Creditreform Sovereign Rating

Creditreform Rating

Rating Object	Rating Information	
REPUBLIC OF ESTONIA	Assigned Ratings/Outlook: **AA- /negative**	Type: Monitoring, Unsolicited with participation
Long-term sovereign rating Foreign currency senior unsecured long-term debt Local currency senior unsecured long-term debt	Initial Rating Publication Date: Rating Renewal: Rating Methodologies:	23-12-2016 19-07-2024 "Sovereign Ratings" "Rating Criteria and Definitions"

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Rating Action

Neuss, 19 July 2024

Creditreform Rating has revised its outlook on the Republic of Estonia to negative from stable and affirmed the unsolicited long-term sovereign rating of "AA-". Creditreform Rating has also affirmed Estonia's unsolicited ratings for foreign and local currency senior unsecured long-term debt of "AA-".

The outlook revision on the Republic of Estonia reflects

(i) prolonged adverse effects from geopolitical tensions on the Estonian economy, which have extended a phase of real GDP contraction, pushing back expectations for a timely resumption of the currently interrupted convergence process towards the EU income level; ongoing pressure on export competitiveness in this context, and weakening productivity, contribute to clouding medium-term economic growth prospects;

(ii) expectations for an ongoing adverse debt trend, albeit from a low level, on the back of protracted economic slack and more sticky spending pressure

Key Rating Drivers

1. Following the economic slump over the last two years, we expect another contraction in real GDP for 2024 on the back of likely subdued domestic demand, and exacerbated by a sizeable negative carry-over effect; amid falling inflation, easing monetary policy and improving external demand, economic growth should rebound next year
2. Although the implementation of reforms and investments under the Recovery and Resilience Plan (RRP), along with Estonia's welcoming business environment, generally supports a constructive outlook, somewhat decoupled wage and productivity growth bears the risk of amplifying challenges to Estonia's competitiveness; alongside shortages of skilled labor, this balances medium-term growth prospects
3. Strong performance as regards the World Bank's governance metrics, and advantages linked to EU/EMU membership, support the high quality of Estonia's institutional set-up, whilst NATO membership balances geopolitical risks to some extent; given elevated exposure in this field, the sovereign's forward-looking approach to improving its cyber infrastructure should be conducive to countering respective risks

4. Low risks to fiscal sustainability, despite a likely more entrenched worsening of the debt trend as a result of continued higher spending needs; we expect pronounced deficits this year and next; this notwithstanding, the public debt ratio should remain comparatively low and debt affordability high; a convincing track record of fiscal discipline strengthens the credibility of the sovereign's commitment to reduce the headline deficit
5. External risks related to the sovereign's status as a small, open economy are partly mitigated by the net international investment position (NIIP) composition and EU funds; persistent pressure on Estonia's external competitiveness stresses uncertainty over the path of the current account balance, which we expect to continue to exhibit deficits this year and next

Reasons for the Rating Decision and Latest Developments[1]

Macroeconomic Performance

The sovereign's solid macroeconomic profile features a diversified structure and a good degree of digitalization. As a small and open economy, Estonia is vulnerable to external shocks, leaving macro-financial variables subject to increased volatility. Due to a prolonged phase of economic weakness in a challenging international environment, Estonia's income convergence process remains interrupted. Drawing on IMF data, Estonia's GDP per capita fell by 0.7% to USD 44,269 (PPP terms, current prices), corresponding to 78% of the EU average in 2023, thus extending the recent unfavorable path. After a pronounced recession in 2023 which extended into the first quarter of the current year, economic growth will likely once again turn out negative this year. Medium-term growth prospects remain somewhat constrained by persisting skill shortages, and could be additionally hampered if misalignment between wages and productivity further weigh on cost competitiveness, which remains to be monitored. While the advancing roll-out of the RRP, as well as Estonia's business-friendly environment, provide counterweights to these challenges, we flag recently increased downside risks.

On the heels of shrinking economic output in 2022, Estonia's recession became deeper and more broad-based in 2023, with real GDP falling by 3.0%, considerably more pronounced than we had projected in our last review (Jul-23). Lower demand from main trading partners, above all the Nordic market, weighed on exports. Higher energy prices and costs of raw materials have increased input costs, affecting the export competitiveness of industries such as construction, metal and wood. Against this backdrop, and amid the high interest rate environment, lower investment activity additionally hampered last year's real GDP outturn. Moreover, faced with lower real disposable income, private households cut their expenditure. Public consumption, on the other hand, increased last year.

In Q1-24, the Estonian economy shrank for a ninth consecutive quarter, contracting by 0.5% q-o-q. Compared with 2023 as a whole, however, the downturn was less broad-based, with mainly private consumption declining. Consumer sentiment remains highly pessimistic, given clouding labor market developments against the backdrop of protracted economic weakness, but may

[1] This rating update takes into account information available until 12 July 2024.

have bottomed out in light of progressing disinflation. Posting at 3.1% in May-24, headline inflation stood well below the 9.1% average recorded in 2023 (2022: 19.4%, Eurostat data).

Estonia's unemployment rate has increased lately, standing at 7.8% in Apr-24, moving above the euro area level (6.4%). Employment continued to grow quarter-on-quarter in Q4-23 and Q1-24, having increased by a strong 3.2% in 2023 (EA 2023: 1.4%, Eurostat, NA data, domestic concept), with labor market integration of displaced persons from Ukraine likely providing support.

As regards the structural labor market situation, labor participation remains high and has increased to 82.4% in Q1-24, continuing to compare favorably in the European context and against its Baltic peers. Likewise, the European Commission's (EC) Social Scoreboard attests to overall strong performance, particularly with regard to equal opportunities. That said, continuously reported skill shortages could pose growth constraints in the near-to-medium term, and could be exacerbated by unfavorable demographic developments with a view to the longer term.

Despite the weak start into the current year, we think that private consumption is set to make a modest positive contribution to real GDP growth this year and gain traction in 2025. With the disinflationary trend expected to continue, further monetary policy easing should lower the burden on private households from mortgage payments. Gross wages grew by 11.4% in 2023 (Statistics Estonia) and the monthly minimum wage was raised by 13.1% in January 2024, buttressing household disposable income.

We expect gross fixed capital formation to remain somewhat restrained this year, with assumed further nterest rate cuts unlikely to have a material impact before next year. Combined with a more pronounced economic recovery, investment activity should take a positive turn in 2025. At the same time, investment should benefit from reforms and investments related to the RRP and cohesion policy funds. Meanwhile, the EC disbursed the first and second tranche under the RRF, amounting to EUR 238.5mn and EUR 122mn, respectively. The financial envelope of these two EU instruments amounts to over EUR 4.3bn (Cohesion policy 2021-2027: EUR 3369.3mn, RRF grants 2021-2026: 953.2mn), or roughly 11.5% of 2023 GDP.

With regard to foreign demand, export expectations for the second quarter have improved, and order books have strengthened (Eurostat data), but remain dampened overall. With key export industries having taken a hit (see above), economic recovery in these areas looks set to proceed rather gradually. At the same time, domestic demand is likely to be lackluster. We expect net exports to exert a negative growth contribution this year. Assumed implementation of further interest rate cuts should provide some tailwind to a recovery in exports next year.

On the whole, we forecast real GDP to shrink by 0.6% this year, dragged down by the weak first quarter, and despite the assumption of a moderate expansion trend thereafter. Against the backdrop of abating inflation, easing financing conditions, and strengthening foreign demand, a more tangible economic revival should take place in 2025. We expect the economy to expand by 2.7% next year.

Protracted skill shortages could hamper Estonia's competitiveness by posing a hindrance to investment. At the same time, whilst acknowledging that addressing skill shortages partly entails higher wages, e.g., taking into account the global competition for talent to drive the digital transformation, we flag risks of erosion of Estonia's cost competitiveness affecting medium-term growth prospects. Dynamic wage growth outstripped productivity gains over 2014-2023, resulting in a sharp rise in real unit labor costs. Between 2022 and 2023, real unit labor costs increased further on the back of a marked decline in real labor productivity per person.

Drawing on Estonia's worldwide export market share of goods and services as a gauge of its export competitiveness, we observe that the overall share was stable in 2023, posting at 0.10% in 2023. That said, its global goods share declined for the second year in a row.

Further to this issue, declining competitiveness in combination with weakening productivity could pose a drag on potential growth. At 0.7% for 2024 and 1.0% in 2025 (AMECO data), near-term projections for Estonia's potential growth compare unfavorably with Baltic peers and the euro area as a whole, falling well short of the long-term average of 2.2% over the period 2010-2019.

On a more positive note, indicators capturing the non-cost competitiveness performance of Estonia continue to paint an overall favorable picture. In the UN's Global Innovation Index 2023, Estonia occupies a strong 16th place (out of 132 countries), with particularly good performances in the innovation pillars 'Infrastructure' and 'Market sophistication'. Despite falling by seven ranks to 33rd (out of 67 economies) in the 2024 edition of the IMD World Competitiveness Ranking, Estonia occupied a midfield position among EU countries.

Estonia's welcoming business environment continues to back a more positive take on medium-term prospects. Underscoring the competitive nature of the Estonian tax system, Estonia topped the OECD's 2023 International Tax Competitiveness Index. As regards the digitalization of public services, Estonia represents one of the EU's most advanced economies. According to the Digital Decade Country Report 2024, digital public services for businesses are markedly better developed than on average in the EU.

Bureaucratic barriers to setting up a business are low, and Estonia boasts an overall nurturing environment for startups, as also echoed by the annual State of European Tech report by Atomico. Referring to the year 2023, the report showed that among the EU countries, the number of funded startups per capita have been the highest in Estonia.

Energy security risks have been reduced, following the diversification of the energy supply through the Balticconnector gas pipeline as well as LNG terminals in Klaipeda, Inkoo and Paldiski. In addition, the synchronization of the Baltic electricity grid with the continental European network has progressed according to plan and is envisaged to be completed by Feb-25.

Institutional Structure

We consider the sovereign's creditworthiness to be underpinned by its strong institutional framework, including benefits stemming from its EU/EMU membership such as the access to the Single Market. In addition, we assess Estonia's security as being strengthened by its NATO membership. The increased military presence on NATO's eastern flank, and the accession of Finland and Sweden into the alliance, somewhat mitigate geopolitical risks arising from its shared border with Russia, which have become more immediate in the face of the war in Ukraine. Partly related to this, and in response to an increased number of cyberattacks, Estonia undertakes continuous efforts to strengthening its cyber resilience.

As again underscored by the 2022 set of the four Worldwide Governance Indicators (WGIs) we deem most relevant for our assessment of a sovereign's institutional quality, Estonia continues to boast strong institutional governance. Improved relative ranks have been achieved with regard to 'Government Effectiveness' (23 out of 213), 'Rule of Law' (23 out of 213) and 'Control of

Corruption' (20 out of 213), and these are well aligned with the respective median ranks regarding our AA-rated universe. Moreover, it may be worth noting that derived ranks regarding 'Government Effectiveness' and 'Rule of Law' were Estonia's strongest since the inception of the WGIs in 1996. Slipping one place with regard to 'Voice and Accountability' (26 out of 208), the relative rank still compared favorably against the euro area median, albeit trailing the median of our AA-rated sovereigns.

Turning to domestic politics, Prime Minister Kaja Kallas (Reform Party) resigned in Jul-24, as she will take over the position as EU High Representative for Foreign Affairs. She looks set to be replaced by incumbent Minister of Climate, Kristen Michal. We expect an ongoing strong focus on defense and security matters.

Also boasting a well-advanced degree of digitalization, Estonia's justice system continues to operate efficiently, as stressed by the EC Rule of Law Report, for which the 2024 update is pending. Drawing on the 2024 EU Justice Scoreboard, the estimated length of proceedings remained relatively low in 2022. Underscoring Estonia's forward-looking approach, headway has been made concerning the regulation of cryptocurrency firms that are currently required to comply with AML rules. Following the adoption of the Act for Markets in Crypto-Assets, cryptocurrency service providers will be supervised by the Financial Supervisory Authority from Jul-26, obliging them to conform to the EU's Markets in Crypto-Assets regulations.

In terms of greening the economy, Estonia exhibits some room for improvement, given that its eco-innovation capabilities compare unfavorably with the EU average, as suggested by the EC's respective index, and greenhouse gas emissions per capita were the fourth-highest in the EU at 10.5 tons per head in 2022 (Eurostat data). Having said that, Estonia's overall share of energy from renewable sources increased to 38.5% in 2022, representing the fifth-highest reading in the EU. The government remains committed to reducing its reliance on oil shale. In this context, in May, the Ministry of Climate outlined the content of the Climate Resilient Economy Act, which focuses on clean energy production, aiming to reduce emissions by 55% by 2030 compared to 1990 levels and to become climate neutral by 2050.

Fiscal Sustainability

Despite worsening fiscal metrics, we consider risks to fiscal sustainability as low, additionally buttressed by a track record of fiscal prudence, sound debt management, and high debt affordability. Notwithstanding the recent rise in the public debt ratio, Estonia's general government debt as a percentage of GDP remains the lowest among EU member states. Rising structural expenditure and higher expenses on national defense, as well as the subdued macroeconomic climate and its implications on tax revenue, will weigh on the fiscal turnout this year and beyond, resulting in an increasing debt ratio in the near-to-medium term. Financial soundness indicators back the assessment of the banking sector as being in healthy condition, although some risks concerning loan losses remain in place.

Illustrating a track record of fiscal prudency, Estonia featured a broadly balanced budget position averaging 0.1% of GDP p.a. over 2010-2019, prior to the recent succession of crises. Following its decline in 2022, Estonia's general government deficit widened to -3.4% of GDP in 2023. The deterioration came on the back of a sizeable increase in spending (+14.5%), driven by final consumption expenditure, rising investment in national defense, and public wage growth. While

subsidies in the context of energy support measures declined, interest payments saw a substantial rise. Nevertheless, with an interest-to-revenue ratio of 0.9% in 2023, debt affordability remains high by comparison.

The protracted slowdown in economic activity led to decelerating growth in total general government revenue (+8.2%) last year, with net social contributions and tax receipts still constituting the main growth drivers. Looking ahead, policy priorities affecting the expenditure side include measures in the field of education, cyber security and national defense. As stated in the Draft Budgetary Plan 2024, measures that would have a revenue-raising effect in 2024 include higher taxes on dividend payments from banks and the increase of environmental fees. In 2025, the increase of the income tax rate by 2 p.p. and the rise of the basic tax-free income and its uniform application to every income tax payer could c.p. decrease revenue by about EUR 290mn (EC intelligence).

Aiming to keep the fiscal deficit below 3% of GDP, more recently the government provided a supplementary state budget, which was passed by the Riigikogu this June, and which is estimated to improve the budget balance by EUR 173mn in 2024 (about 0.4% of our estimated 2024 GDP). We continue to see downside risks with regard to the budgetary outturn, in particular given the persistent geopolitical tensions. Overall, we expect the general government deficit to come to 3.3% of GDP in 2024 and 3.5% of GDP in 2025.

With a general government debt ratio of 19.6% of GDP (2023, Eurostat), Estonia remains the least-indebted country in the EU by this measure, notwithstanding a rising tendency in light of the consecutive shocks over recent years. Although the debt trajectory points moderately upwards in the medium-term under the projected headline deficits, the sovereign enjoys significant fiscal leeway, implying low risks to fiscal sustainability. We forecast the debt-to-GDP ratio to rise to 22.4% in 2024 and 25.2% in 2025.

Contingency risks associated with the highly concentrated banking sector appear limited. Metrics capturing capitalization and asset quality point to ample risk buffers and high asset quality. At 0.7% in Q1-24 (EBA data), Estonia's NPL ratio was one of the lowest in the EU, while its CET1 ratio of 22.3% corresponded to one of the highest.

To be sure, the dominance of floating interest rates regarding loan contracts, in connection with high interest rates, bears the risk of a deterioration in the debt servicing capacity of companies and households. Whilst banks' loan exposure to the construction sector and real estate is relatively high, as also highlighted by Eesti Pank (May-24), we assess adverse consequences for the banking sector as manageable.

Amid weaker loan demand as a direct consequence of tighter financing conditions due to the previous aggressive tightening cycle, credit growth to the private sector has slowed. While outstanding credit volumes to NFCs and households were still higher by 6.3% and 7.3%, respectively, in Apr-24 (ECB data), growth rates are down from near-double-digit territory one year prior. Higher interest rates have also translated into temporarily moderating house price dynamics, with annual house price growth slowing to 3.8% in Q3-23 before rising again to 7.8% in the first quarter of this year (Eurostat data). Macroprudential levers remain activated and have even been further intensified with a CcyB rate of 1.5% effective from Dec-23.

Triggered by financial market expectations for interest rate cuts, the yield on long-term government bonds had dropped by the end of last year, before drifting up again in 2024 amid uncertainty regarding the pace of monetary policy easing. Compared to the time of our last rating

review (Jul-23), yields have fallen by 38bp, reaching 3.71% in May 2024 (Eurostat data). Following the ECB's decision to reduce its key policy rates by 25bp in Jun-24, we expect two more rate cuts to follow in 2024, also recalling that the difference between the main refinancing rate and the deposit rate will be narrowed to 15bp from Sep-24.

Foreign Exposure

The small size and high degree of openness generally make the economy susceptible to external shocks, with the current account balance continuing to reflect protracted challenging circumstances for the Estonian economy, highlighting risks for a more lasting negative impact on its external position. However, we ultimately assess risks pertaining to Estonia's external position as broadly contained, also supported by the composition of the NIIP and incoming EU funds.

For a fourth year in a row, Estonia's current account balance was in deficit territory. Aided by a narrowing goods deficit and a slightly widening services surplus, the deficit decreased in 2023. However, at -1.4% of GDP, it still stood well below the longer-term average of +1.1% of GDP p.a. over 2010-2019. More recent data up to Q1-24 show that the current account deficit rose to 1.6% of GDP (cumulatively over four quarters, Eurostat). We do not expect the current account balance to return to pre-pandemic levels soon, given weakening export competitiveness.

Mainly driven by a growing stock of foreign direct investment, Estonia's negative NIIP increased from -20.2% of GDP in 2022 to -21.6% of GDP in 2023. Developments regarding the portfolio investment and other investment components had the opposite effect, although less pronounced. Adding to mitigating external risks, the NIIP excluding non-defaultable instruments has become more positive, reaching 30.9% of GDP in 2023.

Rating Outlook and Sensitivity

Our rating outlook on the Republic of Estonia is negative, reflecting the deteriorating macroeconomic and fiscal prospects, as well as increasing vulnerabilities via foreign exposure.

We could lower the sovereign's credit ratings if economic growth continues to fall short of our expectations, possibly induced by additional signs for eroding competitiveness or an escalation of geopolitical tensions, and further obstructing Estonia's income convergence process. A substantial rise in the public debt ratio and low confidence for a sustainable reversal could also trigger a negative rating action.

Conversely, we could raise the sovereign's credit rating or outlook if economic performance strengthens significantly, possibly backed by investments and reforms included in the RRP and/or ebbing external vulnerabilities, enhancing the medium-term outlook and likely paving the way for income convergence to resume. A positive rating action could also be prompted by heightened confidence in a reversal of the deteriorating fiscal metrics.

Analysts

Primary Analyst
Lucas Leon Spintig
Associate Senior Analyst Public Finance
L.Spintig@creditreform-rating.de
+49 2131 109 3048

Analyst
Dominic Prott
Analyst Public Finance
D.Prott@creditreform-rating.de
+49 2131 109 3810

Person Approving Credit Ratings
Philipp J. Beckmann
P.Beckmann@creditreform-rating.de

Ratings*

Long-term sovereign rating	AA- / negative
Foreign currency senior unsecured long-term debt	AA- / negative
Local currency senior unsecured long-term debt	AA- / negative

*) Unsolicited

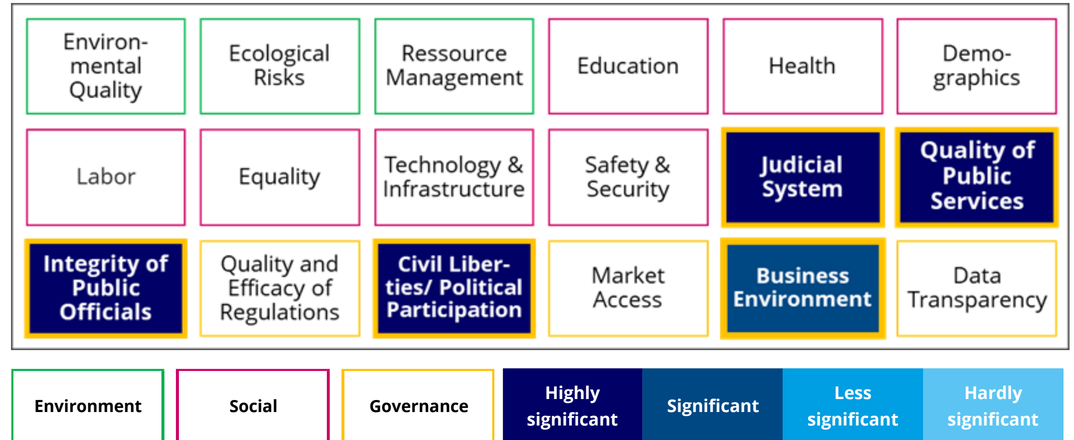
ESG Factors

Creditreform Rating has signed the ESG in credit risk and ratings statement formulated within the framework of the UN Principles for Responsible Investment (UN PRI). The rating agency is thus committed to taking environmental and social factors as well as aspects of corporate governance into account in a targeted manner when assessing creditworthiness.

While there is no universal and commonly agreed typology or definition of environment, social, and governance (ESG) criteria, Creditreform Rating views ESG factors as an essential yardstick for assessing the sustainability of a state. Creditreform Rating thus takes account of ESG factors in its decision-making process before arriving at a sovereign credit rating. In the following, we explain how and to what degree any of the key drivers behind the credit rating or the related outlook is associated with what we understand to be an ESG factor, and outline why these ESG factors were material to the credit rating or rating outlook.

For further information on the conceptual approach pertaining to ESG factors in public finance and the relevance of ESG factors to sovereign credit ratings and to Creditreform Rating credit ratings more generally, we refer to the basic documentation, which lays down key principles of the impact of ESG factors on credit ratings.

ESG Factor Box



The governance dimension plays a pivotal role in forming our opinion on the creditworthiness of the sovereign. As the World Bank's Worldwide Governance Indicators Rule of Law, Government Effectiveness, Voice and Accountability, and Control of corruption have a material impact on Creditreform Rating's assessment of the sovereign's institutional set-up, which we regard as a key rating driver, we consider the ESG factors 'Judicial System and Property Rights', 'Quality of Public Services and Policies', 'Civil Liberties and Political Participation', and 'Integrity of Public Officials' as highly significant to the credit rating.

Since indicators relating to the assessment of an economy's competitive stance by e.g. the World Bank, the World Economic Forum, the European Commission, and IMD Business School and the World Intellectual Property Organization (UN) add further input to our rating or adjustments thereof, we judge the ESG factor 'Business Environment' as significant.

While Covid-19 may exert adverse effects on several components in our ESG factor framework in the medium to long term, it has not been visible in the relevant metrics we consider in the context of ESG factors – though it has a significant bearing on public finances. To be sure, we will follow ESG dynamics closely in this regard.

Economic Data

[in %, otherwise noted]	2018	2019	2020	2021	2022	2023	2024e
Macroeconomic Performance							
Real GDP growth	3.8	4.0	-1.0	7.2	-0.5	-3.0	-0.6
GDP per capita (PPP, USD)	35,867	37,799	37,854	42,415	44,592	44,269	45,122
Credit to the private sector/GDP	70.6	68.3	63.8	59.7	63.6	69.3	n/a
Unemployment rate	5.4	4.5	6.9	6.2	5.6	6.4	n/a
Real unit labor costs (index 2015=100)	102.9	104.2	107.9	104.0	101.8	108.0	109.8
World Competitiveness Ranking (rank)	31	35	28	26	22	26	33
Life expectancy at birth (years)	78.5	79.0	78.9	77.2	78.1	78.8	n/a
Institutional Structure							
WGI Rule of Law (score)	1.2	1.2	1.3	1.4	1.4	n/a	n/a
WGI Control of Corruption (score)	1.5	1.5	1.6	1.5	1.5	n/a	n/a
WGI Voice and Accountability (score)	1.2	1.2	1.2	1.2	1.2	n/a	n/a
WGI Government Effectiveness (score)	1.2	1.1	1.3	1.3	1.3	n/a	n/a
HICP inflation rate, y-o-y change	3.4	2.3	-0.6	4.5	19.4	9.1	3.4
GHG emissions (tons of CO2 equivalent p.c.)	15.3	11.1	8.6	9.5	10.5	n/a	n/a
Default history (years since default)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fiscal Sustainability							
Fiscal balance/GDP	-0.6	0.1	-5.4	-2.5	-1.0	-3.4	-3.3
General government gross debt/GDP	8.2	8.5	18.6	17.8	18.5	19.6	22.4
Interest/revenue	0.1	0.1	0.2	0.2	0.2	0.9	n/a
Debt/revenue	21.2	21.6	47.1	45.0	47.6	48.8	n/a
Total residual maturity of debt securities (years)	n/a	4.6	7.4	6.7	7.3	6.5	n/a
Foreign exposure							
Current account balance/GDP	0.9	2.5	-1.9	-2.6	-3.2	-1.4	n/a
International reserves/imports	3.9	7.9	11.5	10.0	8.3	11.3	n/a
NIIP/GDP	-29.9	-22.4	-21	-13.4	-20.2	-21.3	n/a
External debt/GDP	77.9	75.6	88.7	85.1	84.7	90.2	n/a

Sources: IMF, World Bank, Eurostat, AMECO, ECB, IMD Business School, Statistics Estonia, own estimates

Appendix

Rating History

Event	Publication Date	Rating /Outlook
Initial Rating	23.12.2016	AA- /stable
Monitoring	27.10.2017	AA- /stable
Monitoring	31.08.2018	AA- /stable
Monitoring	30.08.2019	AA- /stable
Monitoring	21.08.2020	AA- /stable
Monitoring	13.08.2021	AA- /stable
Monitoring	12.08.2022	AA- /stable
Monitoring	21.07.2023	AA- /stable
Monitoring	19.07.2024	AA- /negative

Regulatory Requirements

In 2011 Creditreform Rating AG (CRAG) was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation. The rating was not endorsed by Creditreform Rating AG from a third country as defined in Article 4 (3) of the CRA-Regulation.

This sovereign rating is an unsolicited credit rating. The Ministry of Finance of the Republic of Estonia participated in the credit rating process as it provided additional information and reviewed a draft version of the report. Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

Unsolicited Credit Rating	
With Rated Entity or Related Third Party Participation	YES
With Access to Internal Documents	YES
With Access to Management	NO

The rating was conducted on the basis of CRAG's "Sovereign Ratings" methodology (v1.2, July 2016) in conjunction with its basic document "Rating Criteria and Definitions" (v1.3, January 2018). CRAG ensures that methodologies, models, and key rating assumptions for determining sovereign credit ratings are properly maintained, up-to-date, and subject to a comprehensive review on a periodic basis. A complete description of CRAG´s rating methodologies and basic document "Rating Criteria and Definitions" is published on our website.

To prepare this credit rating, CRAG has used the following substantially material sources: International Monetary Fund, World Bank, Organization for Economic Co-operation and Development, Eurostat, European Commission, European Banking Authority, European Central Bank, World Economic Forum, World Intellectual Property Organization (WIPO), IMD Business School, National Bank of Estonia, Republic of Estonia – Ministry of Finance, Statistics Estonia.

A Rating Committee was called consisting of highly qualified analysts of CRAG. The quality and extent of information available on the rated entity was considered satisfactory. The analysts and committee members declared that the rules of the Code of Conduct were complied with. No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks. The analysts presented the results of the quantitative and qualitative analyses and provided the Committee with a recommendation for the rating decision. After the discussion of the relevant quantitative and qualitative risk factors, the Rating Committee arrived at a unanimous rating decision. The weighting of all risk factors is described in CRAG´s "Sovereign Ratings" methodology. The main arguments that were raised in the discussion are summarized in the "Reasons for the Rating Decision."

As regards the rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the credit rating report. There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRAG website.

No ancillary services in the regulatory sense were carried out for this rating object. Creditreform Rating AG ensures that the provision of ancillary services does not present conflicts of interest with its credit rating activities and discloses ancillary services provided for the rated entity or

any related third party, if any, in its rating reports. For the complete list of provided ancillary services please refer to Creditreform Rating AG's website: https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html#non-core-business-activities.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks is indicated clearly and prominently in the rating report; the first release is indicated as "initial rating"; other updates are indicated as an "update", "upgrade or downgrade", "not rated", "affirmed", "selective default" or "default".

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available on the ESMA website: https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml.

An explanatory statement of the meaning of each rating category and the definition of default are available in the credit rating methodologies disclosed on the website.

Disclaimer

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Creditreform Rating AG

Creditreform Rating AG
Europadamm 2-6
D - 41460 Neuss

Phone +49 (0) 2131 / 109-626
Fax +49 (0) 2131 / 109-627
E-Mail info@creditreform-rating.de
Internet www.creditreform-rating.de

CEO: Dr. Michael Munsch
Chairman of the Board: Michael Bruns
HRB 10522, Amtsgericht Neuss