Grand Duchy of Luxembourg
Rating Report

AAA STABLE OUTLOOK

Credit strengths

- Wealthy economy with solid fundamentals
- Sound public finances and robust fiscal framework
- Strong external position

Credit challenges

- Exposure to developments in global taxation and financial markets
- Fiscal pressures due to ageing population
- Rising vulnerabilities in the real estate sector

Rating rationale:

Wealthy economy with solid fundamentals: Luxembourg benefits from its high wealth levels and competitive economy, supported by strong labour productivity and high value-added sectors such as financial services and information and communication technology. These factors contribute to Luxembourg's economic resilience as demonstrated throughout the Covid-19 crisis and a robust growth outlook despite short-term headwinds.

Sound public finances and robust fiscal framework: Luxembourg's public finances are characterised by a track record of solid fiscal surpluses and a very low debt stock. This, combined with a robust fiscal framework, underpins our view that Luxembourg will maintain ample fiscal buffers to face future shocks.

Strong external position: Euro area membership, consistent current account surpluses and large external creditor position mitigate risks linked to Luxembourg's small, open economy.

Rating challenges include: i) a small, open economy that is exposed to developments in global taxation and international financial markets; ii) long-term fiscal pressures linked to population ageing; and iii) rising financial vulnerabilities from rapidly increasing real estate prices and elevated private debt levels.

Luxembourg's sovereign rating drivers

Risk pillars		Quantitative		Reserve currency	Qualitative*	Final rating
		Weight	Indicative rating	Notches	Notches	
Domestic Economic Risk		35%	aa	EUR [+1]	0	AAA
Public Finance Risk		20%	aaa		+1/3	
External Economic Risk		10%	aa-		0	
Financial Stability Risk		10%	aaa		-1/3	
ESG Risk	Environmental Factors	5%	bbb+		0	
	Social Factors	7.5%	a-		0	
	Governance Factors	12.5%	aaa		0	
Indicative outcome			**aaa**		**0**	
Additional considerations					**0**	

Note: *The qualitative scorecard adjustments, capped at one notch per rating pillar, are weighted equally with an aggregate adjustment rounded to the nearest integer. The reserve-currency adjustment applies to currencies in the IMF's SDR basket. For details, please see Scope's 'Sovereign Ratings' methodology. Source: Scope Ratings.

Outlook and rating triggers

The Stable Outlook reflects Scope's view that risks to the ratings are balanced.

Positive rating-change drivers

- N/A

Negative rating-change drivers

- Growth outlook deteriorates substantially
- Fiscal fundamentals weaken significantly
- Vulnerabilities in the financial system threaten macro-economic stability

Ratings and Outlook

Foreign currency

Long-term issuer rating	AAA/Stable
Senior unsecured debt	AAA/Stable
Short-term issuer rating	S-1+/Stable

Local currency

Long-term issuer rating	AAA/Stable
Senior unsecured debt	AAA/Stable
Short-term issuer rating	S-1+/Stable

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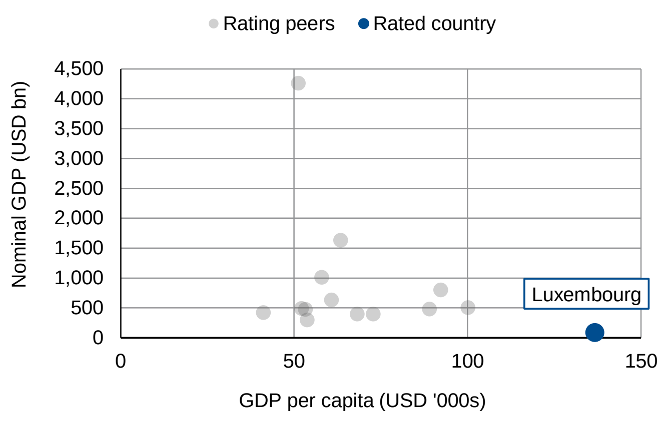
Domestic Economic Risks

- **Growth outlook:** Luxembourg's economy recovered strongly in 2021, with growth reaching 6.9% in 2021, after shrinking by only 1.8% in 2020. The economy had already returned to pre-crisis levels by Q3 2020, one year ahead of the euro area aggregate. Short-term headwinds have emerged due to the escalation of war in Europe and associated inflationary pressures. Growth is slowing in the country with activity in industry and construction particularly affected by supply-side constraints. Still, Luxembourg remains resilient to these pressures compared to euro area peers with limited direct exposure to Russia and Ukraine. Real GDP contracted by 0.5% quarter on quarter in Q2 2022, before picking up again at 1.1% in Q3. Growth will benefit from the government's comprehensive fiscal support package to mitigate the impact of higher prices on purchasing power and investment. We project growth of 2.0% in 2022 followed by 2.2% in 2023 though substantial risks remain.
- **Inflation and monetary policy:** Inflation accelerated rapidly in 2022, as supply-side bottlenecks were compounded by the war in Ukraine. HICP inflation stood at an elevated 6.2% (YoY) in December 2022, having nonetheless moderated from a peak of 10.3% in June and remaining among the lowest in the EU despite the country's high import dependency. Energy prices are the main driver with core inflation standing at 3.9% as of December. Consumer price dynamics appear to have peaked in recent months, further supported by government measures to limit energy price increases. The ECB increased its deposit rate to 2.0% in December 2022, its highest level since 2008, although the 50bps hike marked a slowdown from the two previous increases.
- **Labour markets:** Like other euro area countries, the labour market is showing some signs of a slowdown. Job creation in Luxembourg remains elevated but is slowing. Year on year employment gains stood at 2.6% in December 2022, versus 3.8% in January. Unemployment has inched up in recent months but remains low, at 4.6% in November. The government projects employment to grow at 3.4% in 2022 and then decline to 2% in 2023. Rigidity in the country's labour markets mean that the effects of economic downturns materialise with a delay, but we do not expect a material weakening in the labour market.

Overview of Scope's qualitative assessments for Luxembourg's *Domestic Economic Risks*

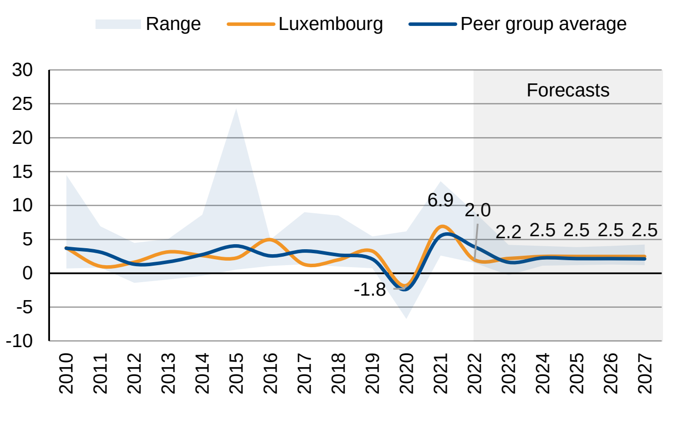
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aa	Growth potential of the economy	Strong	+1/3	High growth potential, supported by sound economic policies and high value-added sectors
	Monetary policy framework	Neutral	0	ECB is a highly credible and effective central bank; appropriate monetary policy response to the Covid crisis
	Macro-economic stability and sustainability	Weak	-1/3	Small, open economy that is subject to volatility; exposed to changes in global tax environment

Nominal GDP and GDP per capita, USD



Source: IMF World Economic Outlook (WEO), Scope Ratings

Real GDP growth, %



Source: IMF WEO, Scope Ratings forecasts

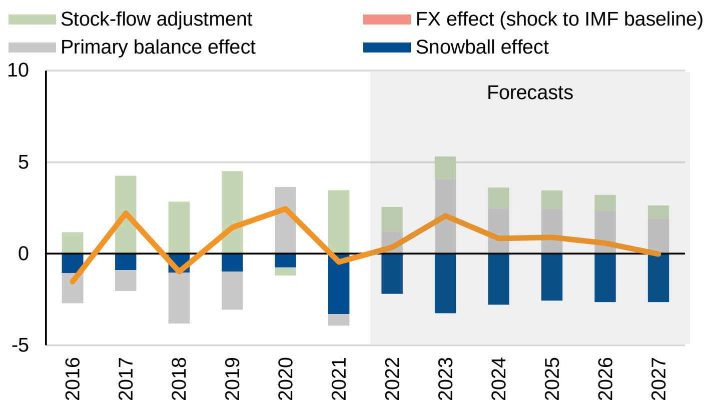
Public Finance Risks

- **Fiscal outlook:** The headline budget balance reached an estimated surplus in 2021 of 0.9% of GDP, thanks to strong recovery in revenue and to the phase out of Covid-19 related measures. However, the medium-term fiscal outlook has deteriorated in view of the fallout of the war in Ukraine and the government's fiscal policy response. The government announced a fiscal support package totalling EUR 2.6bn (3.3% of GDP) to be disbursed over 2022-23. High inflation results in opposing budgetary forces. Revenue, especially from VAT, income tax and social contribution, has been stimulated, while spending has increased under inflation-indexed public sector wages, social transfers and pensions. We project a budget deficit of 0.4% of GDP for 2022, before widening to 2.2% of GDP in 2023. The European Commission has invited Luxembourg to review its budgetary plans to better target vulnerable households and exposed firms and preserve incentives to reduce energy demand.
- **Debt trajectory:** Our baseline projections see Luxembourg's public debt-to-GDP ratio rising slightly and stabilising at 29% by 2026, from 24% of GDP in 2021 and 6.7pps of GDP above pre-crisis levels. This is underpinned by sustained, albeit moderate budget deficits which are only partly offset by relatively favourable growth. These debt levels remain very comfortable and provide Luxembourg with ample fiscal space to respond to future shocks.
- **Debt profile and market access:** The debt structure is favourable with short-term debt representing 7% of total debt and no foreign currency exposure. An average maturity of debt at around 6.5 years mitigates the risks posed by rising interest rates, which will take several years to feed through to the country's interest payment burden. The fiscal position is further bolstered by sizable government financial assets amounting to EUR 59.8bn in Q2 2022 (78% of GDP), mostly comprised of equity investments (46% of total), currency and deposits (24%), and debt securities (18%). Financing costs have increased recently, with the 10-year government bond yield at 2.7% in December 2022, the highest since 2011.

Overview of Scope's qualitative assessments for Luxembourg's *Public Finance Risks*

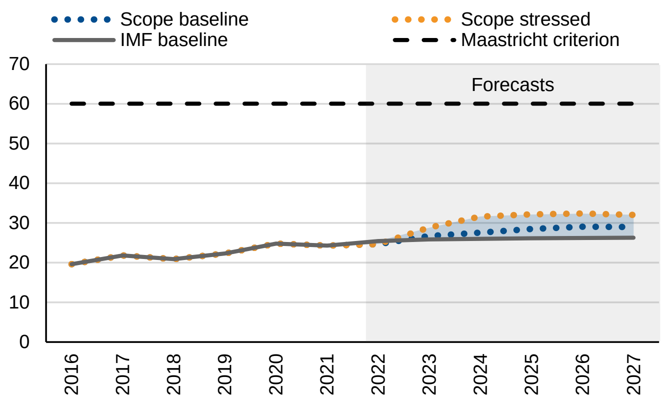
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Fiscal policy framework	Neutral	0	Effective fiscal policy frameworks with track record of conservative budgetary management
	Debt sustainability	Strong	+1/3	Very low debt levels and stable debt dynamics over the forecast horizon
	Debt profile and market access	Neutral	0	Favourable debt profile with a low interest payment burden

Contributions to changes in debt levels, pps of GDP



Source: IMF WEO, Scope Ratings forecasts

Debt-to-GDP forecasts, % of GDP



Source: IMF WEO, Scope Ratings forecasts

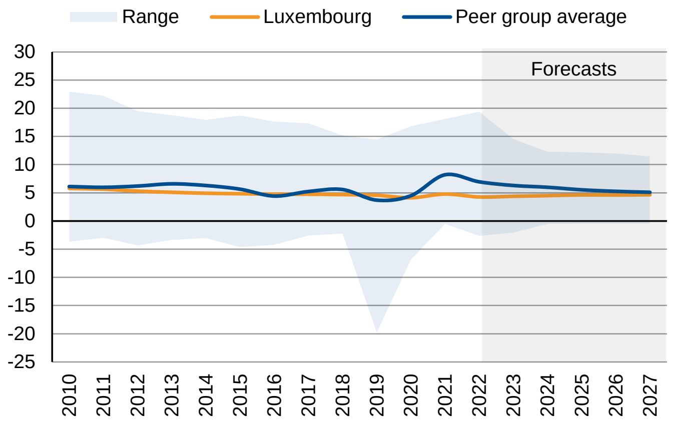
External Economic Risks

- **Current account:** The current account balance has recovered to pre-pandemic levels, reaching 4.8% of GDP in 2021, up from 4.1% of GDP in 2020. Luxembourg's current account balance faces some headwinds as external demand from key euro area trading partners weakens while the terms of trade have deteriorated as well. We note that exports and imports of financial services which drive the country's current account are somewhat price insensitive. The current account balance should narrow to 4.3% of GDP in 2022 and thereafter gradually stabilise at 4.5% of GDP in 2024-27.
- **External position:** Luxembourg's NIIP is sensitive to changes in global market conditions, given its role as a financial hub with extensive ties to international markets. The NIIP stood at 22% of GDP in June 2022, down from 42% of GDP in June 2021. This was driven by weakening asset prices and disinvestments. External debt represented 4,733% of GDP in June 2022. Over a quarter of external debt is short-term while 36% is in the form of intercompany loans. Still, large external debt levels present much lower risks than those implied by these ratios given that they have a limited link to Luxembourg's real economy.
- **Resilience to shocks:** Euro area membership bolsters the country's resilience to short-term shocks. Still, Luxembourg's small, open economy is highly integrated in global financial markets and is highly concentrated on financial services. It is thus exposed to short-term external shocks such as a sharp tightening in global financial conditions.

Overview of Scope's qualitative assessments for Luxembourg's *External Economic Risks*

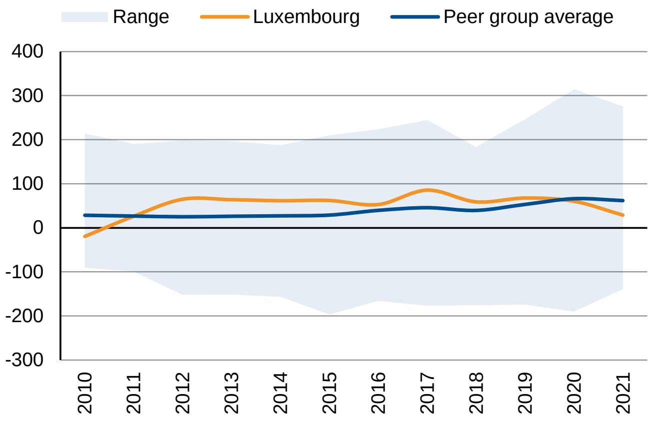
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aa-	Current account resilience	Neutral	0	Strong current account surpluses; reliance on financial service exports; sensitive to dividend policies vis-à-vis foreign investors
	External debt structure	Neutral	0	High external debt levels offset by external assets with a net international creditor position
	Resilience to short-term external shocks	Neutral	0	Euro-area membership mitigates risks from strong integration with global financial markets

Current account balance, % of GDP



Source: IMF WEO, Scope Ratings

Net international investment position (NIIP), % of GDP



Source: IMF, Scope Ratings

Financial Stability Risks

- **Banking sector:** Luxembourg benefits from its resilient banking sector characterised by high capitalisation levels (Tier 1 ratio of 20% in June 2022), strong asset quality (NPL ratio of 1%) and adequate but low profitability (return on equity of 7.5%). Tightening global financial conditions could negatively impact banks through lower investment income, higher risk premia and foreign exchange movements. However, higher interest rates should also support profitability in the sector gradually. The Central Bank of Luxembourg's stress testing showed that Tier 1 ratios could erode by 0.8-3.1pps by 2023, with particular sensitivity to real estate price shocks. The overall banking system is sufficiently resilient to absorb these shocks, but some banks may need to reduce their balance sheets or reinforce their capitalisation.

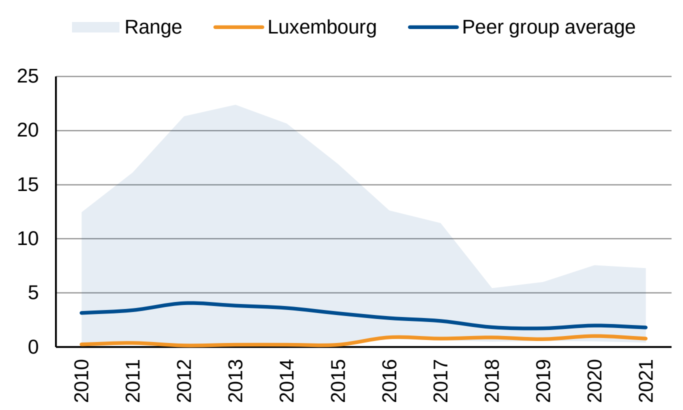
- **Private debt:** Non-financial corporate debt is the highest in the EU, at around 2.7 times GDP in September 2022. This stems from Luxembourg's position as an international business treasury centre and reflects large amounts of intra-company cross border loans. Liabilities are usually matched by equivalent assets. Household debt is also high and rising, at 180% of disposable income in Q1 2022, well above the euro area average of 104%. Most of household debt is made up of mortgage loans, a large share of which are variable rate, thus exposing households to interest rate risk though the share of fixed rate loans in new mortgage lending has been rising substantially to above 67% in Q1 2022. Risk related to elevated household debt are largely mitigated by high household wealth.

- **Financial imbalances:** Growth in housing prices has accelerated in recent years owing to strong demographic and economic growth, increasing mortgage debt combined with supply-side constraints. House and apartment prices have continued to rise in 2022, despite the inflationary pressures and tightening of monetary policies. The Eurostat house price index grew by 11% in the year to September 2022, above the euro area average of 7%. This worsens housing affordability, exacerbates already high household debt and may pose long-term risks to financial stability though the resilience of the banking sector mitigates these risks. Luxembourg has implemented loan to value limits, more stringent risk weighting and increased its countercyclical capital buffers.

Overview of Scope's qualitative assessments for Luxembourg's *Financial Stability Risks*

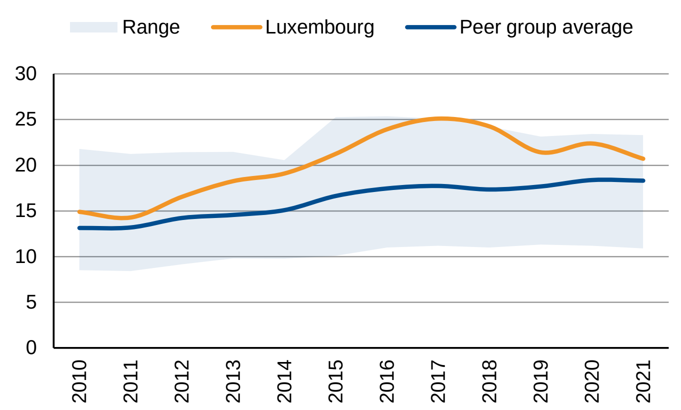
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Banking sector performance	Neutral	0	Efficient banking sector with large capital buffers and strong asset quality but some profitability pressures
	Banking sector oversight	Neutral	0	Efficient, credible oversight frameworks under the Central Bank of Luxembourg and the ECB
	Financial imbalances	Weak	-1/3	Gradually increasing imbalances in the housing sector due to supply constraints; high private debt levels

Non-performing loans, % of total loans



Source: IMF, Scope Ratings

Tier 1 ratio, % of risk-weighted assets



Source: IMF, Scope Ratings

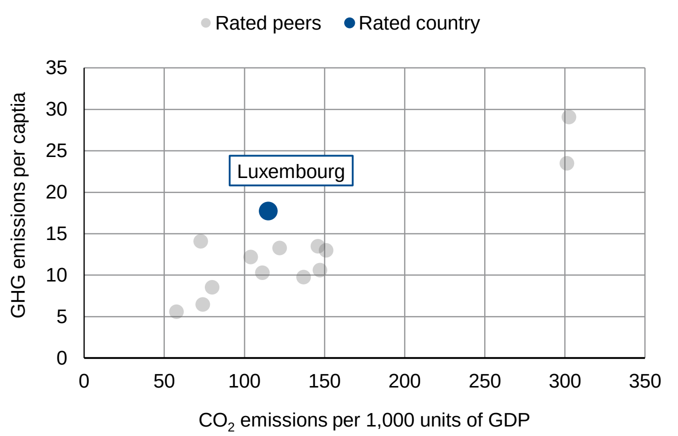
ESG Risks

- **Environment:** Luxembourg has among the highest greenhouse gas emissions per capita in the EU, generating 0.34% of the EU's total greenhouse gas emissions despite only accounting for 0.14% of total EU population. It is highly dependent on resource imports given the constraints of its territory with a fossil fuel-based energy mix (88% of total primary energy supply in 2021) – among the highest of IEA member countries. The government's climate plans include an ambitious -55% emissions targets for Effort Sharing sectors by 2030. The country introduced a carbon tax in January 2021 which was increased in 2022 to EUR 25 per tonne and should increase to EUR 30 per tonne in 2023, though this remains below levels needed to effectively incentivise climate action in line with the Paris agreement.
- **Social:** Luxembourg benefits from its generous social safety net, which results in strong social outcomes in an EU context, but the country is facing several structural pressure points. Sustained surging in house prices poses affordability issues while it also increases inequalities. The share of people at risk of income poverty after transfers has increased steadily since 2002 and reached 18% in 2021. The education system underperforms EU peers with lagging basic skills for pupils and large gaps between advantaged and disadvantaged students. Demographic trends are favourable compared to EU peers, but the generosity of social systems will be strained by population ageing. Spending on pensions is projected to double to 18% of GDP by 2070, though the pension system remains in a comfortable medium-term financial position, given ample revenues that should continue to outweigh spending at least through 2032
- **Governance:** The country benefits from a stable political environment and strong democratic institutions. Luxembourg achieves consensus on important issues, including European integration, and effectively governs through coalitions, which also support political coherence. Xavier Bettel, the prime minister, and his coalition government has been in place since 2013 and was confirmed after the 2018 elections. The coalition includes his party (the Democrats), the Socialist Party and the Greens. The next elections are scheduled for October this year.

Overview of Scope's qualitative assessments for Luxembourg's *ESG Risks*

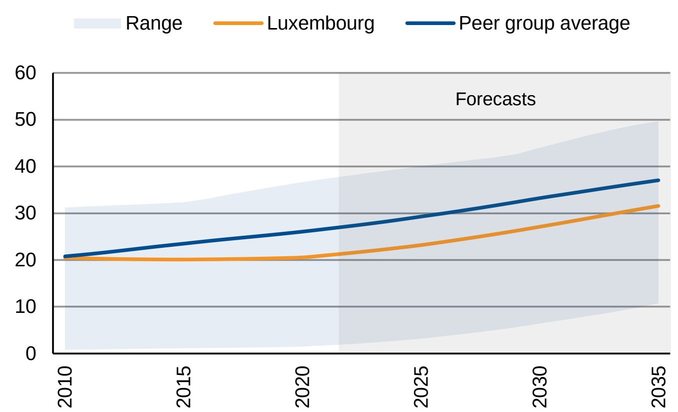
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Environmental factors	Neutral	0	Ambitious climate goals with accelerating climate policy momentum; limited share of renewables; rapid population growth poses challenges
	Social factors	Neutral	0	Strong social outcomes, supported by generous social systems; increasing women participation rates; poverty and inequalities are increasing
	Governance factors	Neutral	0	Strong democratic institutions and stable political landscape

Emissions per GDP and per capita, $mtCO_2e$



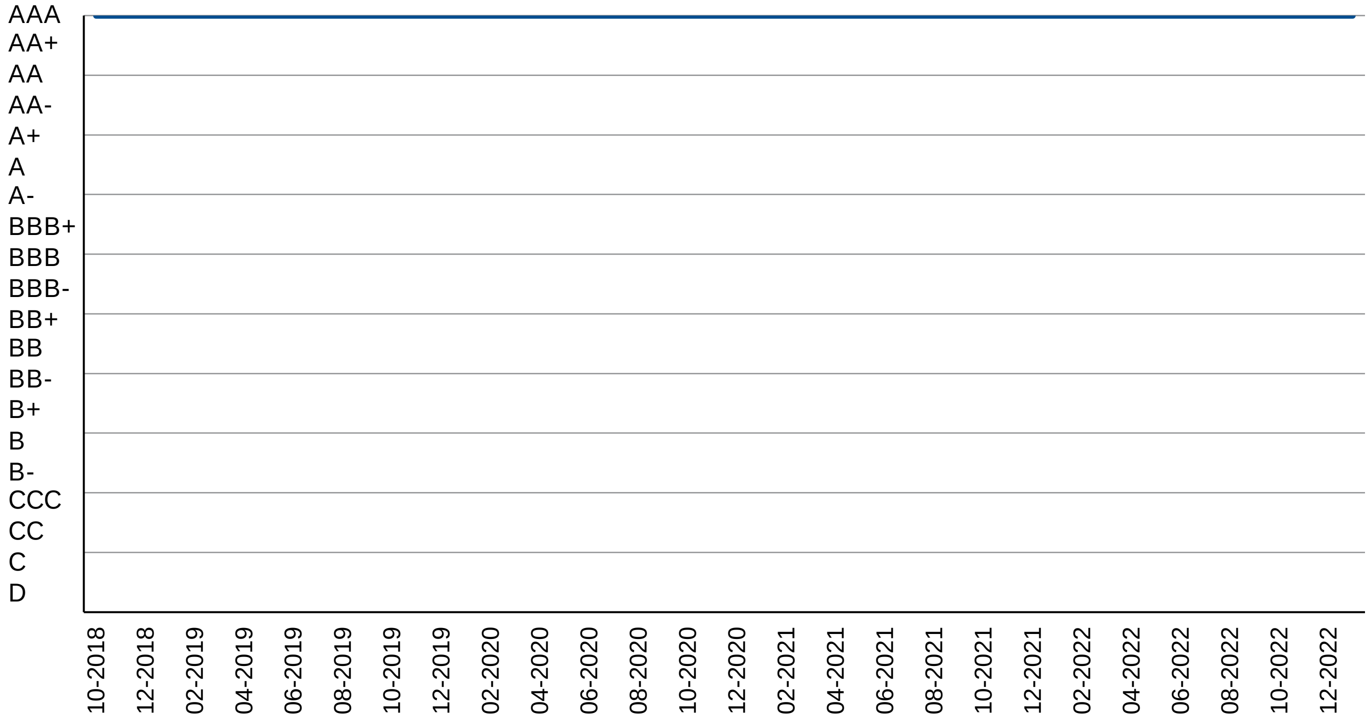
Source: European Commission, Scope Ratings

Old age dependency ratio, %



Source: United Nations, Scope Ratings

Appendix I. Rating history (foreign-currency long-term debt)



NB. Positive/Negative Outlooks are treated with a +/-0.33-notch adjustment. Credit Watch positive/negative with a +/-0.67-notch adjustment.

Appendix II. Rating peers

Rating peers are related to sovereigns with an indicative rating in the same rating category or in adjacent categories per Scope's Core Variable Scorecard, including a methodological reserve-currency adjustment.

Peer group*
Austria
Denmark
Finland
Germany
Ireland
Netherlands
Norway
Sweden
Switzerland

*Publicly rated sovereigns only; the full sample may be larger.

Appendix III. Statistical table for selected CVS indicators

This table presents a selection of the indicators (24 out of 30 – with the governance indicator reflecting a composite of six indicators) used in Scope's quantitative model, the Core Variable Scorecard, in line with Scope's Sovereign Rating Methodology. The metrics and sources for the data presented here ensure comparability across global peers and may therefore differ from national and other selective international statistics.

Pillar	Core variable	Source	2017	2018	2019	2020	2021
Domestic Economic	**GDP per capita, USD '000s**	IMF	111,212	118,466	114,358	117,064	136,701
	Nominal GDP, USD bn	IMF	65.7	71.3	70.2	73.3	86.8
	Real growth, %	IMF	1.3	2.0	3.3	-1.8	6.9
	CPI inflation, %	IMF	2.1	2.0	1.7	0.0	3.5
	Unemployment rate, %	WB	5.5	5.6	5.6	6.8	5.2
Public Finance	**Public debt, % of GDP**	IMF	21.8	20.8	22.3	24.8	24.3
	Interest payment, % of revenue	IMF	-0.5	-0.5	-0.5	-0.5	-0.6
	Primary balance, % of GDP	IMF	1.1	2.8	2.1	-3.7	0.6
External Economic	**Current account balance, % of GDP**	IMF	4.7	4.7	4.6	4.1	4.8
	Total reserves, months of imports	IMF	0.0	0.0	0.0	0.0	0.1
	NIIP, % of GDP	IMF	85.6	58.9	67.6	60.4	28.9
Financial Stability	**NPL ratio, % of total loans**	IMF	0.8	0.9	0.7	1.0	0.8
	Tier 1 ratio, % of risk-weighted assets	IMF	24.5	24.6	22.8	20.7	21.8
	Credit to private sector, % of GDP	WB	100.9	105.8	108.7	105.8	-
ESG	**CO_2 per EUR 1,000 of GDP, $mtCO_2e$**	EC	134.4	136.3	134.3	115.0	111.4
	Income share of bottom 50%, %	WID	20.1	20.3	20.2	20.2	20.2
	Labour-force participation rate, %	WB	70.0	70.8	71.7	-	-
	Old-age dependency ratio, %	UN	20.2	20.3	20.4	20.5	21.0
	Composite governance indicators*	WB	1.7	1.7	1.7	1.7	-

* Average of the six World Bank Worldwide Governance Indicators.

Appendix IV. Economic development and default indicators

IMF Development Classification	Advanced economy
5y USD CDS spread (bps)	N/A

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