# Creditreform Sovereign Rating

Creditreform Rating

| Rating Object | Rating Information | |
|---|---|---|
| GRAND DUCHY OF LUXEMBOURG | Assigned Ratings/Outlook: **AAA /stable** | Type: Monitoring, Unsolicited with participation |
| Long-term sovereign rating<br>Foreign currency senior unsecured long-term debt<br>Local currency senior unsecured long-term debt | Initial Rating Publication Date:<br>Rating Renewal:<br>Rating Methodologies: | 29-07-2016<br>19-04-2024<br>"Sovereign Ratings"<br>"Rating Criteria and Definitions" |

## Rating Action

Neuss, 19 April 2024

Creditreform Rating has affirmed the unsolicited long-term sovereign rating of "AAA" for the Grand Duchy of Luxembourg. Creditreform Rating has also affirmed Luxembourg's unsolicited ratings for foreign and local currency senior unsecured long-term debt of "AAA". The outlook is stable.

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## Key Rating Drivers

1. Luxembourg boasts an extremely high wealth level in terms of GDP per capita; throughout the recent consecutive crises, the labor market has proved robust; after contracting in 2023, we expect Luxembourg's real GDP to resume growing in 2024, additionally backed by the government's spending priorities; we expect a faster economic pace for 2025, also aided by anticipated monetary policy easing starting from the middle of 2024, while persistent geopolitical tensions pose downside risks

2. The medium-term growth outlook remains constructive, additionally bolstered by the implementation of reforms and investments under the Recovery and Resilience Plan (RRP) and expected strength of high-value-added industries, maintaining an overall favorable outlook for potential growth; pockets of vulnerability continue to relate to the significance of the financial sector and its susceptibility to external shocks, as well as stretched private sector balance sheets

3. Exceptionally high institutional quality as evidenced by persistently strong performance regarding the Worldwide Governance Indicators (WGIs); benefits related to EU/EMU membership add to this; we expect continuation of the stable political backdrop and coherent policymaking

4. Long-standing track record of very sound public finances and prudent fiscal planning; we expect the public debt ratio to exhibit a limited further increase on its relatively low level, with moderate general government deficits this year and next; ample fiscal room for maneuver and a high debt affordability balance contingency risks associated with the significance of the financial sector, and with potentially adverse effects resulting from the international corporate taxation reform

5. External risks in connection with Luxembourg's status as a large financial hub are contained by repeated current account surpluses and, as a result, a persistently high net creditor position

## Reasons for the Rating Decision and Latest Developments[1]

### Macroeconomic Performance

*An outstandingly high level of wealth constitutes a cornerstone of the sovereign's exceptionally high creditworthiness. Luxembourg's favorable macroeconomic profile balances a robust labor market against high private sector debt, with non-financial corporate (NFC) debt inflated by the presence of multi-national enterprises (MNEs), as well as vulnerability to external shocks coming on the back of a strong focus on the financial sector and related services. Labor shortages continue to present challenges, while misalignments of unemployment and vacancy rates seem to have diminished. Underlying growth is set to benefit from structural reforms under NextGenerationEU.*

After stagnating in last year's final quarter, Luxembourg's real GDP shrank by 1.1% in 2023 overall, representing the largest recession since the global financial crisis. The contraction in real economic activity was mainly due to a negative growth contribution from net exports, resulting from slowing foreign demand. Gross fixed capital formation subtracted from real GDP growth as well, albeit to a markedly smaller extent. At the same time, private and public consumption expanded, with the former buttressed by wage indexation and fiscal packages.

Notwithstanding the recent economic downturn, Luxembourg continues to enjoy extremely high levels of wealth, which we view as one of the sovereign's key rating strengths. The Grand Duchy's GDP per capita is estimated to have amounted to USD 141,380 in 2023 (IMF data, PPP terms, current prices), 0.1% above the 2022 reading and nearly twice the level of other AAA-economies such as Germany and the Netherlands.

Sentiment indicators point to a lackluster first quarter in 2024, with the mood in the construction and industry sectors remaining particularly pessimistic. Consumer confidence seems to have bottomed out, and was skewed slightly upward over the last three months. Backed by our assumption that major central banks, including the ECB, will start to cut interest rates this year as disinflationary trends have continued, the ground for a somewhat faster economic pace is likely being prepared.

Moderating inflation should buttress household expenditure in 2024, which is additionally bolstered by wage indexation, partly extended energy support measures, and a robust labor market. Headline inflation averaged 2.9% in 2023 (EA: 5.4%), but stood slightly higher more recently, posting at 3.2% in March 2024.

Core inflation is likely to remain stickier in light of wage indexation, although pressure from the automatic wage adjustment should ease in 2024, given slowing inflation. Household disposable income has also benefited from three wage-indexations in 2023.

Generally, private consumption should continue to benefit from the 'Solidaritéitspak 3.0,' the latest agreement between government authorities, employer representatives and unions from

[1] This rating update takes into account information available until 18 April 2024.

March 2023 over measures to preserve the purchasing power of households, including some tax relief, to cushion the blow from higher energy prices. We understand that some energy support measures might be further extended until 2025.

Despite a slowdown in recent quarters, reflecting to some extent weaker economic activity, employment in the Grand Duchy grew by a robust 2.2% in 2023, remaining well above comparable rates in the euro area (EA 2023: 1.4%, domestic concept, Eurostat). In the current year, employment growth is set to slow. At the same time, Luxembourg's unemployment rate trended upward, although at 5.6% in Feb-24 (LFS-adj., s.a., Eurostat) it continues to move below the euro area as a whole (Feb-24: 6.5%). Structural challenges, in particular shortages of skilled labor, remain in place. In a bid to address this issue, the government passed a law which entered into force in September, aiming to facilitate the access to the labor market for third-country nationals living in Luxembourg.

High lending rates continue to weigh on investment, with dampening effects from tight monetary policy particularly visible in construction and real estate. While housing investment has fallen for eight consecutive quarters in y-o-y terms, the expected shift in the ECB's monetary policy should prospectively be conducive to gross fixed capital formation, with a larger effect likely to be felt from next year. Moreover, the 'Housing Pact 2.0', aims to increase the supply of affordable housing on the municipality level. Public investment remains supported by the implementation of the twin transition measures (green and digital) under the Recovery and Resilience Plan (RRP). In this context, the EC disbursed the first payment of EUR 20.2mn under the RRP (Jun-23), following the fulfillment of 26 milestones and targets.

We expect the contribution from net exports to remain dampened this year, given subdued economic activity among key European trading partners and continuing tight global funding conditions. With regard to next year, an expected, more tangible easing of financing conditions on financial markets should enable greater impulses via exports, also benefiting the important financial services industry.

Following expected resuming GDP growth in 2024, we expect growth to pick up pace next year on the back of monetary policy easing, which could strengthen domestic demand and also prove conducive to financial sector performance. On the whole, we forecast real economic activity to expand by 1.0% in 2024 and 2.3% in 2025. Persistent geopolitical tensions and the related uncertainty over renewed commodity price spikes pose downside risks.

With regard to the medium term, economic growth prospects remain backed by sizeable investment plans to drive the twin transformation, and by fostering innovative sectors including FinTech, CleanTech and BioTech. Drawing on AMECO data, Luxembourg's potential growth is estimated to remain higher than that of the euro area as a whole this year, amounting to 1.7% in 2024 and 2025, respectively (EA: 1.4% in 2024 and 1.3% in 2025), thus lower than its ten-year average of 2.3% in the years to 2023.

Shock-absorbing capacities are somewhat constrained by vulnerabilities linked to persistently high private indebtedness. That said, the comparatively high level of non-financial corporate debt partly reflects the activities of MNEs. Amounting to 258.9% of GDP in Q3-23, NFC debt remains by far the EU's highest reading. Similarly, household debt calculated as a percentage of disposable income remains high by European standard, posting at 181.9% in Q4-22. That said, we note that households hold a significant stock of financial assets, and savings rates are high.

Related developments remain to be monitored against the backdrop of high interest rates and the ongoing house price correction.

While any effects from the current changes to international corporate taxation will have to be monitored, Luxembourg appears to enjoy ongoing attractiveness as a business location, with a US battery manufacturer and materials specialist having signed a memorandum of understanding (Oct-23), with a view to establishing its European headquarters in Luxembourg to conduct research activities.

Recent developments which potentially have a bearing on Luxembourg's competitiveness from a cost-focused point of view, also against a backdrop of wage pressure, include a renewed decline in real labor productivity per person in 2023, which had declined by 0.2% on average over 2013-2022. The global export market share of goods and services decreased in 2022, although these developments could still partly reflect pandemic-related distortions. Moreover, Luxembourg continues to compare favorably in the European context in terms of productivity levels.

Taking into account non-cost factors in our assessment of Luxembourg's competitiveness, we note that the Grand Duchy ranges in the upper third among the EU members regarding the IMD World Competitiveness Ranking 2023. That said, Luxembourg slipped by seven places to rank 20 out of 64 economies, following its sharp deterioration in 'Economic performance' from an outstanding first position in 2022 to rank 38 in 2023.

Confirming its innovative power, Luxembourg maintained its status as a strong innovator on the European Innovation Scoreboard 2023. Being ranked 21st out of 132 countries, the 2023 edition of the Global Innovation Index likewise pays testament to the sovereign's high innovative capacity, with Luxembourg standing out in the innovation pillars 'institutions' and 'business sophistication'.

Judging by the EC's Digital Decade report 2023, Luxembourg is one of the leaders in terms of the digitalization of public services for citizens, as well as for businesses and the use of e-government services. It also performs well when it comes to digital skills and digital infrastructure, whereas the digital intensity of SMEs is below the EU average.

## Institutional Structure

*Luxembourg's exceptionally high institutional quality remains a key pillar of its AAA rating, buttressed by a track record of political stability and responsive policy making, including a prudent fiscal (CNFP) and supervisory (CSSF) framework. Furthermore, as an international financial center, Luxembourg enjoys significant advantages linked to its EU/EMU membership, with the free movement of capital and labor playing a vital role.*

The Grand Duchy's exceptionally strong institutional set-up is also reflected by the four Worldwide Governance Indicators (WGIs) on which we put particular emphasis when assessing a sovereign's institutional quality. Luxembourg scores persistently high in this context, and with regard to the latest set of WGI indicators (reference year 2022) moves among the perceived top-ten performers worldwide as regards 'government effectiveness', 'rule of law', 'control of corruption' and 'voice and accountability', having climbed in the ranking regarding the former two dimensions.

Notwithstanding a deterioration (15 places) to a relative rank of 30 out of 213 economies with 2022 as base year, Luxembourg continues to display the EU's strongest performance pertaining

to the WGI 'political stability'. The parliamentary elections held on 8 October 2023 saw the Christian Social People's Party (CSV) emerge victorious with 29.2% of the vote. The second-strongest party was the Luxembourg Socialist Workers' Party (LSAP) with 18.9% of the vote, just ahead of the Democratic Party (DP, 18.7%).

A new coalition agreement was signed on 16 November 2023 between the CSV and the DP, with the government thus commanding a parliamentary majority (35 of 60 seats). Key elements on the political agenda include safeguarding household purchasing power, and maintaining public investment to address demographic challenges and drive the digital and green transformation. Our main scenario remains a high degree of policy continuity going forward, with coherent and consensus-seeking policymaking.

Luxembourg's responsiveness and reform ownership is, in our view, corroborated by further headway as regards aspects of its judicial system as well as corruption prevention. According to the EC's Rule of Law report (Jul-23), the level of perceived judicial independence is high, and courts are operating efficiently. Reforms are progressing, and legislation has been adopted to transpose directives in the context of whistleblower protection.

In addition, in an addendum to the second compliance report (fourth evaluation round), which analyzes Luxembourg's progress on corruption prevention with respect to members of parliament, judges, and prosecutors, GRECO (Dec-23) concluded that all recommendations have now been implemented satisfactorily, with the exception of one, which has been partly implemented. We also note that the Financial Action Task Force, in a mutual evaluation report (Sep-23), assessed Luxembourg's AML/CFT framework as solid. At the same time, further scope for risk-based supervision of the non-financial sectors is mentioned, including trust and company services and real estate.

Commitment to transitioning to a low-carbon, green economy remains high, with environmental metrics showing a mixed picture. While Luxembourg was the top performer in the EC's Eco-Innovation Index 2022, challenges remain to reduce greenhouse gas emissions. With regard to 2021, Luxembourg displayed the EU's highest greenhouse gas emissions per head (17.6 tons). The Grand Duchy also exhibits room for improvement in terms of its overall share of energy from renewable sources, with its share standing well below the EU average in 2022 (LU: 14.4%, EU: 23.0%, Eurostat).

## Fiscal Sustainability

*Public finances constitute another key supportive pillar to Luxembourg's creditworthiness. A proven track record of fiscal prudence and firm commitment to fiscal sustainability lend confidence that the debt-to-GDP ratio will remain relatively low over the medium term, despite the recent adverse trend. Contingent liability risks, largely associated with the extensive size of the financial sector, are mitigated by highly affordable debt and ample fiscal space. We continue to flag some uncertainty over the net effects of the changes to global corporate taxation once fully implemented. Apart from that, we continue to see some risks linked to the housing market in the context of respective price corrections.*

Having posted a small headline deficit in 2022 (-0.3% of GDP) on the heels of a surplus in 2021, Luxembourg's general government balance seems to have been on course for a moderate deficit in 2023 overall. Judging by data relating to Q1-Q3-23 (Eurostat), net social contributions and a strong increase in taxes on income and wealth were drivers for total general government revenue, which rose by 11.8% y-o-y in the first three quarters of 2023. On the expenditure side,

subsidies and compensation of employees seem to have been important contributors to overall spending growth (12.7% y-o-y over Q1-Q3-23), whilst interest expenditure seemed to be on course for a sharp rise.

Although not necessarily a reliable guide, cash-based data regarding the central government level for 2023 as a whole would back expectations for a moderate deficit for 2023, with social benefits in kind, public wages and subsidies posting pronounced increases. According to the Ministry of Finance, energy support measures (Energiedësch, Solidaritéitspak 1.0-3.0, guarantees), had had a negative impact on the general government balance to the tune of 2.1% of GDP since 2022. We broadly concur with the recently presented updated Draft Budgetary Plan for 2024 (DBP24, March-24) that Luxembourg's general government deficit was roughly 0.7% of GDP in 2023, which would represent a considerably lower value than we had assumed in our last rating report (Apr-23).

Concerning the current year, the fiscal deficit is likely to widen on the back of envisaged measures to maintain households' purchasing power and support the housing and construction sectors. Addressing ongoing headwinds to housing and construction, the budget 2024 comes with the planned support of around EUR 844mn over 2024-2027.

With regard to social cohesion as one of the further priorities of the budget 2024, the social security budget is to be increased by 12%. Meanwhile, public investment is forecast to reach about EUR 3.7bn in 2024 (4.5% of our estimated 2024 GDP), while earmarked defense spending is to amount to 0.83% of GDP this year. Overall, we forecast the general government deficit to total -1.4% of GDP in 2024 and -0.9% of GDP in 2025 at this stage.

Luxembourg has ample fiscal leeway, as reflected by the second-lowest debt-to-GDP ratio in the EU, standing at 25.7% of GDP in Q3-23. While the previous strong commitment to a debt ceiling of 30% of GDP is not stated in the current coalition agreement, we nevertheless expect the public debt ratio to remain below this threshold this year and next. From an estimated increase to 25.7% of GDP in 2023, we project the ratio to edge up to 27.4% of GDP in 2024 and more or less stabilize at 27.2% of GDP in 2025 on the back of stronger economic growth.

Notwithstanding the expected debt trajectory, risks to fiscal sustainability remain very low in the near to medium term, additionally mitigated by considerable financial assets and the absence of debt denominated in foreign currency. At 0.6% in Q3-23 (0.4% in Q3-22), Luxembourg boasts the EU's lowest interest-to-revenue ratio. Related to this, the average weighted maturity is relatively long (Feb-24: 7.86y), ensuring that higher yields roll over more slowly to interest rates.

Given the sheer size of the banking sector – nearly 12 times Luxembourg's GDP in Q3-23 – contingent liability risks remain to be closely monitored. The maximum amount of public guarantees came to an elevated 13.3% of GDP (updated DBP24), with an estimated take-up of 5.9% of GDP, of which 2.7 p.p. were linked to the financial sector and 0.4 p.p. were associated with the Covid-19 response.

Judging by financial soundness metrics, Luxembourg's banking sector appears robust, with capital buffers remaining significantly higher than the EU on average, as underpinned by a CET1-ratio of 21.7% in Q4-23 (EU: 16.0%, EBA data). As captured by a NPL ratio of 1.4%, asset quality deteriorated slightly y-o-y, nevertheless comparing favorably with the EU level (Q4-23: 1.9%).

Notwithstanding this, there remain risks around developments in the real estate sector against the backdrop of pronounced household indebtedness and ongoing house price correction.

House prices have fallen significantly and in an orderly manner in recent quarters, with the annual rate of change posting at -14.4% in Q4-23 (EA: -1.1%, Eurostat data). The three-year rate of change in house prices has thus dropped from 38.0% in Q4-22 to 1.2% Q4-23. At the same time, OECD indicators gauging affordability point to diminishing misalignments from a high level.

What is more, loan demand is shrinking amid tight financing conditions, with the volume of outstanding mortgage loans declining by 1.3% y-o-y in Feb-24. At 55.3% in Feb-24, the share of mortgage loans in total outstanding bank credit to the private sector remains relatively high. Prospectively, lending conditions are set to ease, as we expect the ECB to lower interest rates from this June. Acknowledging uncertainty over the pace and scope of monetary policy easing in light of inflation volatility and still widespread wage pressure, we expect a reduction of the main refinancing rate to 3.75% by the end of this year, from its current level of 4.50%. Moreover, abovementioned fiscal support measures for the housing market are likely conducive to softening the respective downturn.

We note that Luxembourg's large investment fund industry has demonstrated resilience in the face of previously tightening financial conditions. Net assets of undertakings for collective investments totaled EUR 5,326.3bn as of end Jan-24, representing a rise by 2.6% compared to the previous year. Potential disorderly market corrections pose limited risks to investment funds and the financial services sector as a whole. The financial sector was recently assessed to be largely resilient against severe shocks (IMF, Apr-24). Apart from that, we would still flag some risks emanating from the overhaul of the international corporate taxation regime, with a view to the uncertain impact on tax revenue and, potentially, the attractiveness of Luxembourg as a business location more generally. Over the medium-to-longer term, rising age-related spending looks set to weigh on public finances if left unaddressed.

### Foreign Exposure

*Recurring current account surpluses have contributed to building a large positive net international investment position (NIIP), limiting external risks linked to Luxembourg's very high degree of trade openness and the significance of its financial sector.*

Whilst narrowing from 7.7% of GDP in 2022 to 6.8% of GDP in 2023, the Grand Duchy's current account surplus continued to exceed its long-term average of 5.6% of GDP over 2010-2019. Last year's decline in the surplus position was mainly driven by a smaller surplus in services, on account of a lower surplus with regard to non-financial services, whereas the surplus pertaining to financial services increased. Going forward, we expect a pronounced current account surplus to persist, with improvements in the goods balance set to add to this amid an expected accelerating economic pace next year.

Coming to 33.8% of GDP in 2023, Luxembourg maintained its position as one of the EU's largest net creditors, although the NIIP was significantly smaller than in 2022, largely reflecting a pronounced decline in the net asset position of direct investment. While we believe Luxembourg will continue to exhibit a high positive NIIP, visibility regarding the impact of the global minimum corporate tax is limited at this stage, partly due to the complexity of the reform.

## Rating Outlook and Sensitivity

Our rating outlook on the Grand Duchy of Luxembourg's long-term credit ratings is stable. This reflects our view that risks emanating from persistent geopolitical tensions and still prevailing tight financial conditions are balanced by its institutional excellence as well as large fiscal and external buffers.

We could lower the sovereign's credit outlook or rating if medium-term growth prospects substantially deteriorate, possibly due to further escalation of the wars in Ukraine and the Middle East. A longer phase of tight monetary policy, possibly amid renewed inflationary pressure or financial market shocks, could also cause downward pressure on the outlook or the rating. A prolonged upward-sloping trajectory of the debt-to-GDP ratio could also lead to a negative rating action.

## Analysts

Primary Analyst
Fabienne Riefer
Head of Public Finance
F.Riefer@creditreform-rating.de
+49 2131 109 1462

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 | AAA /stable |
| Foreign currency senior unsecured long-term debt | AAA /stable |
| Local currency senior unsecured long-term debt | AAA /stable |

*) Unsolicited

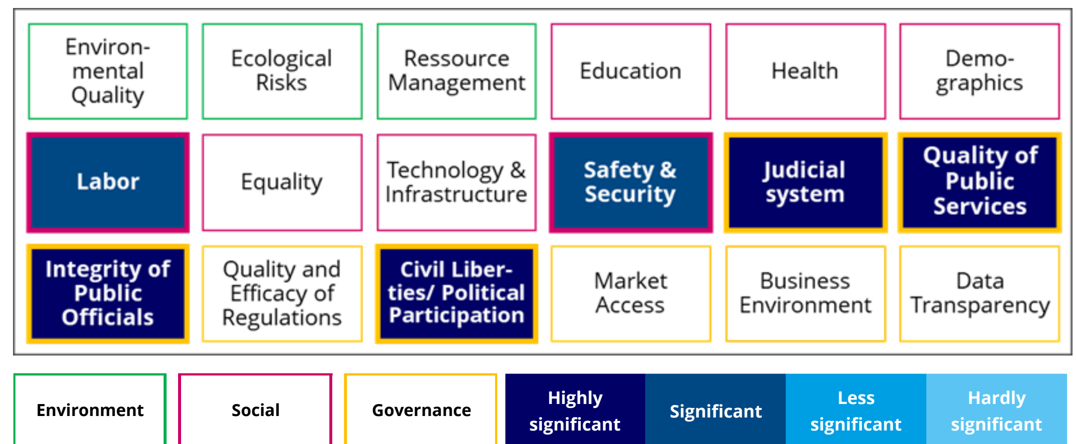
## ESG Factors

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.

The social dimension plays an important role in forming our opinion on the creditworthiness of the sovereign. Labor market metrics constitute crucial goalposts in Creditreform Rating's considerations on macroeconomic performance of the sovereign, and we regard the ESG factor 'Labor' as significant to the credit rating or adjustments thereof. What is more, exceptionally high perceived political stability would also touch upon the social dimension, which is reflected among other things by the respective WGI, and would ultimately affect the sovereign's institutional performance, so that we regard the ESG factor 'Safety and Security' 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 | 2023e | 2024e |
|---|---|---|---|---|---|---|---|
| ***Macroeconomic Performance*** | | | | | | | |
| Real GDP growth | 1.2 | 2.9 | -0.9 | 7.2 | 1.4 | -1.1 | 1.0 |
| GDP per capita (PPP, USD) | 118,604 | 121,846 | 119,927 | 132,472 | 141,333 | 143,304 | 145,826 |
| Credit to the private sector/GDP | 162.6 | 167.4 | 162.0 | 154.8 | 152.1 | 144.6 | n/a |
| Unemployment rate | 5.6 | 5.6 | 6.8 | 5.3 | 4.6 | 5.2 | n/a |
| Real unit labor costs (index 2015=100) | 106.6 | 108.2 | 107.8 | 103.9 | 106.1 | 109.4 | 109.6 |
| World Competitiveness Ranking (rank) | 11 | 12 | 15 | 12 | 13 | 20 | n/a |
| Life expectancy at birth (years) | 82.3 | 82.7 | 82.2 | 82.7 | 83.0 | n/a | n/a |
| ***Institutional Structure*** | | | | | | | |
| WGI Rule of Law (score) | 1.8 | 1.8 | 1.7 | 1.7 | 1.8 | n/a | n/a |
| WGI Control of Corruption (score) | 2.0 | 2.1 | 2.0 | 1.8 | 1.9 | n/a | n/a |
| WGI Voice and Accountability (score) | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | n/a | n/a |
| WGI Government Effectiveness (score) | 1.7 | 1.7 | 1.8 | 1.7 | 1.8 | n/a | n/a |
| HICP inflation rate, y-o-y change | 2.0 | 1.6 | 0.0 | 3.5 | 8.2 | 2.9 | 2.2 |
| GHG emissions (tons of CO2 equivalent p.c.) | 20.4 | 20.2 | 16.9 | 17.6 | n/a | 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 | 3.0 | 2.2 | -3.4 | 0.6 | -0.3 | -0.7 | -1.4 |
| General government gross debt/GDP | 20.9 | 22.4 | 24.6 | 24.5 | 24.7 | 25.7 | 27.4 |
| Interest/revenue | 0.8 | 0.7 | 0.5 | 0.4 | 0.4 | n/a | n/a |
| Debt/revenue | 46.2 | 49.3 | 56.5 | 56.4 | 56.7 | n/a | n/a |
| Total residual maturity of debt securities (years) | 5.5 | 5.0 | 6.3 | 6.0 | 6.6 | 8.0 | n/a |
| ***Foreign exposure*** | | | | | | | |
| Current account balance/GDP | 6.5 | 8.9 | 8.6 | 7.9 | 7.7 | 6.8 | n/a |
| International reserves/imports | 3.9 | 4.3 | 5.3 | 11.2 | 10.6 | 11.6 | n/a |
| NIIP/GDP | 72.5 | 66.2 | 42.4 | 42.6 | 47.0 | 33.8 | n/a |
| External debt/GDP | 6364.9 | 5881.0 | 5203.6 | 4969.0 | 4521.9 | 4321.4 | n/a |

Sources: IMF, World Bank, IMD, Eurostat, AMECO, ECB, STATEC, own estimates

## Appendix

### Rating History

| Event | Publication Date | Rating /Outlook |
|---|---|---|
| Initial Rating | 29.07.2016 | AAA /stable |
| Monitoring | 30.06.2017 | AAA /stable |
| Monitoring | 01.06.2018 | AAA /stable |
| Monitoring | 31.05.2019 | AAA /stable |
| Monitoring | 29.05.2020 | AAA /stable |
| Monitoring | 21.05.2021 | AAA/ stable |
| Monitoring | 20.05.2022 | AAA/ stable |
| Monitoring | 21.04.2023 | AAA /stable |
| Monitoring | 19.04.2024 | AAA /stable |

### 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 (MOF) participated in the credit rating process as it provided additional information and commented on a draft version of the report. Thus, this report represents an updated version, which was augmented in response to the factual remarks of MOF during their review. However, the rating outcome as well as the related outlook remained unchanged.

| Unsolicited Credit Rating | |
|---|---|
| With Rated Entity or Related Third Party Participation | YES |
| With Access to Internal Documents | NO |
| 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, Banque Centrale du Luxembourg (BCL), Institute national de la statistique et des étude économiques (STATEC), Grand Duchy of Luxembourg – Ministry of Finance, Commission de Surveillance du Secteur Financier (CSSF).

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 rating and credit service ancillaries please refer to https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html#non-core-busi-ness-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".

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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