Grand Duchy of Luxembourg
Rating Report

AAA STABLE OUTLOOK

Credit strengths

- Wealthy, competitive and high growth economy
- 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, competitive and high growth economy: Luxembourg benefits from its high wealth levels, competitive economy supported by high value-added sectors such as financial services and information and communication technology sectors. These factors contribute to Luxembourg's economic resilience as demonstrated throughout the Covid-19 crisis.

Sound public finances and robust fiscal framework: Luxembourg's public finances are characterised by consistent 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 frameworks and international financial markets; ii) long-term fiscal pressures linked to population ageing and generous social security systems; and iii) rising financial vulnerabilities linked to rapidly increasing real estate prices and elevated private debt levels.

Luxembourg's sovereign rating drivers

Risk pillars		Quantitative scorecard		Reserve currency adjustment (notches)	Qualitative scorecard	Final rating
		Weight	Indicative rating		Notches	
Domestic Economic Risk		35%	aaa		0	AAA
Public Finance Risk		25%	aaa		+1/3	
External Economic Risk		10%	aaa		-1/3	
Financial Stability Risk		10%	aaa		-1/3	
ESG Risk	Environmental Risk	5%	a+		0	
	Social Risk	5%	a		0	
	Governance Risk	10%	aaa		0	
Overall outcome		**aaa**		**+1**	**0**	

Note: The sum of the qualitative adjustments, capped at 1 notch per rating pillar, is weighted equally and 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 GmbH

Outlook and rating triggers

The Stable Outlook reflects Scope's view that risks to the ratings are balanced over the next 12 to 18 months.

Positive rating-change drivers

Negative rating-change drivers

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

Ratings and Outlook

Foreign and local currency

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

Lead Analyst

Thibault Vasse
+49 69 6677389-59
t.vasse@scoperatings.com

Team Leader

Dr Giacomo Barisone
+49 69 6677389-22
g.barisone@scoperatings.com

Scope Ratings GmbH

Neue Mainzer Straße 66-68
60311 Frankfurt am Main

Phone +49 69 6677389-0

Headquarters

Lennéstraße 5
10785 Berlin

Phone +49 30 27891-0
Fax +49 30 27891-100

info@scoperatings.com
www.scoperatings.com

Bloomberg: RESP SCOP

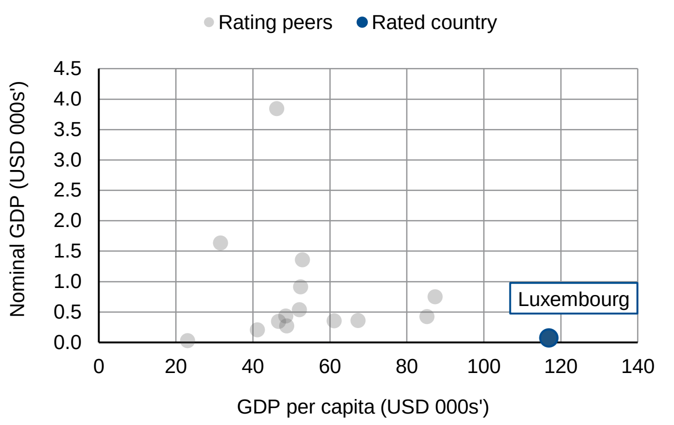
Domestic Economic Risks

- **Growth outlook:** Luxembourg has demonstrated remarkable resilience during the Covid-19 crisis, thanks to the government's large and multi-pronged fiscal support package, a favourable economic structure with strong performance in the ICT and financial service sectors, as well as a careful and well-calibrated reopening in Q3 of last year. As such, the Covid-19 pandemic has had a relatively mild impact on Luxembourg with real GDP shrinking by only 1.8% in 2020. We expect a strong recovery, with real growth of 5.9% in 2021, followed by 3.6% in 2022. With a gradual converge to the country's potential growth rate of 2.5%, we expect medium-term growth to be lower than pre-pandemic trends but still in line with most peers.
- **Inflation and monetary policy**: The country faces some inflationary pressures. Headline inflation averaged 3% in the ten months to October 2021, versus 0%, on average, in 2020. This is mostly driven by rising energy and raw material prices as core inflation has been more moderate at 1.4% on average over the same period. While some central banks have started tapering their asset purchase programmes or indicated interest rate rises in the near term, the ECB has signaled that it will maintain its accommodative monetary policy in the near term.
- **Labour markets**: Labour markets in the country have performed well despite the pressures due to the Covid-19 pandemic. The unemployment rate peaked at 7.6% in June 2020 before steadily declining to 5.1% in October 2021, below pre-crisis levels while total employment is 4% above pre-crisis levels. The government expects labour markets to remain buoyant with annual employment growth forecast at 2.5% in 2021-22.

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

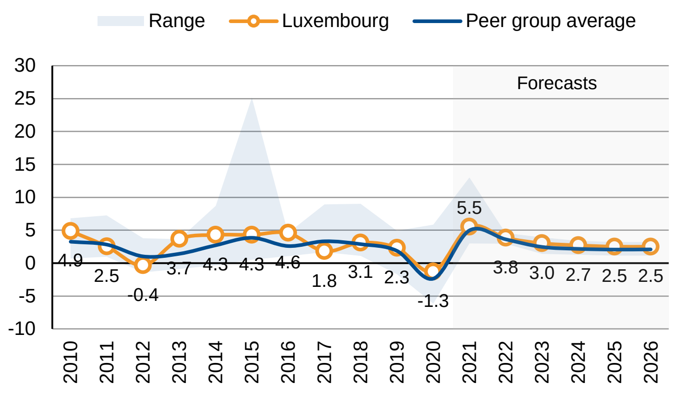
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Growth potential of the economy	Strong	+1/3	High growth potential, supported by sound economic policies and high value-added sectors
	Monetary policy framework	Neutral	0	ECB is a highly credible and effective central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

Nominal GDP and GDP per capita, USD thousands



Source: IMF, Scope Ratings GmbH

Real GDP growth, %



Source: IMF, Scope Ratings GmbH

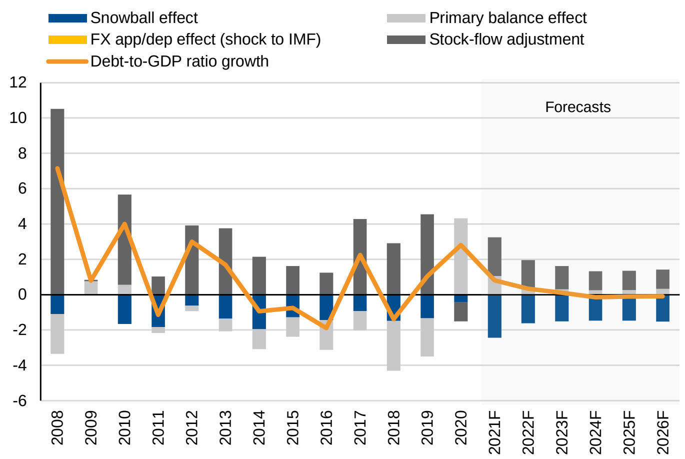
Public Finance Risks

- **Fiscal outlook**: Luxembourg benefits from strong public finances relative to peers thanks to its record of very prudent budgetary management. The government's medium-term budgetary strategy has been designed to fully align with the national budgetary guidelines as well as those set by the European Commission. It balances the need to provide discretionary support for the economic recovery and return public finances to a sound footing, in line with EU fiscal rules. We forecast the deficit to fall to 0.8% of GDP in 2021, well below the 3% Maastricht threshold, and expect the country to return to fiscal surpluses by 2023.
- **Debt trajectory:** Our baseline projections see Luxembourg's public debt-to-GDP ratio increasing moderately to 26% by 2022-23, only 4pps higher than pre-crisis levels, and stabilising at that level thereafter. Strong growth prospects and a renewed commitment to fiscal discipline as well as the government's record of prudent budgetary policies underpin this view. These levels remain very comfortable and provide Luxembourg with ample fiscal space to respond to future crises.
- **Debt profile and market access:** The public debt structure is very favourable with short-term debt representing less than 1% of total debt and no foreign currency exposure. The fiscal position is further bolstered by sizable government financial assets amounting to EUR 57bn (84% of GDP), mostly comprised of equity investments (47% of total), debt securities (20%), and deposit holdings (20%). Financing costs are very low, with the 10-year government bond yield at -0.2% as of 31 October 2021.

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

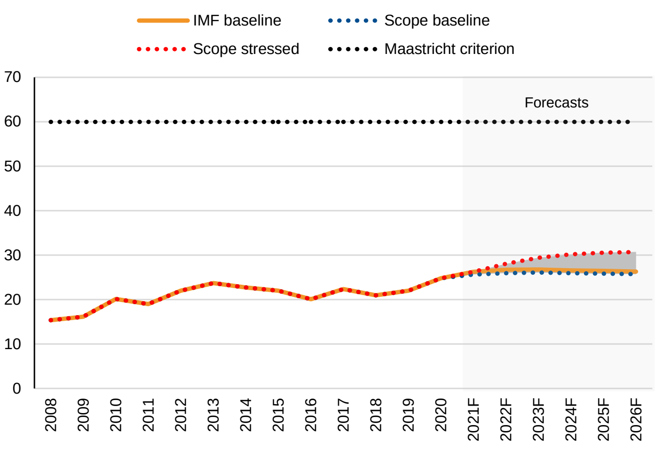
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Fiscal policy framework	Neutral	0	Effective fiscal policy frameworks with track record of conservative budgetary management
	Debt sustainability	Strong	+1/3	Very low debt levels and stable debt dynamics over the forecast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

Contributions to changes in debt levels, pps of GDP



Source: Scope Ratings GmbH

Debt-to-GDP forecasts, % of GDP



Source: Scope Ratings GmbH

External Economic Risks

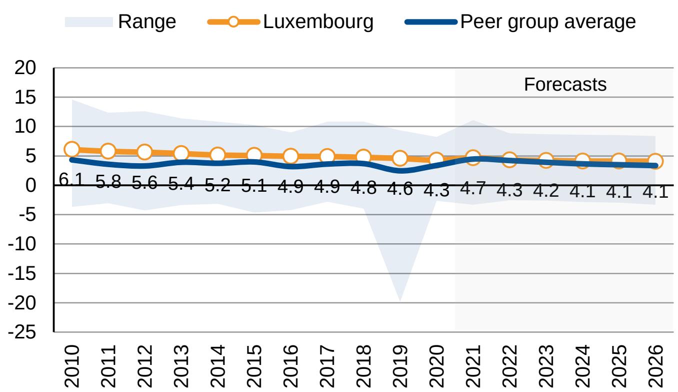
- **Current account:** Luxembourg has consistently generated current account surpluses, averaging 4.8% of GDP over 2015-19. However, the current account balance has deteriorated recently, reaching -0.1% of GDP in the twelve months to June 2021, reflecting a deteriorating in the goods trade balance and wider primary income deficits, potentially driven by higher dividend and interest payments to foreign investors.
- **External position:** After a marked deterioration, the NIIP has slightly improved from 43% of GDP at year-end 2020 to 46% of GDP as of June 2021. This reflects movements in asset prices in global financial markets which have recovered from the turmoil induced by the Covid-19 pandemic.

  Given its role as a financial service hub and centre for intra-corporation cash pooling, Luxembourg has very high external debt levels. External debt represented 4,986% of GDP in June 2021. Over a quarter of external debt is short-term while 37% is in the form of intercompany loans. Still, the 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. 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*

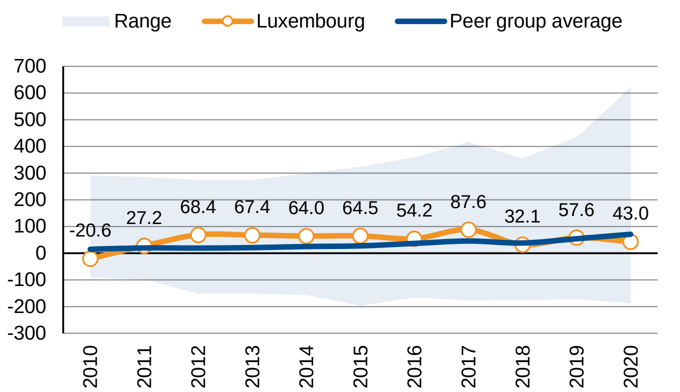
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Current account resilience	Neutral	0	Strong current account surpluses; reliance on financial service exports; sensitive to dividend policies vis-à-vis foreign investors
	External debt structure	Neutral	0	High external debt levels offset by external assets with a net international creditor position
	Resilience to short-term shocks	Weak	-1/3	Euro-area membership; high exposure to external developments given very small, open economy and strong integration with international markets

Current account balance, % of GDP



Source: IMF, Scope Ratings GmbH

NIIP, % of GDP



Source: IMF, Scope Ratings GmbH

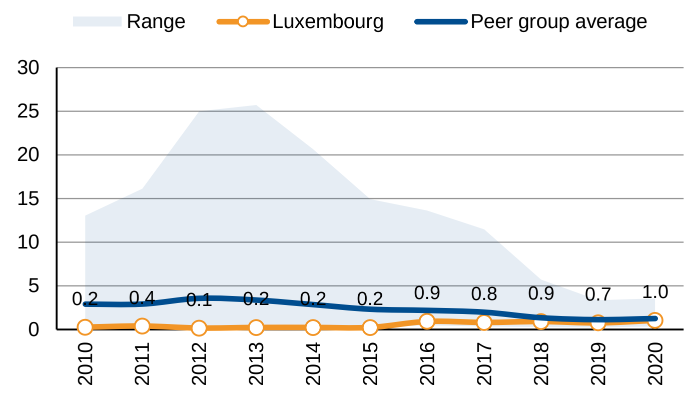
Financial Stability Risks

- **Banking sector:** Luxembourg benefits from its resilient banking sector characterized by high capitalisation levels (Tier 1 ratio of 22.6%), strong asset quality (NPL ratio of 0.7%) and comfortable profitability (ROE of 9.3%). Thanks to broad-based policy support, the impact of the Covid-19 shock on the banking sector has been limited. Solvency risks have not materialized, asset quality deteriorated somewhat in 2020 but has since recovered and profitability metrics have exceeded pre-crisis levels.
- **Private debt:** Non-financial corporate debt is the highest in the EU, at around 3.7 times of GDP in June 2021 stemming 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 indebtedness is high relative to income levels at around 170%, one of the highest levels in the EU, although mitigated by high, albeit unevenly distributed levels of 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. Growth in mortgage lending to households averaged 11% over 2015-19, while residential prices grew by 6.8% on average over the same period. Residential prices continued to grow by 16.7% year-on-year during the fourth quarter of 2020. This worsens housing affordability, exacerbates already high household indebtedness, and can pose long-term risks to financial stability. Risks are mitigated by the banking sector's resilience, capable of weathering negative price developments in the real estate sector. Similarly, macro-prudential policies have been appropriately tightened through the introduction of loan-to-value limits for example, thus further mitigating potential build-up of vulnerabilities.

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

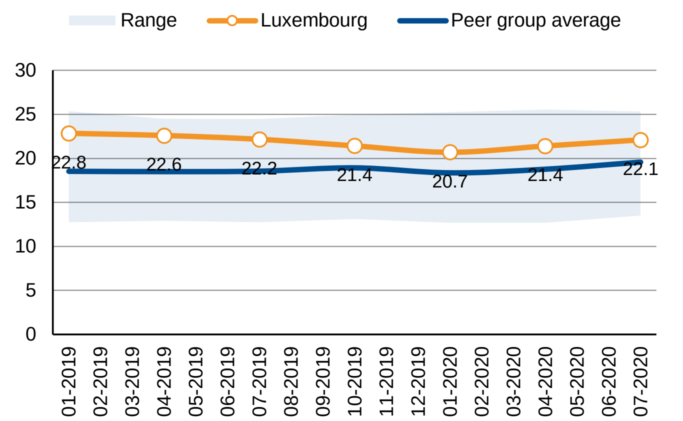
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Banking sector performance	Neutral	0	Efficient banking sector with large capital buffers and strong asset quality but some profitability pressures
	Banking sector oversight	Neutral	0	Efficient, credible oversight frameworks 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

NPLs, % of total loans



Source: IMF, Scope Ratings GmbH

Tier 1 ratio, % of risk-weighted assets



Source: IMF, Scope Ratings GmbH

ESG Risks

- **Environment:** In per capita terms, Luxembourg is one of the most carbon intensive countries in the EU compared to its population size, generating 0.34% of the EU's total greenhouse gas emissions despite only accounting for 0.14% of total EU population. It is also highly dependent on resource imports given its small, natural resource constrained territory. Luxembourg has made progress on its energy sector priorities of ensuring security of supply, promoting energy efficiency, increasing the use of renewable energy and reducing greenhouse gas (GHG) emissions despite a rapidly expanding economy and population.

  The government has adopted ambitious energy sector targets for 2030 to reduce non-ETS emissions by 50-55% versus 2005, which exceeds the 40% reduction required by the EU and is in line with a below 2/1.5-degree global temperature target. It plans net-zero GHG emissions and 100% renewable electricity by 2050. The country has adopted measures that will help reach its emissions target including the introduction of a carbon tax which is set to increase further over the medium term, though more efforts are needed to address challenges posed by population growth and an expanding economy.

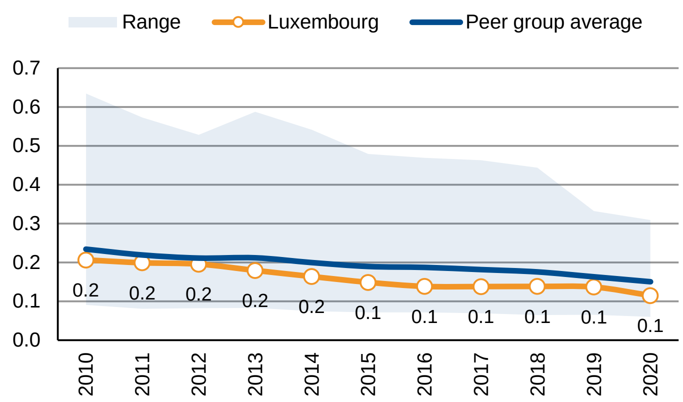
- **Social**: Social outcomes are strong in an EU context, supported by generous social systems. Social transfers have a strong impact on poverty reduction. However, poverty levels and income inequality have worsened over the past decade. The proportion of people at risk of poverty or social exclusion stood at 20.6% in 2019, up from 17.8% in 2009. Similarly, the S80/S20 ratio increased from 4.3 to 5.3. Women participation in employment is rising, supported by measures aimed at improving work-life balance for parents.

- **Governance:** The country benefits from a stable political environment. Strong democratic institutions and broad consensus on key issues, including European integration also support political coherence. Xavier Bettel has been prime minister since 2013 and was confirmed after the 2018 elections, with support from a coalition formed by his party (the Democrats), the Socialist Party and the Greens. The next elections are scheduled for 2023.

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

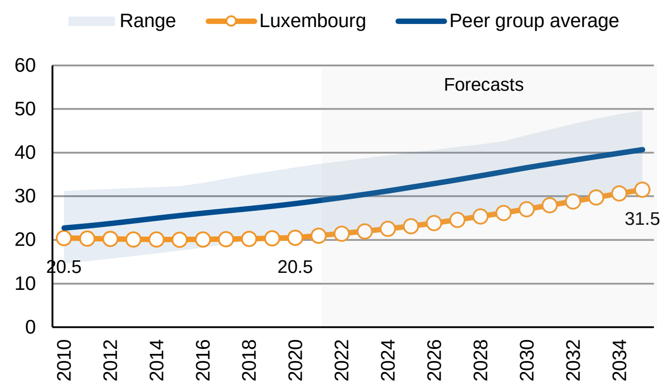
CVS indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
aaa	Environmental risks	Neutral	0	Ambitious climate goals with accelerating climate policy momentum; limited share of renewables; rapid population growth poses challenges
	Social risks	Neutral	0	Social outcomes are good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

CO2 emissions per GDP, mtCO2e



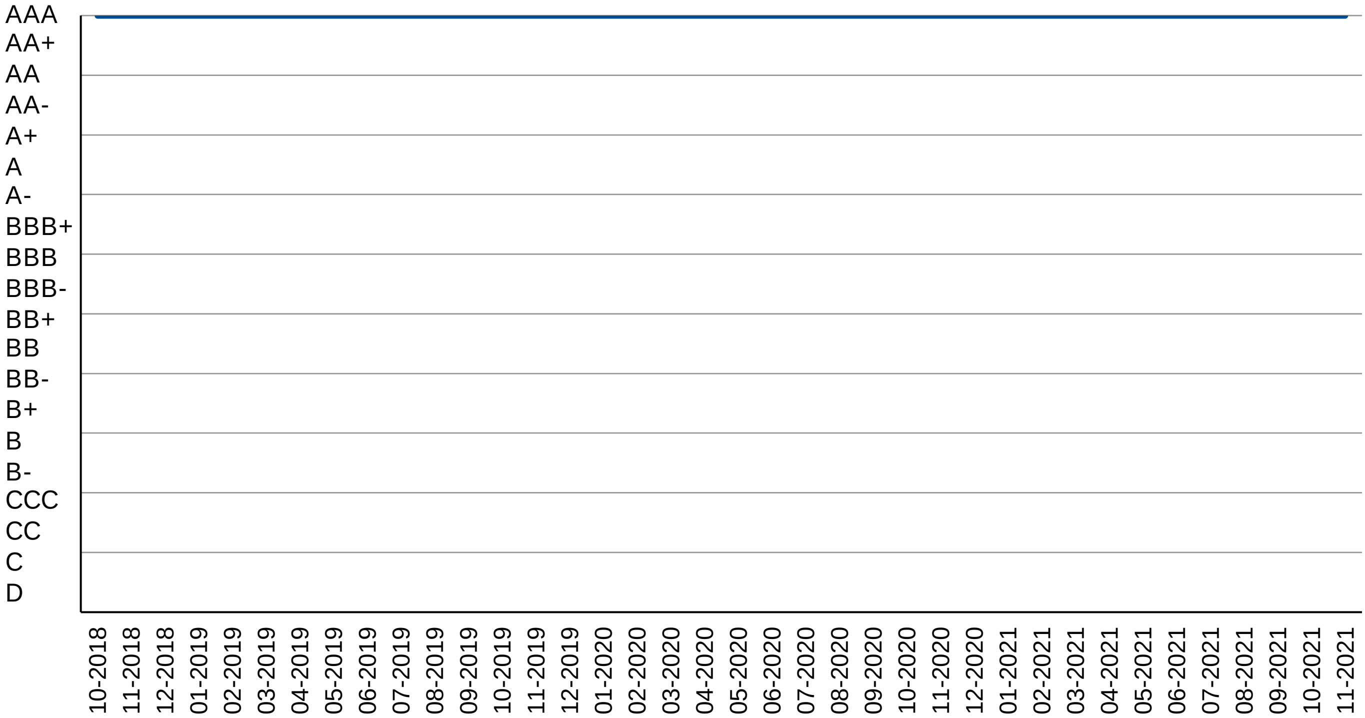
Source: European Commission, Scope Ratings GmbH

Old age dependency ratio, %



Source: United Nations, Scope Ratings GmbH

Appendix I. Rating history



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.

Peer group*
Austria
Denmark
Estonia
Finland
Germany
Ireland
Luxembourg
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 29) used in Scope's quantitative model, the Core Variable Scorecard.

	2016	2017	2018	2019	2020	2021F	2022F
Domestic Economic Risk							
GDP per capita, USD 000s'	105.4	108.6	117.9	115.8	116.9	131.3	137.9
Nominal GDP, USD bn	60.7	64.2	71.0	71.1	73.2	83.8	89.7
Real growth, %[1]	4.6	1.8	3.1	2.3	-1.3	5.9	3.6
CPI inflation, %	0.0	2.1	2.0	1.7	0.0	2.7	1.4
Unemployment rate, %[1]	6.2	5.8	5.1	5.4	6.3	5.8	5.6
Public Finance Risk							
Public debt, % of GDP[1]	20.1	22.3	21.0	22.0	24.8	25.6	26.0
Interest payment, % of government revenue	-0.6	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6
Primary balance, % of GDP[1]	1.7	1.1	2.8	2.2	-4.3	-1.1	-0.4
External Economic Risk							
Current account balance, % of GDP	4.9	4.9	4.8	4.6	4.3	4.7	4.3
Total reserves, months of imports	0.0	0.0	0.0	0.0	0.0	-	-
NIIP, % of GDP	54.2	87.6	32.1	57.6	43.0	-	-
Financial Stability Risk							
NPL ratio, % of total loans	0.9	0.8	-	-	-	-	-
Tier 1 ratio, % of risk weighted assets	23.9	25.1	24.3	21.4	22.4	22.1	-
Credit to private sector, % of GDP	99.1	103.3	106.3	107.3	105.9	-	-
ESG Risk							
CO^2 per EUR 1,000 of GDP, $mtCO^2e$	138.1	137.7	138.1	136.5	114.7	-	-
Income quintile share ratio (S80/S20), x	-	-	-	-	-	-	-
Labour force participation rate, %	69.6	70.0	70.8	71.7	-	-	-
Old age dependency ratio, %	20.1	20.2	20.3	20.4	20.5	21.0	21.5
Composite governance indicator[2]	1.7	1.7	1.7	1.7	1.1	-	-

[1] Forecasted values are produced by Scope and may differ from those presented in the charts of the previous sections
[2] Average of the six World Bank Governance Indicators
Source: European Commission, IMF, World Bank, Scope Ratings GmbH

Appendix IV. Economic development and default indicators

IMF Development Classification	Advanced economy
5y USD CDS spread (bps) as of 30 November 2021	N/A

Scope Ratings GmbH

Headquarters Berlin

Lennéstraße 5
D-10785 Berlin

Phone +49 30 27891 0

Frankfurt am Main

Neue Mainzer Straße 66-68
D-60311 Frankfurt am Main

Phone +49 69 66 77 389 0

Paris

23 Boulevard des Capucines
F-75002 Paris

Phone +33 6 62 89 35 12

Oslo

Karenslyst allé 53
N-0279 Oslo

Phone +47 21 62 31 42

Madrid

Paseo de la Castellana 141
E-28046 Madrid

Phone +34 91 572 67 113

Milan

Via Nino Bixio, 31
20129 Milano MI

Phone +39 02 30315 814

Scope Ratings UK Limited

London

52 Grosvenor Gardens
London SW1W 0AU

Phone +44 20 7824 5180

info@scoperatings.com
www.scoperatings.com

Disclaimer