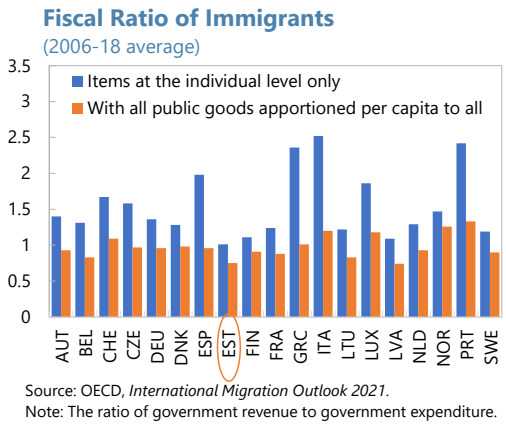


Sources: Statistics Estonia, IMF staff calculations.
Note: Low and high employment rate scenarios assume unemployment rate of 30% and 12% respectively, and labor participation rate of 70%. "Matches skills profile" scenario is based on the distribution of workers across economic activities by educational level in 2021. Two-fifth of refugee workers are assumed to have tertiary education, 1/5 upper-secondary, and 1/5 below that level.

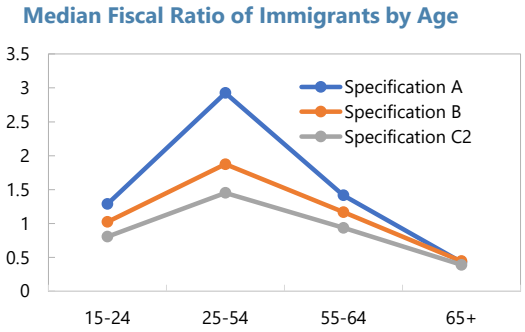
7. … and allow refugees to increase their contribution to the tax and welfare system. Refugees have just arrived and need to establish themselves and as such, their contribution to government revenues (including income and consumption tax) is likely to be far smaller than the social benefits and services they receive. Over time, their net fiscal contribution is expected to become less negative with labor market integration. While previous studies generally find that fiscal costs are much higher for refugees compared to labor migrants (Rowthorn, 2008), the situation with the Ukrainian refugees could be different because of their temporary protection status, which grants them immediate access to the labor market. At the same time, highly skilled workers tend to earn more and contribute more to government revenues, while relying less on social benefits—and most of the refugees fall under this category.

8. The fiscal impact also depends on the demographic profile. Minors make up a third of the refugee population and their education imposes a large fiscal cost. Over the medium-to long-run, however, once the children enter the labor force, they could have a positive impact on the fiscal balance as net contributors. Damas de Matos (2021) estimates the fiscal ratio (government revenue to government expenditure) of immigrants in OECD countries for the period 2006–18, including by age group. In all countries, immigrants contributed more than they received in social protection,

health, and education.[10] But this ratio was relatively low for Estonia due to government expenditures related to health and old age. This cost is likely to be relatively low for the Ukrainian refugees.



Source: OECD, *International Migration Outlook 2021*.
Note: The ratio of government revenue to government expenditure.



Source: OECD, *International Migration Outlook 2021*.
Note: Specification A corresponds to individualized items only; Specification B adds congestible public goods; Specification C2 adds also pure public goods apportioned to foreign and native-born.

C. Policy Considerations

9. Active labor market policies (ALMPs) and other supportive measures are crucial for high-quality integration. Facilitating skills recognition, providing language training, fulfilling childcare needs, and increasing the overall flexibility of labor markets could help refugees rapidly integrate into the labor market and avoid "skills downgrading." Given that most working age refugees are women with children, education support, including at the pre-primary level, will be important for labor force participation. Language training could increase employment options for refugees. For instance, a recent survey finds that social work employers are open to hiring foreign-born workers but stress the need for proficiency in Estonian.

10. Adequate public spending on integration and adaption of refugees will pay off in fiscal terms. Kancs and Lecca (2018) find that for EU countries receiving refugees, depending on the integration policy scenario, the year in which the net fiscal balance becomes positive could be vary between 9 and 19 years. For migrants in general, it is also important to provide a clear path to residency and employment security once they begin to work (Koczan and others, 2021). This could also help employers to hire and invest in migrant workers. At the same time, measures could be introduced to minimize any adverse impacts of large refugee inflows on native workers, including pressures on housing affordability.

[10] However, when all public expenditure (e.g., defense, waste management) is included, the net fiscal contribution remains positive in one-third of the countries.

References

Aiyar, Shekhar and others. 2016. "The Refugee Surge in Europe: Economic Challenges." IMF Staff Discussion Note.

Damas de Matos, Ana. 2021. "The Fiscal Impact of Immigration in OECD Countries since the mid-2000s", in OECD, International Migration Outlook 2021, OECD Publishing, Paris.

International Labour Organization (ILO). 2022. "The Impact of the Ukraine Crisis on the World of Work: Initial Assessments." ILO Brief, May 11.

Kancs, d'Artis and Patrizio Lecca. 2018. "Long-term Social, Economic and Fiscal Effects of Immigration into the EU: The Role of the Integration Policy." The World Economy 41(10): 2599-2630.

Koczan, Zsoka and others. 2021. "The Impact of International Migration on Inclusive Growth: A Review." IMF Working Paper 21/88.

Rowthorn, Robert. 2008. "The Fiscal Impact of Immigration on the Advanced Economies." Oxford Review of Economic Policy, 24(3): 560-580.

Ruist, Joakim. 2015. "The Fiscal Cost of Refugee Immigration: The Example of Sweden." Population and Development Review 41(4): 567-581.

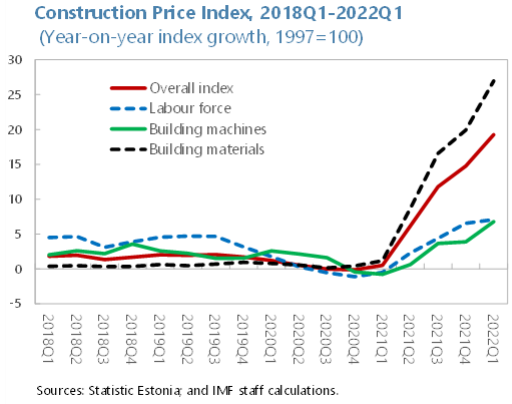
Annex IV. Construction Costs and Public Investments[1]

The war in Ukraine has exacerbated the increase in construction material costs, which were already pushed up by supply-chain disruptions from 2021. Preliminary data suggest that higher costs are expected to trigger public investment cost overruns. In response, the government has pro-actively initiated a review of its public investments projects and has taken steps to prioritize spending.

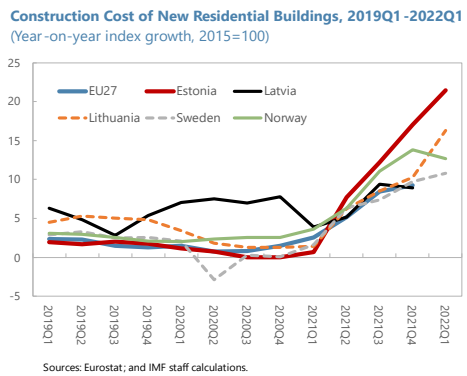
A. Rising Construction Costs and Public Projects' Cost Overruns

1. The war in Ukraine has exacerbated higher construction costs which started in 2021. In 2022:Q1, the construction price index in Estonia increased by 4.6 percent compared to 2021:Q4 and by 19.3 percent y/y.[2] The construction price index y/y increase in Q1, primarily reflected the rising cost of materials, which accounted for 86 percent of the total index rise. Compared to the fourth quarter of 2021, labor force was 0.9 percent more expensive, the cost of using building machines rose by 3.1 percent, while the costs of materials were up by 6.8 percent. The impact of the war in Ukraine on construction prices became apparent in March 2022, driven by rising prices of wood and wood products (by 15.7 percent) and higher prices of metal products (18.8 percent).[3] The repair and reconstruction work price index also rose by 3.1 percent compared to the fourth quarter of 2021 and by 16.7 percent compared to the first quarter. Higher construction costs growth relative to the EU, also mirrored higher relative inflation.

Text Figure 1. Construction Costs and Prices



Sources: Statistic Estonia; and IMF staff calculations.



Sources: Eurostat; and IMF staff calculations.

2. The rapid increase in construction costs has triggered public investment cost overruns, prompting the authorities to review and prioritize projects. The authorities' preliminary analysis as

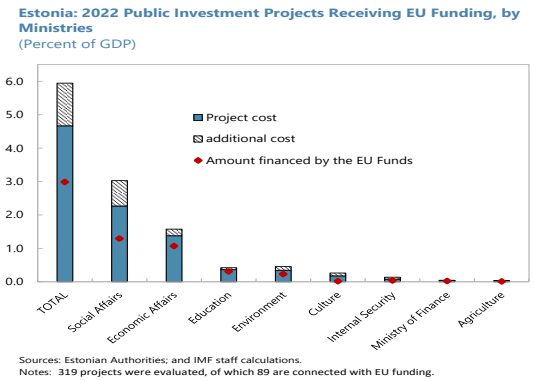
[1] Prepared by Neree Noumon.

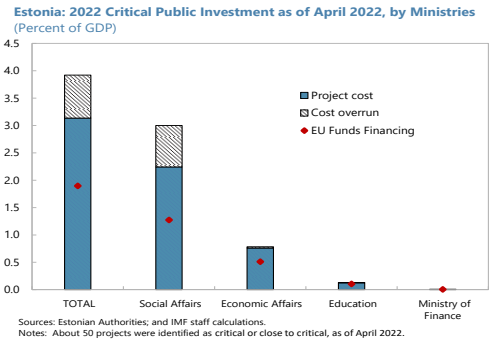
[2] The construction price index expresses the change in construction expenditures taking into consideration the price changes of three basic inputs: labor force, building materials and building machines.

[3] The sanctions imposed on Russia and Belarus, has reduced by 30 percent of the timber supply previously imported these countries, which was replaced by a more expensive supply from Nordic countries.

April 2022, found that higher-than-expected construction costs have caused a cost overrun of 1.3 percent of GDP on the public investments in 319 projects budgeted at 4.7 percent of GDP.[4] The authorities have adopted a multi-pronged approach to guide prioritization, based on the degree of implementation, funding risks, and the sector of investment. Well-advanced projects (60–100 percent completion) were given a higher priority score than less advanced projects (e.g., in tender preparation or evaluation phases). Projects with external funding expiring earlier were classified as critical, whereas those financed by the state budget were attributed a low priority. Similarly, projects at risk of losing foreign funds because of a missed milestones were given a high criticality core. Investments in energy security, health, and the green-digital transition are considered as critical. More than half of the 50 projects classified as critical projects (as of April 2022) were related to EU funding, and were mostly related to investments in hospitals, the medical system, and infrastructure (e.g., road and railway).

Text Figure 2. Public Investment Cost Overruns





B. Policy Recommendations

3. High uncertainty and new spending priorities call for a faster implementation the FTE and PIMA recommendations. While the initial steps taken by the authorities to face cost overruns (e.g., public projects review and prioritization) are in line with FTE recommendations, they should be further institutionalized going forward.[5] More precisely, the FTE report recommends that the public investment budget should be monitored centrally, and projects should be tracked for potential cost overruns and delays, while information on total project costs should remain readily available. A comprehensive overview of fiscal risks in Estonia is also warranted and should include the quantification of the likelihood of risk materialization as well as potential costs. Accelerating the implementation of the PIMA recommendations on long-term strategic planning and project implementation would help efficiently spend on the new priorities.

[4] Initial estimates of cost overruns are initial (27 percent) is broadly comparable to typical cost overruns in Europe.

[5] IMF Country Report No. 21/179 and IMF Country Report No. 20/12.

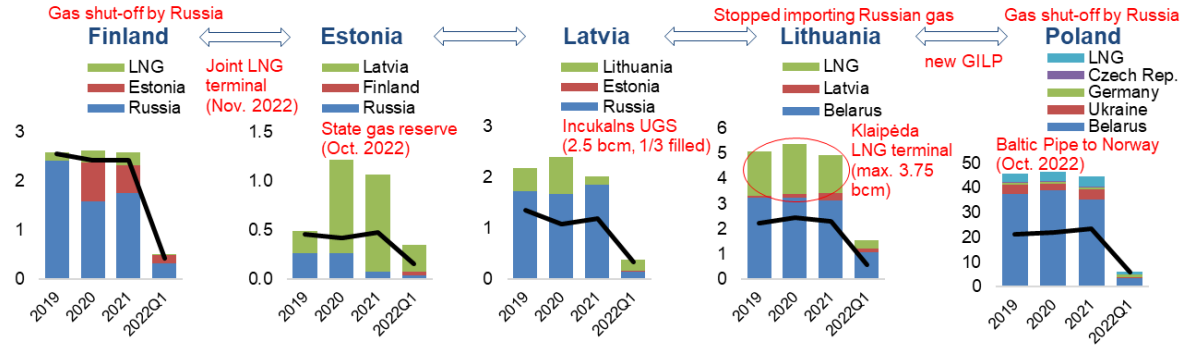
Annex V. Recent Developments in Gas and Electricity Markets[1]

Amid energy security concerns in Europe, higher natural gas prices have pushed up electricity prices, due to the reliance on gas-fired power plants but also higher carbon prices caused by the switch to coal for energy production. In Estonia, limited generation, and transmission capacity from renewable energy sources, as well as rapid pass-through to retail prices, has also contributed to high electricity prices. Improving energy security would therefore require prompt infrastructure investments and effective coordination with Baltic and Nordic peers, whose energy markets are closely integrated with Estonia's. In parallel, Estonia's European Green Deal commitment to climate neutrality by 2050 should be safeguarded, including through advancing the restructuring of the oil shale sector and accelerating green energy projects.

A. Gas Market

1. Natural gas prices surged amid energy security concerns in Europe. Gas prices, historically below 30 €/MWh, were recently around 100 €/MWh, peaking occasionally at double that level. Rising tensions over Ukraine—and eventually the war—have triggered extreme volatility of gas prices. With heightened risk of a gas shut-off by Russia (which has already materialized for Bulgaria, Finland, and Poland), Europe is working to refill storage and diversify supply, including through LNG imports.[2] The markets expect gas prices to remain high at least through mid-2023.

Natural Gas Trade Flows and Consumption, 2019–2022:Q1 (billion cubic meters)



Sources: IEA, Eurostat, national sources, IMF staff calculations.
Note: Stacked bar shows imports while black line shows inland consumption. Arrows indicate bi-directional gas pipelines. GILP = Gas Interconnection Poland-Lithuania. Indicated in red are recent developments and contingency planning.

[1] Prepared by Jeong Dae Lee

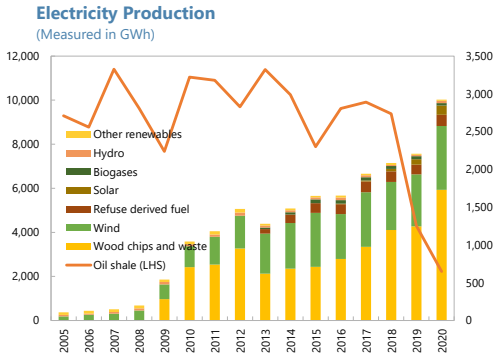
[2] The European Commission has called on gas storage operators to fill sites to at least 80 percent by November 1. Europe's gas stocks were nearly 40 percent full as of mid-May, up from less than 30 percent at the end of March. Meanwhile, LNG imports represented less than 1/3 of total supply in 2021.

2. Estonia is moving quickly to stop importing Russian gas. Estonia's gas demand is relatively small, mainly used for district heating, and is mostly covered by LNG procured from the Klaipeda terminal in Lithuania.[3] In April, Estonia decided to cease imports of Russian gas before the end of the year and to enhance supply security, establish a central state gas reserve (20 percent of annual gas consumption at the storage in Latvia) and jointly with Finland, invest in new LNG capacity. The floating storage and regasification unit (FSRU) would be linked to the Baltic Connector, the pipeline linking the Finnish and Estonian gas grids. Supply security also depends on broader regional infrastructure, including the new Lithuania-Poland connection.

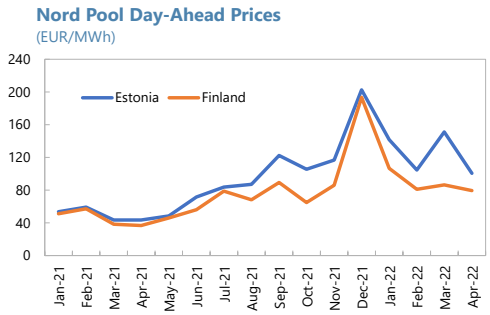
B. Electricity Market

3. A surge in electricity prices reflects capacity constraints and marginal pricing. The European Power Benchmark averaged 194 €/MWh in Q4:2021, four times higher on yearly basis, on the back of higher gas prices. The increase in electricity prices has been particularly steep in Estonia, due to limited electricity generation and transmission capacity from renewable energy sources. When electricity sellers place orders in the open market, renewable and nuclear units are the first to enter to meet demand. But if they are not enough, oil shale, coal and gas power plants will have access to the market. And given that the exchange price is determined by the last bidder (marginal pricing), this could significantly raise the price.[4] While Estonia is part of Nord Pool's open electricity market, prices vary from area to area due to limited cross-border transmission capacities and since mid-2021, prices in Finland have been cheaper than in Estonia.

Sources of Electricity Generation and Electricity Prices



Source: Statistics Estonia.



Source: Nord Pool.

[3] Estonia's gas consumption (0.5 bcm per year, compared to 412 bcm for the entire EU in 2021) reflects the small share of gas in the overall energy mix (8 percent, compared to 24 percent in the entire EU in 2020) as well as the size of the economy. While direct gas dependency on Russia is 46 percent, accounting for the secondary dependence on Russian gas through intra-EU imports would lead to the estimation that Estonia has a 98 percent Russian import dependency on gas (EC, 2022a).

[4] Marginal pricing means all suppliers in the market, including cheaper wind or solar installations, get the price paid for the most expensive offer accepted, providing a boon for capital intensive technologies such as renewable energy. At the same time, there has been calls to better establish a link between the price paid by the consumers, and the average production cost of electricity in national production mixes.

4. Renewable electricity generation can lower prices and support climate goals. Despite notable progress since mid-2000s, Estonia does not have enough domestic capacity produced from cheap renewable energy sources and still relies heavily on domestically produced oil shale for electricity.[5] In particular, the development of wind farms has been slowed down by security and environmental concerns and resistance from the local community. The sharp increase in electricity prices since mid-2021 has prompted the government to move faster, however. To receive the consent of the local community, an element of local benefit is being explored. For offshore wind farms, a maritime spatial plan has been proposed. And to increase the transmission capacity, the government aims to complete the third undersea power link to Finland (Estlink 3) by 2030. It is also promoting fixed contracts to limit the pass-through to retail prices.

5. The synchronization with the European grid is crucial for supply security. The Baltic electricity grid still operates synchronously with the Russian and Belarusian systems, with the power frequency controlled by Russia. Since 2018, progress has been made towards synchronizing with the continental European network by 2025 at the latest. The total cost of the synchronization process—including internal network reinforcement in the Baltic countries and the construction and upgrading of the interconnection between Lithuania and Poland (LitPol Link)—is estimated around €1.6 billion.

C. Solving the Energy Trilemma[6]

6. Energy security strategies should be harmonized with climate commitments. For Estonia, there is a risk that high gas prices will delay the phasing out of electricity generation from highly carbon-intensive oil shale. In line with the REPowerEU Plan, the current energy security challenge should instead be an opportunity to accelerate the green transition.[7] Policy options aimed at addressing energy security and affordability should also be assessed from a long-term sustainability perspective.

[5] Oil shale is an energy-rich sedimentary rock that can be either burned for heat and power generation or used for producing liquid fuels. Electricity production from oil shale is the most CO2-intensive among all combustion technologies.

[6] The Energy Trilemma refers to finding a balance between security, affordability, and sustainability in how we access and use energy in our daily lives.

[7] Estonia's state-owned energy group Eesti Energia aims to almost quadruple renewable electricity by 2026, although it foresees that the thermal power plants in Narva will continue to participate in the electricity market during periods of high demand.

Annex VI. Recent Developments in Estonia's Banking Sector

Estonia's banking system is well capitalized and profitable. It has withstood the pandemic well, with non-performing loans now lower than before the pandemic. Going forward, the banking system faces risks related to the war in Ukraine, high inflation, and a buoyant housing market. While generally beneficial, increasing competition within the banking sector and from the non-bank financial sector could also result in higher risks.

1. Estonia's financial system is dominated by four large banks, three of which are foreign owned. Estonia has a bank-centric financial system, in which banks account for about 85 percent of assets. The banking sector comprises nine banks licensed in Estonia (down from 42 in 1992), as well as five branches of foreign banks. Four banks are recognized as systemically important institutions by Eesti Pank. The two largest of these are Swedish-owned Swedbank and SEB. The third largest (in terms of Estonian assets) is Luminor, which was created in 2019 out of the Baltic banking assets of Nordea and DNB and is currently majority owned by US investment firm Blackstone. Luminor has branches in Latvia and Lithuania and has sizeable loan portfolios in these countries. These three banks are under ECB supervision. The fourth systemic institution is Estonian-owned LHV Pank, the parent company of which is listed on the Nasdaq Tallinn stock exchange. The remaining banks are much smaller, with a combined market share of less than 10 percent. The branches of foreign banks account for about 2 percent of banking system assets. Their importance has been declining.

2. The banking system is well capitalized and profitable (see Figure 6 and Table 8). The system's capital adequacy ratio (CAR) is among the highest in the EU, at well over 20 percent. However, it has been on a downward trend since 2014, driven by the growth of the loan portfolios and a change in the tax code that made it more attractive for banks to pay out dividends. Small banks are, on aggregate, significantly less well capitalized than the large banks. The four systemic banks are required by Eesti Pank to maintain additional institution-specific capital buffers, on top of the pillar-2 based capital buffers. A countercyclical capital buffer of one percent will become mandatory for all banks starting from December 7, 2022. Profitability is sound and well above EU averages, with a return on equity (RoE) that has been consistently around 8–10 percent in recent years. The COVID pandemic has had no significant effect on the system's profitability.

3. Non-performing loans are low but could increase as a result of the war in Ukraine and high inflation. The banking system's NPL level is around one percent, which is lower than before the pandemic. The loan portfolios have withstood the pandemic well, including due to the structure of the economy (in which COVID-sensitive sectors are relatively less important than in other countries) and the use of grace periods for affected debtors. The COVID impact is disappearing, as grace period loans are fading out (see Text Chart 9). An exception is the accommodation sector, which makes up only a small part of the banks' loan portfolios. Direct exposures to Russia, Belarus and Ukraine are very limited. Indirect exposures, to clients with connections to these countries, amount to 2.2 percent of total assets. However, these direct and indirect exposures may underestimate the risks of the war in Ukraine to banks' loan portfolios, as the Estonian economy is likely to be significantly affected. The current very high inflation could negatively affect the finances of households and firms and thus also poses risks to the

quality of the loan books. Stress tests that predate the war indicated that Estonia's banking system should be able to withstand plausible economic shocks.

4. The banking system is liquid and is increasingly funded by domestic customer deposits. Deposit growth, which was especially rapid during the pandemic, has helped banks to build up and maintain high volumes of liquid assets, and this in turn has limited liquidity risks. The banking system's liquidity coverage ratio (LCR) is over 150 percent (compared to a minimum requirement of 100 percent). Deposit growth has also allowed the foreign-owned banks to reduce their reliance on funding from their parent institutions. Deposits now account for over 90 percent of the banking system's external funds. Further diversification in funding has come from increased issuance of debt securities. The loan-to-deposit ratio declined significantly during the pandemic, to about 80 percent, but is now going up again as loan growth accelerated and deposit growth slowed down. Deposits of non-residents are on a declining path and do not constitute a significant source of funding.

5. Competition is increasing, including from the non-bank financial sector. Some domestically owned banks are growing strongly and aim to increase their market share further. This has contributed to increased competition, amidst indications of greater risk-raking. The growth of these banks has been uneven across segments. Their market share has reached almost 50 percent in the long-term corporate loan segment, whereas it is just over 20 percent for housing loans. Competition has also increased from the non-bank financial sector as non-bank financial intermediation is growing rapidly, albeit from a low base. Estonia has a well-developed fintech sector.

6. Mortgage and other real estate lending have been buoyant, fueling housing price increases. House prices have been rising steadily since 2009, and affordability indicators have been deteriorating (see Text Chart 18). The pace of price increases accelerated to around 20 percent in 2021. Credit has been among the drivers of these house price increases, as housing loans represent the bulk of the increase in loans to households and loans to real estate firms have also been growing rapidly. Real estate firms have also increased their access to non-bank sources of funding.

7. The war in Ukraine has increased the risk of cyberattacks. In active communication with the supervisors, banks and other supervised financial sector entities have been preparing to withstand a possible sudden increase in cyberattacks and mitigate the potential consequences.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ESTONIA

STAFF REPORT FOR THE 2022 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

June 27, 2022

Prepared by European Department

CONTENTS

FUND RELATIONS

(As of April 30, 2022)

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

General Resources Account

	SDR Million	Percent Quota
Quota	243.6	100.00
Fund holdings of currency	183.89	75.49
Reserve Tranche Position	59.73	24.52

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	295.44	100.00
Holdings	262.14	88.73

Outstanding Purchases and Loans: None

Latest Financial Arrangements

In millions of SDR

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

Projected Payments to Fund: None

Implementation of HIPC Initiative: Not applicable.

Implementation of MDRI Assistance: Not applicable.

Implementation of CCR Assistance: Not applicable.

Exchange Arrangements: The currency of Estonia is the euro (since of January 1, 2011). The exchange rate arrangement of the euro area is free floating. Estonia participates in a currency union (EMU) with 18 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 Fund's Articles of Agreement, and maintains an exchange system free of multiple currency practices and restrictions on the making of payments and transfers for current international transactions, except for those measures imposed for security reasons in accordance with Regulations of the Council of the European Union, as notified to the Executive Board in accordance with Decision No. 144-(52/51). An updated and

comprehensive list of all EU restrictions can be found at:
http://ec.europa.eu/external_relations/cfsp/sanctions/measures.htm

Article IV Consultation: Estonia is on the 12-month consultation cycle. The last Article IV consultation was concluded on July 19, 2021. The Executive Board assessment is available at:
http://www.imf.org/external/country/EST/index.htm

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

Anti-Money Laundering (AML) and Combating Financing of Terrorism (CFT): MONEYVAL's report on the 4th round assessment of Estonia adopted in September 2014, which is a follow-up round on the 2003 Financial Action Task Force (FATF) standard, highlighted the authorities' progress in strengthening the AML/CFT legal and supervisory frameworks, specifically the development of a risk-based approach to determine priorities for AML/CFT activities, amendments to the legal definition of the financing of terrorism offence, and the establishment of the Economic Crime Bureau. The report notes some remaining deficiencies, in particular with respect to the sanctioning regime for AML/CFT breaches and the beneficial ownership identification of legal persons. The authorities are addressing these issues, including by preparing amendments to the penal code to allow for "administrative sanctions." They are also working on ensuring compatibility of the widespread use of information technology and AML/CFT requirements. A regulation has been issued with respect to the e-Residency program, namely with regards to customers' identification for the non-face-to-face opening of bank accounts. As the e-residency program is in its early stages, it will be important to follow up on appropriate safeguards that should be put in place to ensure integrity of the program and limit the potential for abuse. Estonia issued its first regular follow-up report to MONEYVAL in September 2016 and was invited to seek removal from the follow-up process not later than September 2018. The amendments to the AML/CFT regulation that came into force in March 2022 aim to strengthen the supervision of virtual asset service providers. The law on crypto assets and crowdfunding services to be considered by parliament in the fall of 2022 is expected to further limit the risks in the fintech sector, in line with the EU proposal on markets in crypto assets (MiCA). A new MONEYVAL assessment is ongoing, and its results are expected around end-2022.

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

Republic of Estonia: Technical Assistance from the Fund, 2000–22				
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 10, 2022)

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).
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.

Estonia: Table of Common Indicators Required for Surveillance

As of June 10, 2022

	Date of latest observation	Date received	Frequency of Data[8]	Frequency of Reporting[8]	Frequency of publication[8]
Exchange Rates[1]	June 9, 2022	June 10, 2022	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[2]	May 2022	June 7, 2022	M	M	5D
Reserve/Base Money	April 2022	May 12, 2022	M	M	9D
Broad Money	April 2022	May 27, 2022	M	M	4W
Central Bank Balance Sheet	April 2022	May 12, 2022	M	M	9D
Consolidated Balance Sheet of the Banking System	April 2022	May 27, 2022	M	M	4W
Interest Rates[3]	April 2022	May 26, 2022	M	M	D/M
Consumer Price Index	May 2022	June 9, 2022	M	M	5D
Revenue, Expenditure, Balance and Composition of Financing[4]—General Government[5]	Q4/2021	March 25, 2022	Q	Q	85D
Revenue, Expenditure, Balance and Composition of Financing[4]—Central Government	April 2022	June 2, 2022	M	M	1M
Stocks of Central Government and Central Government-Guaranteed Debt[6]	Q4/2021	March 25, 2022	Q	Q	1Q
External Current Account Balance	Q1/2022	June 9, 2022	Q	Q	6W
Exports and Imports of Goods and Services	April, 2022	June 9, 2022	M	M	40D
GDP/GNP	Q1/2022	June 4, 2022	Q	Q	2M
Gross External Debt	Q1/2022	June 9, 2022	Q	Q	1Q
International Investment Position[7]	Q1/2022	June 9, 2022	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).

Statement by Mika Pösö, Executive Director for Republic of Estonia
and Raido Kraavik, Advisor to the Executive Director for Republic of Estonia
August 29, 2022

On behalf of the Estonian authorities, we would like to thank staff for the candid and constructive policy discussions during the Article IV mission held in May. The authorities appreciate staff's analysis on economic developments and policy recommendations.

Recent Economic Developments, Outlook, and Risks

The strong growth in the Estonian economy in the beginning of this year is expected to weaken. Estonia experienced one of the fastest recoveries in the EU from the COVID pandemic but spillovers from Russia's invasion of Ukraine have compounded challenges for the economy with the broader impact expected in the second half of the year. Estonia's direct economic links with Russia have significantly declined since the illegal annexation of Crimea in 2014 but the expected weaker demand in the export markets, prolonged supply bottlenecks, and the sharp rise in commodities prices are creating headwinds for the economy. Nonetheless, Estonia benefits from a flexible economy, low public debt, strong institutions, and improved energy security.

The surge in inflation has been driven by both external and domestic factors. Inflation has continued to accelerate and has been well above the euro area average. Higher energy costs are steadily passing through into the prices of other goods and services. However, the high and increasingly broad-based inflation cannot be fully explained by the surge in energy prices and continuing supply chain disruptions. What has also played a role is buoyant domestic demand, boosted by the rapid growth in incomes, excess savings built up during the COVID restrictions, the money withdrawn from the second pension pillar, and increased state spending.

The labor market has largely recovered, and the employers' expectations remain favorable despite the increased uncertainty. Both labor force participation and employment continued to grow in the first quarter. The unemployment rate has remained low in the context of a relatively large number of Ukrainian refugees entering the labor market. The very high inflation readings will cause real wages to fall this year and, coupled with the rising cost of borrowing, this will limit the households' ability to consume going forward.

The Estonian economy is expected to record a low growth in 2022 and gradually recover to its potential growth thereafter. The economy was in a very strong position at the start of this year when production resources were running at full capacity. Growth is projected to weaken in the second half of the year but will pick up gradually thereafter. Slower growth and the government's plans to compensate households for the part of the cost of energy in the coming winter will start to limit the surge in inflation. The implementation of Estonia's Recovery and Resilience Plan (RRP) will

help the country become more sustainable, resilient, and prepared for the green and digital transitions over the medium term.

Downside risks may materially affect the outlook. Uncertainty surrounding the baseline forecast is exceptionally high at this time. Estonia's small and open economy is vulnerable to external risks while a relatively high sectoral diversification helps to shield it from idiosyncratic shocks. The high degree of uncertainty is owing to further spillovers from Russia's war against Ukraine, energy market disruptions, prolonged constraints on supply chains, higher-than-expected inflation, tighter monetary policy, and risks related to the pandemic.

Fiscal policy

The authorities are committed to pursue a prudent fiscal policy. Estonia's public debt to GDP ratio remains the lowest in the EU. The fiscal policy framework is centered around a balanced budget rule in structural terms to ensure long-term fiscal sustainability. The current structural deficit is expected to narrow over the coming years. The authorities are committed to respond firmly to the rapidly evolving environment and will maintain a sound fiscal position while ensuring macroeconomic stability.

A low public debt level has enabled to flexibly tackle the challenges related to the COVID pandemic and Russia's invasion of Ukraine. The authorities share staff's view that the fiscal space should be efficiently used and well-targeted to meet essential spending needs. Russia's invasion of Ukraine has compounded the regional security challenges and given rise to a large-scale refugee crisis. Consequently, the 2022 supplementary budget was adopted in May to guarantee energy security, strengthen defense capabilities, and maintain social cohesion, including by assisting the Ukrainian refugees.

Substantial progress has been made in implementing the IMF's FTE and PIMA recommendations. A spending review has been launched to improve public investment management. The Ministry of Finance concluded a mapping exercise of public construction projects in May due to rapidly increased construction costs. Based on this exercise, the government is currently prioritizing ten critical projects that received the EU Cohesion Policy funding and will have to be completed by the end of the next year. Most of these projects will receive additional funding to cover cost overruns.

Structural Policies

The Estonian authorities are taking swift measures to enhance energy security. Natural gas and electricity imports from Russia have stopped. Yet, as of now, there are no immediate supply risks. Estonia's diversified energy mix and large oil shale reserves will allow it to permanently phase out all Russian energy imports. A significant reduction in natural gas usage is expected to be achieved and

the process of procuring a natural gas strategic reserve is on-going. The Estonian and Finnish governments are also working on a new LNG terminal to complement the current natural gas supply via the LNG terminal in Lithuania. Furthermore, 90 days of reserves have been built up for diesel, gasoline, and jet fuel to mitigate the risks related to the transport fuels sector. The Baltic Synchronization Project will also reduce energy related risks by connecting Estonia's electricity grid with the Continental European Network while decoupling it from Russia's electricity system.

The authorities have set an ambitious goal to reach carbon neutrality by 2050. More specific plans have been articulated in the National Development Plan for the Energy Sector until 2030 and the Transport and Mobility Development Plan 2021-2035. The current energy market disruptions may increase the use of fossil fuels for electricity production in the short term. However, the authorities remain committed to phasing out oil shale in the electricity generation by 2035. Moreover, the new government has set the goal to increase the share of renewables in the electricity consumption to 100% by 2030. The authorities share the view that more needs to be done in the transport and building sectors to improve energy efficiency. While the options for introducing national tax measures are explored, the primary effort is currently directed at advancing the EU-wide agenda as envisaged by the updated Energy Taxation Directive and the Carbon Border Adjustment Mechanism. Alleviating the negative effects on vulnerable households remains one of the main objectives when implementing these initiatives and possible additional tax instruments.

Addressing skill mismatches remains an important goal to alleviate pressures in the tight labor market. Robust productivity growth over the past years has helped preserve competitiveness despite the strong wage pressures. Active labor market policies will remain essential for improving the functioning of the labor market and boost productivity further. Enhancing digital skills continues to be a priority area. Changes in the unemployment benefit system are being prepared to adjust the benefits according to the cyclical position of the labor market. The Estonian authorities will also continue to strongly support Ukrainian refugees to facilitate their integration and labor market participation.

The high gender pay gap remains a concern despite the steady improvement. The female labor force participation rate remains high, and the authorities are committed to decrease the gender pay gap to 5 percent by 2035. The adoption of the EU Pay Transparency Directive and the Estonian Welfare Development Plan 2023-2030 are expected to have a positive impact. Work is also on-going to raise the employers' awareness and facilitate the analysis of the pay gap.

Financial policies

The financial sector remains resilient, but the authorities agree that enhanced supervisory vigilance is required. Financial stability risks have increased somewhat as a result of Russia's invasion of Ukraine, but the direct impact of the war on the Estonian financial sector is small. The Bank of Estonia continues to regularly assess the financial stability risks and will take measures to avoid systemic risks building up. The macro- and microprudential capital requirements help ensure that the banks hold sufficient capital against risks. The risk of cyberattacks on financial institutions

has become more pronounced but no systemic impact on the continuity of services has materialized to date. The sector has taken measures to counter possible attacks and has analyzed fallback solutions to deal with service interruptions.

Vulnerabilities in the housing market have increased further. The strong growth in incomes and savings has boosted demand. At the same time, supply difficulties and large price increases for construction materials continue to limit the supply of new residential property. This has led to a rapid increase in prices. The share of riskier housing loans has slightly increased with competition between banks becoming tighter. Going forward, higher interest rates may start to limit demand. The Bank of Estonia may tighten the requirements for issuing housing loans, if needed, to stabilize the loan market and guard against an increase in the risks from rapid growth in lending.

The authorities have made great efforts to prevent the use of the financial system for money laundering and terrorist financing. The supervisory efficiency has risen significantly and the strengthening of the AML/CFT framework is continuing. More resources have been allocated to AML/CFT supervisors over the past years and the level of staffing has been substantially increased. The Estonian authorities will continue to engage in international cooperation, including through the IMF's Nordic-Baltic regional AML/CFT analysis and by ensuring compliance with the FATF standards, as assessed by the MONEYVAL. The authorities have pinpointed the risks related to virtual asset service providers (VASPs) that will need to be addressed. This entails improving the transparency, regulation, and supervision of VASPs. The draft law on crowdfunding and virtual assets and the EU Regulation on Markets in Crypto-assets (MiCA) are expected to further limit the risks.