CREDIT OPINION
27 October 2026

Update

Send Your Feedback

Contacts

Steffen Dyck +49.69.70730.942
SVP-Ratings
steffen.dyck@moodys.com

Federico Impaglione +34.91.768.8234
Sr Ratings Associate
federico.impaglione@moodys.com

Dietmar Hornung +49.69.70730.790
Exec Dir-Ratings
dietmar.hornung@moodys.com

Marie Diron +44.20.7772.1968
MD-Global Sovereign Risk
marie.diron@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

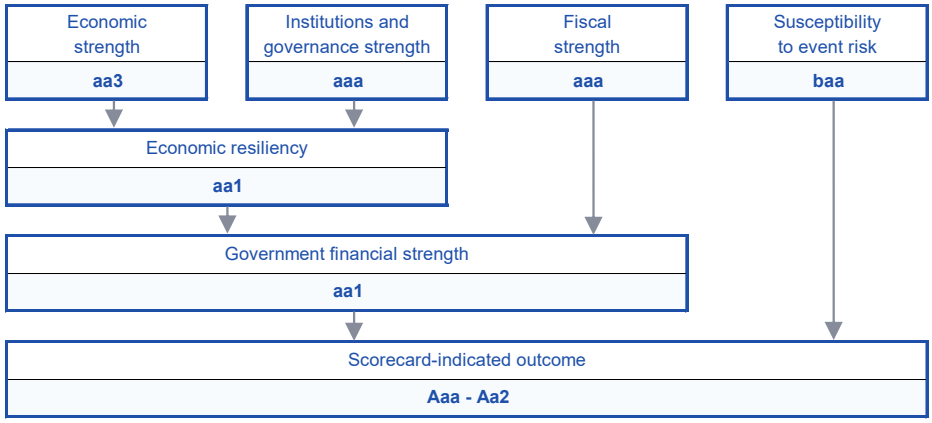
Government of Norway – Aaa stable

Regular update

Summary

Norway's credit profile reflects the country's exceptionally strong public sector balance sheet and very low risk to debt sustainability. Norway's extraordinary fiscal strength is supported by the Government Pension Fund Global (GPFG), the largest sovereign wealth fund globally. Norway's strong institutions and forward-looking policy framework further limit the transmission of external shocks to the sovereign credit profile and help address long-term challenges. The country's highly competitive, diversified economy adds to its credit strength. Susceptibility to event risk reflects heightened geopolitical risks since Russia's invasion of Ukraine (Ca stable).

Exhibit 1
Norway's credit profile is determined by four factors



Source: Moody's Ratings

Credit strengths

» Very large fiscal buffers and long track record of fiscal surpluses

» Very high and relatively evenly distributed wealth that supports economic resilience

» Sound macro policy framework and a stable, consensus-oriented political system

Credit challenges

» Adapting to steadily decreasing oil and gas output over the coming decades

» Managing potential risks from very high household debt

» Exposure to heightened geopolitical event risk

Rating outlook

The stable outlook reflects the absence of downward pressure on Norway's Aaa ratings. Exceptionally large fiscal buffers and very strong institutions allow for an effective fiscal and monetary policy response to potential shocks, adverse long-term demographic trends, and the expected reduced contribution from the oil and gas sector to economic growth and government revenue. We expect that the Norwegian authorities will continue to manage challenges related to vulnerabilities in the real estate sector amid high household debt. Our baseline scenario does not assume a military confrontation between NATO and Russia.

Factors that could lead to a downgrade

The Aaa ratings would come under downward pressure in the unlikely scenario of a significant weakening of Norway's prudent macroeconomic, monetary and fiscal policy framework. This could come in combination with a large external shock, leading to a material and multi-year erosion of Norway's very large fiscal buffers with a lasting negative impact on the country's economic and fiscal strength. Moreover, downward pressure on Norway's credit profile could arise in a scenario of a further escalation in geopolitical risk, particularly in the context of a significant operation against an EU or NATO country in Europe.

Key indicators

Exhibit 2

Norway [1]	2020	2021	2022	2023	2024	2025	2026F	2027F
Real GDP (% change)	-1.4	4.1	4.1	0.4	1.4	1.1	1.2	0.6
Mainland (non-oil) real GDP (% change)	-2.7	4.7	5.2	0.9	0.6	1.7	1.3	0.9
Inflation rate (% change average)	1.3	3.5	5.8	5.5	3.2	3.0	3.3	2.3
Gen. gov. financial balance/GDP (%)	-2.6	10.0	24.6	15.9	12.7	10.5	13.9	11.2
Gen. gov. primary balance/GDP (%)	-2.0	10.4	25.1	16.9	14.2	12.1	15.2	13.2
Gen. gov. debt/GDP (%) [2]	43.4	39.8	35.1	42.7	53.2	54.4	46.7	46.4
Gen. gov. debt/revenues (%) [2]	83.2	72.9	57.5	71.0	88.9	91.7	78.1	78.6
Gen. gov. interest payment/revenues (%)	1.2	0.7	0.8	1.7	2.5	2.6	2.3	3.4
Current Account Balance/GDP (%)	1.8	14.4	27.8	17.1	15.0	14.2	19.5	16.5

[1]Economic forecasts based on an assumed average oil price in the range of $90-110/barrel for 2026 and $80/barrel for 2027. Our broad expectations are that prices will fluctuate within a range of $55-$75/barrel in the medium term.
[2] Data until 2013 reported under ESA95; ESA2010 from 2014 onwards
Sources: Statistics Norway & Moody's Ratings

Profile

Norway is a high-income Nordic country with an advanced, export-oriented economy dominated by oil and gas production. Hydrocarbons account for a large share of exports and fiscal revenues. All of the government's net cash flow from petroleum activities is transferred to the GPFG, while only the fund's expected real return is spent over time. Strong institutions, very high GDP per-capita, and ample fiscal buffers underpin its sovereign credit profile.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

Detailed credit considerations

We assess Norway's **economic strength** as "aa3," which is above the initial score of "a2". This reflects the country's highly competitive position in the oil and gas market, substantial support from the sizeable assets of the GPFG, which provides an additional form of economic diversification not captured in nominal GDP, and a large fiscal buffer to soften economic shocks.

Our assessment of economic strength also considers Norway's large economy, moderate volatility in real GDP growth, and a GDP per capita of 111,545 PPP (Intl$) in 2025, surpassing the Aaa-rated median of 84,738 PPP (Intl$). Trend growth averages 1.5% over 2021-30, below the Aaa-rated median of 2.2%.

The mainland economy benefits from the flexible wage-setting model and exchange rate. Norway's participation in the European Economic Area (EEA) and the EU Single Market further supports its economic strength by facilitating the free movement of goods, services, capital and people and providing a common framework for competition. Its participation in the Schengen area further reinforces its close integration with European economies.

An efficient social safety net, which includes the provision of basic services, education, and healthcare, combined with low economic inequality and high social mobility, significantly reduces Norway's susceptibility to social risks.

Long-term growth challenges for Norway include its rapidly ageing population, which will slow labour force growth, and exposure to the implications of the carbon transition. However, carbon transition risks are effectively mitigated by the country's competitive and flexible mainland economy, the accumulation of oil and gas revenue in its sizeable sovereign wealth fund, and comparatively "clean" and competitive oil and gas production.

We score Norway's **institutions and governance strength** at "aaa," the highest possible level. The consensus-oriented political framework and a track record of successive governments designing and implementing prudent macroeconomic and fiscal policy underpin our assessment of the very high quality of legislative and executive institutions. This is also reflected in consistently very high scores in relevant Worldwide Governance Indicators (WGI) such as Government Effectiveness and Regulatory Quality.

Strength of civil society and the judiciary is also very high. Similar to other Nordic countries, Norway shows very strong scores in global surveys that gauge the freedom of society and strength of rule of law. For instance, Norway shows the highest score globally in the 2026 Press Freedom Index, and the fourth highest score in the latest Corruption Perceptions Index, and ranks within the 95th percentile of rated sovereigns for Rule of Law, Control of Corruption and Voice and Accountability in the WGI.

The efficient and transparent institutional framework provides us with a high degree of confidence in the government's ability to implement effective policies and we assign the highest possible scores to fiscal policy and monetary and macroeconomic policy effectiveness. Fiscal policy effectiveness is supported by the highly effective management of GPFG assets by the country's central bank, which provides a strong cushion to counter cyclical shocks.

In addition to managing Norway's sovereign wealth fund, Norges Bank's mandate is to ensure price and financial stability which we view as credible. Potential financial stability risks from very high levels of household debt are effectively balanced by a very strong banking sector and the use of macroprudential measures like systemic risk buffers and countercyclical capital buffers.

We assess **fiscal strength** as "aaa," supported by substantial financial assets, mainly related to the GPFG and also including government deposits at the central bank. The government transfers oil and gas revenues to the GPFG and withdraws funds to finance the non-oil deficit. Over time, withdrawals are intended to track the fund's estimated real rate of return, currently 3%.

The central government only borrows to fund state lending institutions, refinance maturing debt, and support and develop the well-functioning domestic financial market. Under ESA (European system of national and regional accounts) rules, government debt also includes GPFG's liabilities associated with repurchase agreements (repos), which increase debt volatility given the fund's large operations.

The market value of the GPFG amounted to NOK 21,268 billion (386% of GDP) at the end of 2025. The return of the fund measured in the invested currency basket amounted to 15.1% in 2025 up from 13.1% in 2024. In recent years, strong investment returns, rather than inflows, have driven the GPFG's expansion. To avoid economic distortions such as asset price inflation and currency appreciation, the GPFG invests solely abroad.

The rule governing withdrawals to finance the non-oil deficit was tightened, and the estimated real rate of return on the fund was reduced from 4% to 3%, effective from 2018. This adjustment decreases the amount that can typically be drawn from the fund for the budget, allowing for some flexibility over economic cycles. The nominal annual NOK-return of the fund since inception is close to 8%.

Norway's **susceptibility to event risk** at "baa" is driven by geopolitical risks. Although Norway's NATO membership is ultimately a guarantor of national security, the country also faces contagion risks from the war in Ukraine as it is bound by NATO's collective defense clause to provide assistance to any other member state facing an attack. The disengagement of the US from its broader historic role of ultimate guarantor of European security further heightens geopolitical risks for European sovereigns, also driving pressure to raise defense spending.

Our baseline scenario does not assume a military confrontation between NATO and Russia, but we expect Russia will engage in hybrid warfare such as sabotage against energy and communications infrastructure affecting European sovereigns, particularly around the Baltic Sea. We also expect Russia to continue to interfere in domestic politics and the electoral process of many European sovereigns to sow disunity among them and NATO members. Norway's extensive presence close to the Arctic also increases its exposure to geopolitical risk amid growing strategic competition over security, natural resources and shipping routes.

We view domestic **political risk** as very low, supported by Norway's consensus-driven political framework and long history of stable coalition governments and broad parliamentary cooperation. This limits the risk of abrupt policy shifts and supports proactive responses to long-term economic and fiscal challenges.

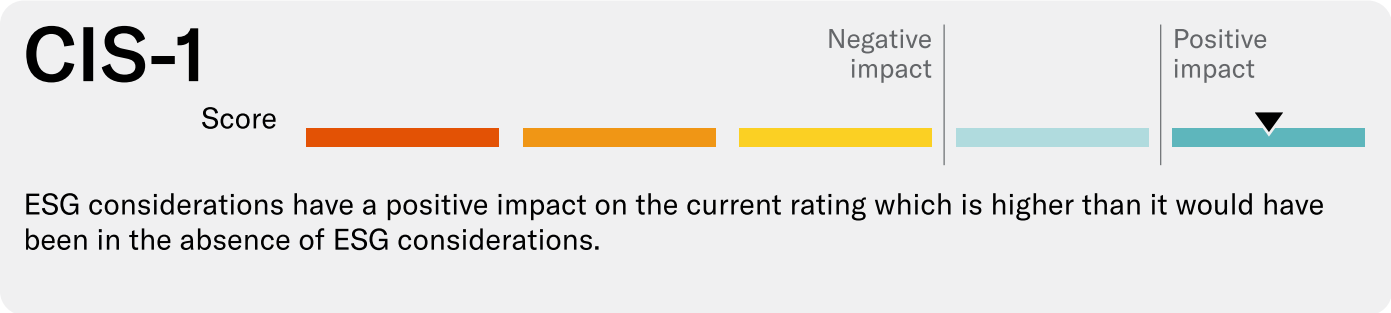
We assess **government liquidity risk** and **external vulnerability risk** both as "aaa". Low government gross financing needs and strong market access minimize government liquidity risks. Norway's consistently high structural current-account surplus, averaging about 11% of GDP over the past decade, coupled with a substantial and growing net international investment position, shields the country from external liquidity pressures.

Our assessment of **banking sector related risks** is "a". This reflects the intrinsic strength of Norway's banking sector, marked by a strong "a2" average asset-weighted Baseline Credit Assessment as well as a total bank assets to GDP ratio of around 165% as of year-end 2025.

ESG considerations

Norway's ESG credit impact score is CIS-1

Exhibit 3
ESG credit impact score



Source: Moody's Ratings

Norway's credit rating is higher than it would have been in the absence of ESG considerations (**CIS-1**). This reflects the credit benefits stemming from predictable policies, a well-educated labor force, evenly distributed wealth, and very good-quality healthcare and basic services. Together with very large fiscal buffers and the very high quality of governance and institutions this underpins Norway's strong capacity to respond to environmental hazards or social demands.

Exhibit 4
ESG issuer profile scores



Source: Moody's Ratings

Environmental

Norway's **E-3** issuer profile score reflects the country's material dependence on its oil and gas sector and as a result its elevated exposure to risks from the transition to a lower-carbon economy. This exposure is mitigated by Norway's highly competitive and flexible mainland economy and by investment in comparatively clean oil and gas production. The country's exposure to physical climate risks, such as flooding, landslides and avalanches, stormwater, sea level rise and storm surges, is mitigated by significant investments in adaptation and resilience.

Social

Norway's **S-1** issuer profile score reflects a well-educated labor force, evenly distributed wealth and very good-quality healthcare and basic services. Public spending on education per pupil is among the highest within Europe. Norway performs well on education outcome indicators and participation in lifelong-learning is high. Health and safety is supported by a strong universal healthcare system. Demographic challenges posed by its aging population to long-term economic growth are mitigated by sustained net immigration and high labor market participation rates. According to European Commission estimates, total ageing costs will steadily increase over the next decade, reaching 32.0% of GDP in 2034, up from 30.4% of GDP in 2024. Norway's sovereign wealth fund strengthens the government's ability to cope with the costs of this trend.

Governance

Norway's **G-1** issuer profile score reflects the country's efficient and very transparent institutional framework that provides a high degree of confidence in the authorities' ability to implement timely and effective policies in response to shocks. Coupled with

exceptionally high wealth levels and financial strength, this supports a high degree of resilience. The transparency and management of Norway's sovereign wealth fund adhere to international best practices. The prudent, long-standing fiscal rule ensures that government withdrawals, over time, equate to the estimated real return of the sovereign wealth fund.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Recent developments

Modest growth as petroleum investment declines and persistent inflation keeps monetary policy restrictive

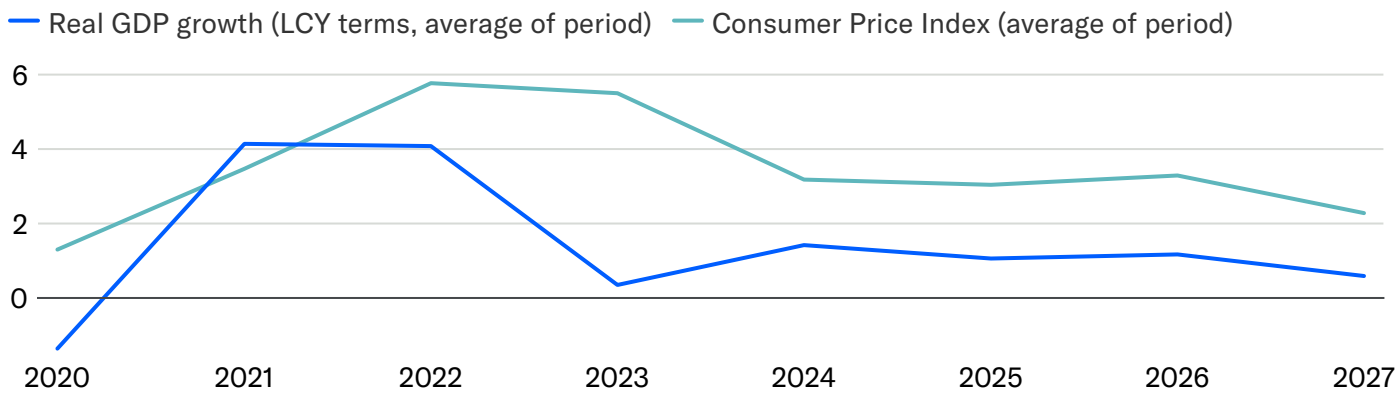
We forecast overall real GDP growth of 1.2% in 2026 and mainland growth of 1.3%. Private and public consumption will support activity, with growth of 1.1% and 1.8%, respectively. Fixed investment expands only marginally and petroleum investment declines. The robust labour market supports household incomes, but we expect unemployment to increase slightly. An uncertain external environment and subdued trading-partner demand will constrain export growth, limiting the contribution from external demand.

Overall real GDP growth will slow to 0.6% in 2027, with mainland growth moderating to 0.9% and offshore activity contracting slightly, driven by falling investment and maturing production. Public consumption will remain robust, while higher debt-servicing costs will constrain private consumption.

Inflation was above Norges Bank's 2% target for several years (see Exhibit 5). Headline CPI inflation was 3.3% in August 2026. Against this backdrop, Norges Bank increased its policy rate by 25 basis points to 4.50% in September, the second increase in 2026. We forecast average inflation of 3.3% in 2026, easing to 2.3% in 2027, but continued domestic cost pressures pose upside risks.

Higher interest rates will continue to weigh on household spending and investment. High household debt and widespread variable-rate mortgages make household spending more sensitive to interest-rate changes. That said, easing inflation should support real purchasing power, allowing private consumption growth to strengthen to 1.8% in 2027 despite the restrictive monetary stance.

Exhibit 5
Economic growth remains modest while inflation will likely ease in 2027
% change



Source: Moody's Ratings

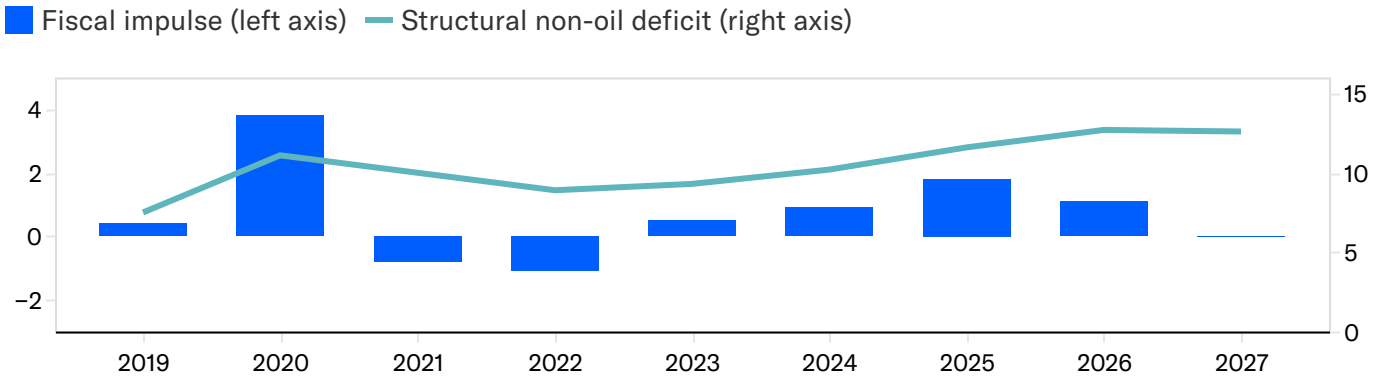
2027 budget with neutral fiscal stance while prioritising defence spending

The 2027 budget proposal includes a broadly stable structural non-oil deficit of 12.6% of mainland trend GDP, following four years of rising structural non-oil deficits (see Exhibit 6). The government aims to contain overall spending growth by reprioritising expenditure towards defence and other policy priorities. An additional NOK 6.5 billion will go to defence, maintaining overall defence spending at 3.4% of GDP. Measures to support households include NOK 6.4 billion in personal income-tax relief. Structural fund use remains at 2.7% of the GPFG, below the fiscal rule's 3% benchmark.

Exhibit 6

Proposed 2027 budget is broadly neutral, while the structural non-oil deficit remains near its historical high

percentage points (left axis), % of trend mainland GDP (right axis)



Fiscal impulse = change in structural non-oil fiscal deficit measured as a % of trend mainland GDP; Structural non-oil deficit = the budget deficit excluding oil- and gas-related revenues and adjusted for cyclical and other temporary factors.
Source: Ministry of Finance

From a general government perspective, we expect the surplus to narrow to 11.2% of GDP in 2027 after an expected 13.9% in 2026, although it remains exceptionally large. We expect Norway's general government debt to decline to 46.7% of GDP in 2026 and 46.4% in 2027, from 54.4% in 2025, partly reflecting strong nominal GDP growth. Changes in government debt do not closely track annual budget balances. Borrowing also reflects government on-lending and liabilities associated with GPFG operations. We expect debt to remain around 46% of GDP through 2034. Debt affordability will remain very strong: interest payments are projected to fall to 2.3% of revenue in 2026 from 2.6% in 2025, before rising to 3.4% in 2027.

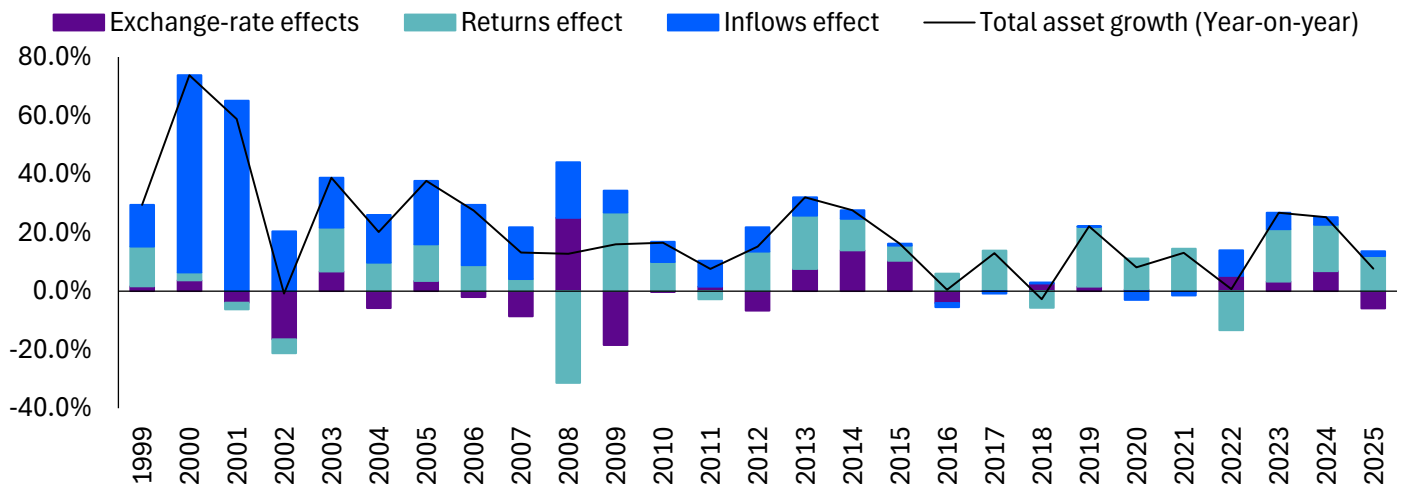
The GPFG continues to underpin Norway's exceptionally strong public sector balance sheet

The GPFG's value reached NOK 22,683 billion at the end of June 2026, up from NOK 21,268 billion at year-end 2025. The increase in the fund's value during the first half of 2026 primarily reflected strong investment returns which were partly offset by a stronger currency (see Exhibit 7). At the end of June 2026, equities accounted for 72.1% of the portfolio, fixed-income instruments for 25.8%, unlisted real estate for 1.6%, and unlisted renewable energy infrastructure for 0.5%.

Exhibit 7

Asset returns have increasingly driven GPFG growth

Drivers of GPFG asset growth (% change, year-on-year)



Source: Norges Bank Investment Management

Moody's rating methodology and scorecard factors: Norway — Aaa stable

Factor / Sub-Factor	Metric	Indicator Year	Indicator	Initial Factor Score	Final Factor Score	Weights
Factor 1: Economic strength				**a2**	**aa3**	**50%**
Growth dynamics	Average real GDP growth (%)	2021-2030F	1.5	b1		25%
	MAD Volatility in Real GDP Growth (%)	2016-2025	0.7	a3		10%
Scale of the economy	Nominal GDP ($ billion)	2025	530.1	aa3		30%
National income	GDP per capita (PPP, Intl$)	2025	111,545.1	aaa		35%
Adjustment to factor 1	*# notches*				2	max ±9
Factor 2: Institutions and governance strength				**aaa**	**aaa**	**50%**
Quality of institutions	Quality of legislative and executive institutions			aaa		20%
	Strength of civil society and the judiciary			aaa		20%
Policy effectiveness	Fiscal policy effectiveness			aaa		30%
	Monetary and macroeconomic policy effectiveness			aaa		30%
Specified adjustment	Government default history and track record of arrears				0	max -3
Other adjustment to factor 2	*# notches*				0	max ±3
F1 x F2: Economic resiliency				**aa2**	**aa1**	
Factor 3: Fiscal strength				**aaa**	**aaa**	
Debt burden	General government debt/GDP (%)	2025	54.4	baa1		25%
	General government debt/revenue (%)	2025	91.7	aa2		25%
Debt affordability	General government interest payments/revenue (%)	2025	2.6	aa1		25%
	General government interest payments/GDP (%)	2025	1.5	aa3		25%
Specified adjustments	*Total of specified adjustment (# notches)*			4	4	max ±6
	Debt Trend - Historical Change in Debt Burden	2017-2025	18.2	0	0	
	Debt Trend - Expected Change in Debt Burden	2025-2027F	-8.0	1	1	
	General Government Foreign Currency Debt/ GDP	2025	0.0	0	0	
	Other non-financial public sector debt/GDP	2025	20.1	-1	-1	
	Government Financial Assets including Sovereign Wealth Funds / GDP	2025	389.3	4	4	
Other adjustment to factor 3	*# notches*				0	max ±3
F1 x F2 x F3: Government financial strength				**aa1**	**aa1**	
Factor 4: Susceptibility to event risk				**baa**	**baa**	Min
Political risk				baa		
	Domestic political risk and geopolitical risk			baa		
Government liquidity risk				aaa	aaa	
	Ease of access to funding			aaa		
Specified adjustment	High refinancing risk				0	max -2
Banking sector risk				a	a	
	Risk of banking sector credit event (BSCE)	Latest available	a2	aaa-a3		
	Total domestic bank assets/GDP	2025	165.3	80-180		
Adjustment to F4 BSR	*# notches*				0	max ±2
External vulnerability risk				aaa	aaa	
	External vulnerability risk			aaa		
Adjustment to F4 EVR	*# notches*				0	max ±2
Overall adjustment to F4	*# notches*				0	max -2
F1 x F2 x F3 x F4: Scorecard-indicated outcome				**Aaa - Aa2**	**Aaa - Aa2**	

Note: While information used to determine the grid mapping is mainly historical, our ratings incorporate expectations around future metrics and risk developments that may differ from the ones implied by the scorecard-indicated outcome. Thus, the rating process is deliberative and not mechanical, meaning that it depends on peer comparisons and should leave room for exceptional risk factors to be taken into account that may result in an assigned rating outside the scorecard-indicated outcome. For more information please see our Sovereign Ratings Methodology.

Footnotes: (1) Initial factor score: scorecard indicators combine with the automatic adjustments to produce an initial factor score for every rating factor, as detailed in Moody's Sovereign Ratings Methodology. **(2) Final factor score:** where additional analytical considerations exist, initial factor scores are augmented to produce a final factor score. Guidance on additional factors typically considered can be found in Moody's Sovereign Ratings Methodology; details on country-specific considerations are provided in Moody's research. **(3) Scorecard-indicated outcome:** Factor 1: Economic Strength, and Factor 2: Institutions and Governance Strength, combine with equal weight into a construct we designate as Economic Resiliency (ER). An aggregation function then combines ER and Factor 3: Fiscal Strength, following a non-linear pattern where Fiscal Strength has higher weight for countries with moderate ER and lower weight for countries with high or low ER. As a final step, Factor 4, a country's Susceptibility to Event Risk, is a constraint which can only lower the government financial strength as given by combining the first three factors. **(4) There are 20 ranking categories for quantitative sub-factors:** aaa, aa1, aa2, aa3, a1, a2, a3, baa1, baa2, baa3, ba1, ba2, ba3, b1, b2, b3, caa1, caa2, caa3, ca and 8 ranking categories for qualitative sub-factors: aaa, aa, a, baa, ba, b, caa, ca **(5) Indicator value:** if not explicitly stated otherwise, the indicator value corresponds to the latest data available.

© 2026 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.
CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE LEGAL, COMPLIANCE, INVESTMENT, FINANCIAL OR OTHER PROFESSIONAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.
MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.
ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.
MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.
All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating or assessment is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating or assessment process or in preparing its Materials.
To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating or assessment assigned by MOODY'S.
To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.
NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.
Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at ir.moodys.com under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."
Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., Moody's Local PA Calificadora de Riesgo S.A., Moody's Local CR Calificadora de Riesgo S.A., Moody's Local ES S.A. de CV Clasificadora de Riesgo, Moody's Local RD Sociedad Calificadora de Riesgo S.R.L. and Moody's Local GT S.A.(collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.
Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.
Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.
Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. EU: In the European Union, each of Moody's Deutschland GmbH and Moody's France SAS provide services as an external reviewer in accordance with the applicable requirements of the EU Green Bond Regulation. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used

within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER 1499080