Sovereign & Public Sector

8 November 2024



Grand Duchy of Luxembourg

Rating report

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, combined with forceful policy support, contribute to Luxembourg's economic resilience as demonstrated throughout recent crises and its robust medium-term growth outlook.

Sound public finances and ample fiscal buffers: Luxembourg's public finances benefit from very low public debt and substantial fiscal space, providing ample buffers to face future shocks driven by consistent fiscal surpluses before the pandemic. Fiscal support measures have resulted in a slight weakening of the budget balance, while permanent budgetary adjustments and ambitious public investment commitments are set to weigh on the medium-term fiscal outlook.

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

Rating challenges include: i) a small, open economy that is exposed to external developments, including volatility in international financial markets; ii) heightened financial vulnerabilities linked to imbalances in the real estate sector and elevated private debt levels amid tighter monetary policy; and iii) long-term fiscal pressures linked to population ageing and a generous social welfare system.

Figure 1: Luxembourg's sovereign-rating drivers

Risk pillars		Quantitative		Reserve currency*	Political risk**	Qualitative***	Final
		Weight	Indicative rating	Notches	Notches	Notches	rating
Dome	stic economic risk	35%	aa-			0	
Public finance risk		20%	aa+		Luxembourg	0	
External economic risk		10%	aa+	FUD		0	
Financial stability risk		10%	aaa	EUR		- 1/3	
	Environmental factors	5%	bbb+	[+1]	[-0]	0	AAA
ESG risk	Social factors	7.5%	a-			0	
IISK	Governance factors	12.5%	aaa			0	
Sovereign Quantitative Model		aaa			-0		
Additional considerations					0		

^{*}The reserve-currency quantitative adjustment applies to currencies in the IMF's Special Drawing Rights (SDR) basket. **The political-risk quantitative adjustment is based on the World Bank's Political Stability & Absence of Violence/Terrorism index. ***The qualitative scorecard analyst adjustments, capped at one notch per rating pillar, are weighted equally with an aggregate adjustment rounded to the nearest integer. For details, please see Scope's Sovereign Rating Methodology. Source: Scope Ratings.

Foreign currency

Long-term issuer rating/Outlook

AAA/Stable

Senior unsecured debt

AAA/Stable

Short-term issuer rating/Outlook

S-1+/Stable

Local currency

Long-term issuer rating/Outlook

AAA/Stable

Senior unsecured debt

AAA/Stable

Short-term issuer rating/Outlook

S-1+/Stable

Lead Analyst

Brian Marly

+33 186 261 882

b.marly@scoperatings.com

Team Leader

Alvise Lennkh-Yunus

+49 69 6677389-85

a.lennkh@scoperatings.com



Credit strengths and challenges

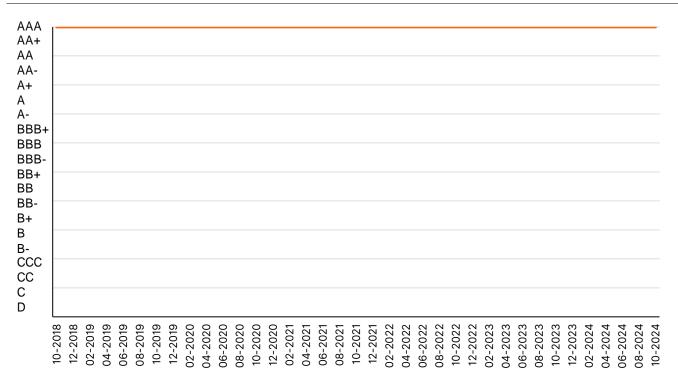
Credit strengths	Credit challenges
 Wealthy economy with solid fundamentals Sound public finances and robust fiscal framework Strong external position Very strong institutional and political stability 	 Exposure to adverse external developments, as a small, open economy Heightened vulnerabilities stemming from imbalances in the real estate sector Long-term fiscal pressures from an ageing population

Outlook and rating triggers

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

Positive rating-change drivers	Negative rating-change drivers
• N/A	 Growth outlook deteriorates substantially Fiscal fundamentals weaken significantly Vulnerabilities in the financial system threaten macro-economic stability

Figure 2: Rating history¹



Foreign-currency long-term issuer rating. Positive/Negative Outlooks are treated with a +/-0.33-notch adjustment. Credit Watch positive/negative with a +/-0.67-notch adjustment. Source: Scope Ratings.

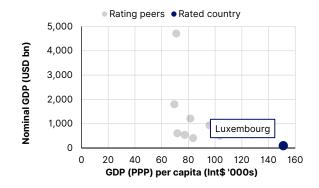


Domestic economic risk

Overview of Scope's assessments of Luxembourg's Domestic Economic Risk

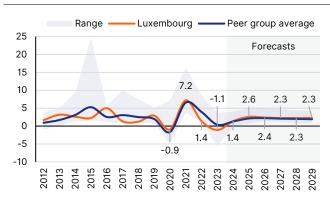
SQM* indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
	Growth potential and outlook	Strong	+1/3	High growth potential, supported by sound economic policies and high value-added sectors
aa-	Monetary policy framework	Neutral	0	ECB is a highly credible and effective central bank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

Figure 3: Nominal GDP and GDP per capita (2024F)



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

Figure 4: Real GDP growth, %



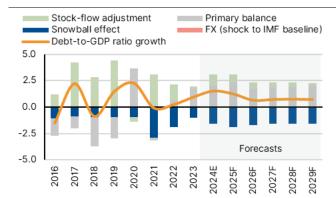
Source: IMF WEO, Scope Ratings forecasts

Public finance risk

Overview of Scope's assessments of Luxembourg's Public Finance Risk

SQM indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
	Fiscal policy framework	Neutral	0	Effective fiscal policy framework with track record of prudent budgetary management
aa+	Long-term debt trajectory	Neutral	0	Very low debt levels; moderately rising debt trajectory over the forecast horizon
	Debt profile and market access	Neutral	0	Favourable debt profile with a low interest payment burden

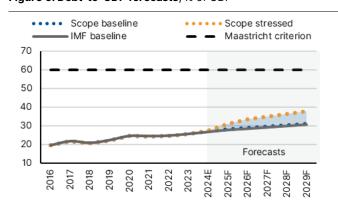
Figure 5: Contributions to change in debt levels, pps of GDP



Source: IMF WEO, Scope Ratings forecasts

*Sovereign Quantitative Model.

Figure 6: Debt-to-GDP forecasts, % of GDP



Source: IMF WEO, Scope Ratings forecasts

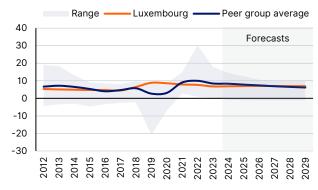


External economic risk

Overview of Scope's assessments of Luxembourg's External Economic Risk

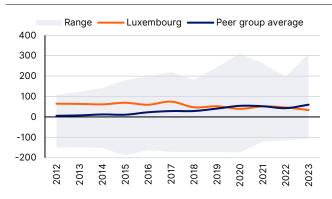
SQM indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
	Current account resilience	Neutral	0	Strong current account surpluses; reliance on financial service exports; sensitive to dividend policies vis-à-vis foreign investors
aa+	External debt structure	Neutral	0	High external 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

Figure 7: Current-account balance, % of GDP



Source: IMF WEO forecasts, Scope Ratings

Figure 8: Net international investment position (NIIP), % GDP



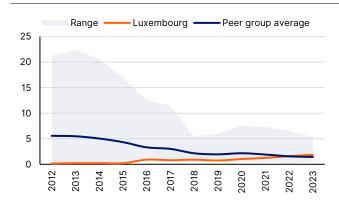
Source: IMF, Scope Ratings

Financial stability risk

Overview of Scope's assessments of Luxembourg's Financial Stability Risk

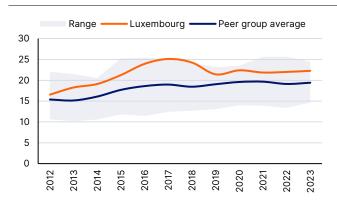
SQM indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
	Banking sector performance	Neutral	0	Efficient and resilient banking sector with large capital buffers and strong asset quality
aaa	Financial sector oversight and governance	Neutral	0	Efficient, credible oversight frameworks under the Commission de Surveillance du Secteur Financier, the Central Bank of Luxembourg and the ECB
	Financial imbalances	Weak	-1/3	Imbalances in the housing sector due to demand and supply mismatches; high private debt levels mitigated by high net household wealth

Figure 9: Non-performing loans (NPLs), % of total loans



Source: World Bank (WB), Scope Ratings

Figure 10: Tier 1 capital, % of risk-weighted assets



Source: IMF, Scope Ratings

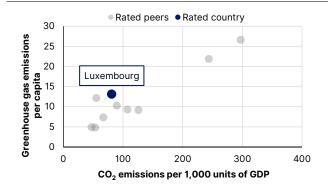


Environmental, Social and Governance (ESG) risk

Overview of Scope's assessments of Luxembourg's ESG Risk

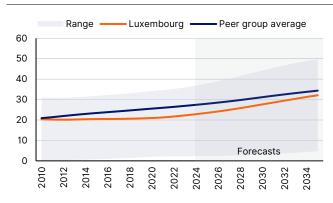
SQM indicative rating	Analytical component	Assessment	Notch adjustment	Rationale
	Environmental factors	Neutral	0	Ambitious climate goals with accelerating climate policy momentum; limited share of renewables; rapid population growth poses challenges
aaa	Social factors	Neutral	0	Strong social outcomes, supported by generous social systems; increasing women participation rates; poverty and inequalities are increasing
	Governance factors	Neutral	0	Stable political environment, high institutional effectiveness and track-record of broad policy continuity

Figure 11: CO₂ emissions per capita/GDP (2022), mtCO₂e



Source: European Commission (EC), Scope Ratings

Figure 12: Old-age dependency ratio, %



Source: United Nations (UN), Scope Ratings

Reserve-currency adjustment

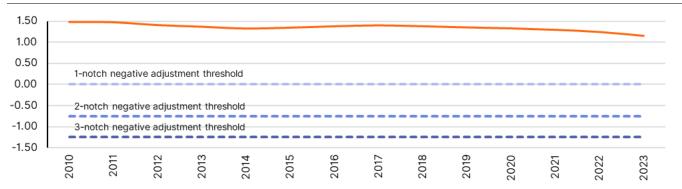
Figure 13: IMF SDR basket and Scope reserve-currency adjustment

Currency	U.S. dollar	Euro	Chinese yuan	Japanese yen	Pound sterling	Other
IMF SDR basket weights, %	43.4	29.3	12.3	7.6	7.4	0.0
Positive adjustment, notches	3	1	1	1	1	0

Source: IMF, Scope Ratings

Political-risk adjustment

Figure 14: WB Political Stability & Absence of Violence/Terrorism index, Luxembourg, 3-year moving average



Source: WB, Scope Ratings

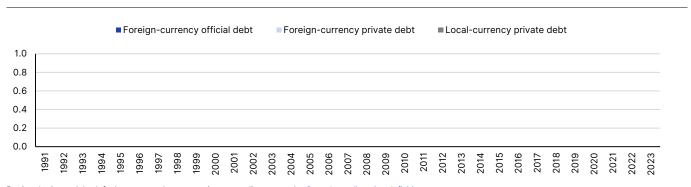


Additional considerations

No adjustment was applied to the rating from additional considerations.

Appendix I. Sovereign default history

Figure 15: Sovereign default history, USD m



Depicted private-debt defaults may not always constitute a credit event under <u>Scope's credit-rating definitions</u>. Source: <u>Bank of Canada-Bank of England Sovereign Default Database</u>, Scope Ratings.

Appendix II. Rating peers

Rating peers are related to sovereigns with an indicative rating in the same rating category or adjacent categories, as assigned by Scope's sovereign quantitative model after accounting for methodological reserve-currency and political-risk adjustments.

^{*}Select publicly-rated sovereigns only; the full sample of sovereign-rating peers may be larger.

Appendix III. Economic development and default indicators

IMF Development Classification Advanced economy

5-year USD CDS spread (bps) n/a



Appendix IV. Statistical table for selected SQM indicators

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

Pillar	Core variable	Source	2018	2019	2020	2021	2022	2023
nic.	GDP per capita (PPP), Int\$ '000s	IMF	117.6	122.6	123.0	139.1	148.6	148.7
Domestic Economic	Nominal GDP, USD bn	IMF	71	70	74	86	82	86
	Real growth, %	IMF	1.2	2.9	-0.9	7.2	1.4	-1.1
nest	CPI inflation, %	IMF	2.0	1.7	0.0	3.5	8.2	2.9
Dor	Unemployment rate, %	WB	5.6	5.6	6.8	5.2	4.6	5.2
υø	Public debt, % of GDP	IMF	20.9	22.4	24.6	24.5	24.7	25.7
Public Finance	Net interest payments, % of government revenue	IMF	-0.5	-0.5	-0.5	-0.6	-0.7	-1.1
□ □ □	Primary balance, % of GDP	IMF	2.8	2.0	-3.7	0.3	-0.6	-1.7
a jc	Current-account balance, % of GDP	IMF	6.5	8.9	8.6	7.9	7.7	6.8
External Economic	Total reserves, months of imports	WB	0.0	0.0	0.0	0.1	0.1	0.1
ă ă	NIIP, % of GDP	IMF	47.2	52.2	39.6	51.3	46.3	-
ia ≥	NPL ratio, % of total loans	IMF	0.9	0.7	1.0	1.3	1.6	1.9
Financial Stability	Tier 1 ratio, % of risk-weighted assets	IMF	24.6	22.8	20.7	21.8	21.6	22.2
i	Credit to the private sector, % of GDP	WB	105.6	109.0	110.2	104.0	101.5	96.5
	CO ₂ per EUR 1,000 of GDP, mtCO ₂ e	EC	117.2	115.7	96.4	94.3	81.1	79.2
	Income share of bottom 50%, $\%$	WID	19.2	19.9	19.5	20.6	20.7	-
ESG	Labour-force participation rate, %	WB	71.8	72.8	72.9	74.1	74.1	-
ES	Old-age dependency ratio, %	UN	20.6	20.8	21.0	21.3	21.7	22.3
	Composite governance indicators*	WB	1.8	1.7	1.8	1.7	1.8	-
	Political stability, index	WB	1.3	1.3	1.2	1.2	1.1	-

^{*}Average of the following five World Bank Worldwide Governance Indicators: Control of Corruption, Voice and Accountability, Rule of Law, Government Effectiveness, Regulatory Quality.

Scope Ratings GmbH

Lennéstraße 5 Phone: +49 30 27891-0
D-10785 Berlin Fax: +49 30 27891-100
scoperatings.com info@scoperatings.com

in

Bloomberg: RESP SCOP
Scope contacts

Disclaimer

© 2024 Scope SE & Co. KGaA and all its subsidiaries including Scope Ratings GmbH, Scope Ratings UK Limited, Scope Fund Analysis GmbH, and Scope ESG Analysis GmbH (collectively, Scope). All rights reserved. The information and data supporting Scope's ratings, rating reports, rating opinions and related research and credit opinions originate from sources Scope considers to be reliable and accurate. Scope does not, however, independently verify the reliability and accuracy of the information and data. Scope's ratings, rating reports, rating opinions, or related research and credit opinions are provided 'as is' without any representation or warranty of any kind. In no circumstance shall Scope or its directors, officers, employees and other representatives be liable to any party for any direct, incidental or other damages, expenses of any kind, or losses arising from any use of Scope's ratings, rating reports, rating opinions, related research or credit opinions. Ratings and other related credit opinions issued by Scope are, and have to be viewed by any party as, opinions on relative credit risk and not a statement of fact or recommendation to purchase, hold or sell securities. Past performance does not necessarily predict future results. Any report issued by Scope is not a prospectus or similar document related to a debt security or issuing entity. Scope issues credit ratings and related research and opinions with the understanding and expectation that parties using them will assess independently the suitability of each security for investment or transaction purposes. Scope's credit ratings address relative credit risk, they do not address other risks such as market, liquidity, legal, or volatility. The information and data included herein is protected by copyright and other laws. To reproduce, transmit, transfer, disseminate, translate, resell, or store for subsequent use for any such purpose the information and data contained herein, contact Scope Ratings GmbH at Lennéstraße 5, D-10785 Berlin.