Germany

This report does not constitute a new rating action for this issuer. It provides more detailed credit analysis than the previously published Rating Action Commentary, which can be found on www.fitchratings.com.

Ratings

Foreign Currency

Long-Term IDR	AAA
Short-Term IDR	F1+

Local Currency

Long-Term IDR	AAA
Short-Term IDR	F1+

Country Ceiling AAA

Outlooks

Long-Term Foreign-Currency IDR	Stable
Long-Term Local-Currency IDR	Stable

Rating Derivation

Component	
Sovereign Rating Model (SRM)	AA+
Qualitative Overlay (QO)	+1
Structural features	0
Macroeconomic	+1
Public finances	0
External finances	0
Long-Term Foreign-Currency IDR	AAA

Source: Fitch Ratings

Data

	2022E
GDP (USDtrn)	4
Population (m)	83.9

Source: Fitch Ratings

Applicable Criteria

Sovereign Rating Criteria (April 2023)

Country Ceilings Criteria (July 2020)

Related Research

Fitch Affirms Germany at 'AAA'; Outlook Stable (March 2023)

Global Economic Outlook (March 2023)

Interactive Sovereign Rating Model

Fitch Fiscal Index - Analytical Tool

Click here for more Fitch Ratings content on Germany

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Key Rating Drivers

Very Strong Credit Fundamentals: Germany's 'AAA' rating reflects its diversified, high value-added economy, strong institutions and record of sound public finances. The rating is also supported by Germany's position as the benchmark sovereign issuer in the eurozone, which ensures very strong financing flexibility. The record of persistent, high current account surpluses speaks for the competitiveness of Germany's export sector.

Significant Economic Slowdown: The economic shock has abated slightly, mostly due to falling energy prices and high gas storage levels across the continent combined with a warm winter. Fitch Ratings still expects a significant economic slowdown, but has raised its growth forecast for Germany in 2023 to 0.1% from -0.5% at the time of the previous rating review in October. Given the higher base and also our expectation for interest rates to stay higher for longer, we now expect the economy to expand by only 1.4% in 2024, down from 2.3% previously.

Inflationary Pressures Persist: Inflation eased after reaching a peak of 11.6% in October 2022 but remained high at 7.6% in April. We forecast inflation to fall to 5.8% in 2023 from 8.7% in 2022. Core inflation has increased, reaching 5.6% in April from 3.9% twelve months before, in line with the eurozone.

Labour Market Remains Very Tight: Germany's labour market remains very tight, as reflected in one of the highest vacancy rates in the eurozone, at 4.4% in 4Q22. We expect the rate of unemployment to rise slightly due to a slowdown in jobs growth, to 3.2% in 2023 from 3.0% in 2022, but to stay significantly below 3.7% in 2020.

Moderate Fiscal Deficits: We expect the general government fiscal balance to widen to 3.1% of GDP in 2023 from 2.6% in 2022. Our forecast for the 2023 deficit is lower than 3.5% at our previous review, mostly due to lower energy prices, which we expect to translate into smaller spending on the energy package. The fiscal deficit should narrow to 2.6% in 2024 and continue shrinking to about 1% of GDP in the long term, above the 'AAA' rated median for a balanced budget and Germany's fiscal surpluses before the pandemic (five-year average at 1.4% of GDP).

Stable Debt Burden: Moderate fiscal deficits and tepid economic growth will lead to a stabilisation of general government debt at around 67% of GDP in the medium term, 8pp-of-GDP higher than the pre-pandemic level at 58.8% of GDP. This compares favourably with the eurozone average at about 106% of GDP, but it is significantly above the 'AAA' median at 40% of GDP. From 2024, government debt should enter a gradual downward trajectory, with the debt-to-GDP ratio falling to 66% by 2026.

Rising Debt Servicing Cost: Germany's bond yields have increased substantially since the start of the monetary-tightening cycle, to 2.3% at the beginning of May from only 0.2% in February 2022. The long maturity of Germany's debt at 7.6 years means that the pass-through of the higher financing cost will be gradual. Notwithstanding the long average maturity of debt, we estimate that around 17% of total debt will mature in less than one year, the highest share of debt among EU countries.

We expect the interest payments-to-revenue ratio to increase to 1.4% in 2024 from 0.9% in 2022, above the 'AAA' median of 0.9%.

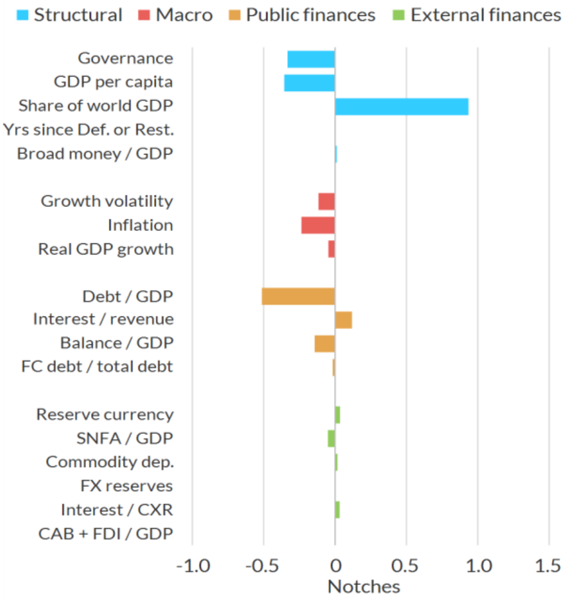
Resilient Banking Sector: The German banking sector's 'a' Banking System Indicator reflects resilient asset quality and sound capitalisation and funding and liquidity. This should limit the impact on German banks' credit profiles from the energy crisis and economic slowdown. The latter is likely to damp business conditions for banks, as reflected in Fitch's deteriorating 2023 sector outlook. Fitch expects lower lending volumes and increasing loan impairment charges, resulting in overall lower sector profitability.

Rating Summary

Long-Term Foreign-Currency Issuer Default Rating: AAA

Sovereign Rating Model: AA+

Contribution of variables, relative to AAA median



Qualitative Overlay: +1

Adjustments relative to SRM data and output

Structural features: No adjustment.

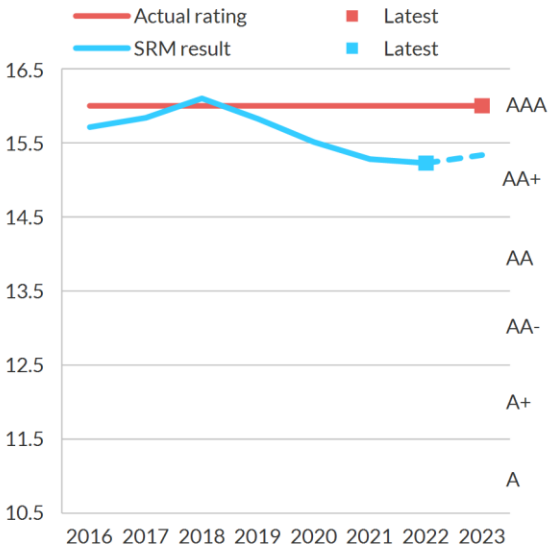
Macroeconomic outlook, policies and prospects: + 1 notch, to offset the deterioration in the SRM output driven by volatility from the pandemic shock, including on GDP growth. Fitch believes that Germany has the capacity to absorb it without lasting effects on its long-term macroeconomic stability.

Public finances: No adjustment.

External finances: No adjustment.

Note: See ***Peer Analysis table*** for summary data, including rating category medians; see the ***Full Rating Derivation table*** for detailed SRM data.
Source: Fitch Ratings

Sovereign Rating Model Trend



Recent Rating Derivation History

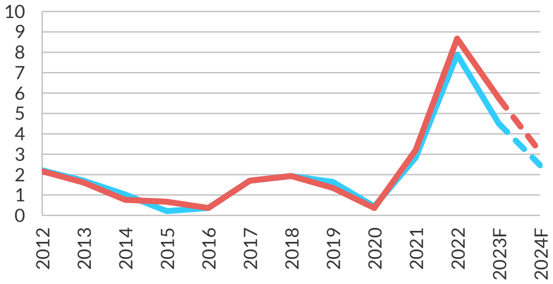
Review Date	LT FC IDR	SRM Result[ab]	QO S	M	PF	EF
Latest	AAA	AA+	0	+1	0	0
21 Oct 22	AAA	AA+	0	+1	0	0
29 Apr 22	AAA	AA+	0	+1	0	0
29 Oct 21	AAA	AA+	0	+1	0	0
30 Apr 21	AAA	AA+	0	+1	0	0
6 Nov 20	AAA	AA+	0	+1	0	0
12 Jun 20	AAA	AAA	0	0	0	0
17 Jan 20	AAA	AAA	0	0	0	0
19 Jul 19	AAA	AAA	0	0	0	0
25 Jan 19	AAA	AAA	0	0	0	0

[a] The latest rating uses the SRM result for 2022 from the chart. This will roll forward to 2023 in July 2023.
[b] Historical SRM results in this table may differ from the chart, which is based on our latest data, due to data revisions.
Abbreviations: LT FC IDR = Long-Term Foreign-Currency Issuer Default Rating; SRM = Sovereign Rating Model; QO = Qualitative Overlay
Source: Fitch Ratings

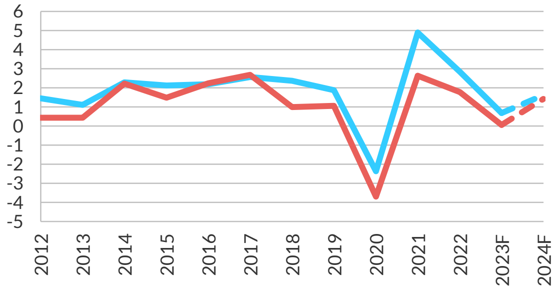
Peer Analysis

Germany AAA Median

Consumer Price Inflation
(annual avg, %)

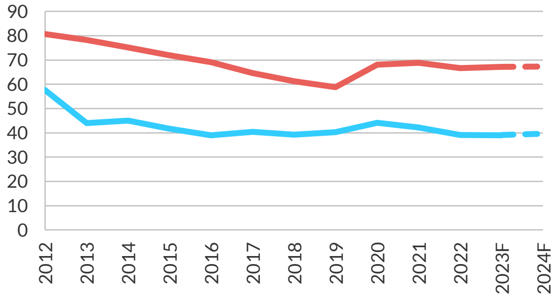


Real GDP Growth
(%)

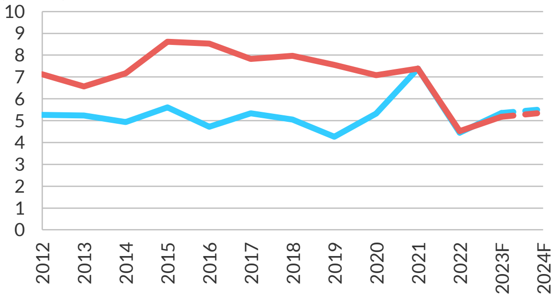


General Government Balance
(% GDP)

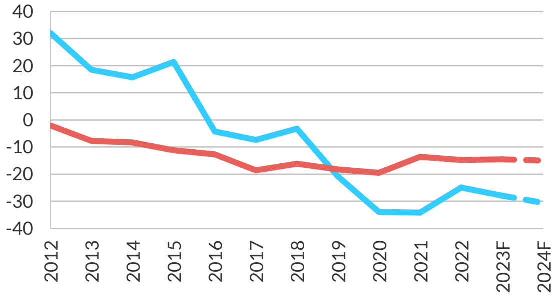
Gross General Government Debt
(% GDP)



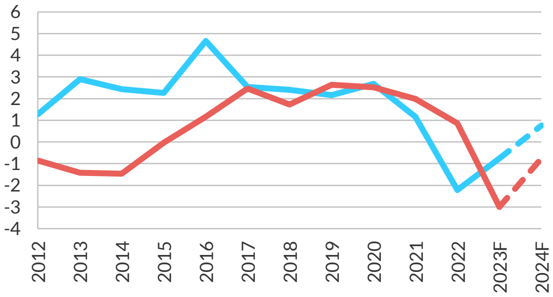
Current Account Balance
(% GDP)



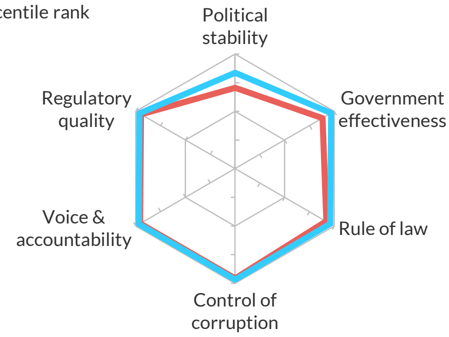
Net External Debt
(% GDP)



Real Private-Sector Credit Growth
(%)



Governance Indicators
Percentile rank



Source: Fitch Ratings, Statistical Office, Ministry of Finance, IMF, World Bank

Peer Analysis

2022E[a]	Germany	AAA median	AA median	A median
Structural features				
GDP per capita (USD) [SRM]	48,375	68,545	48,827	28,763
Share in world GDP (%) [SRM]	4.2	0.0	0.0	0.0
Composite governance indicator (percentile, latest) [SRM][b]	89.4	93.9	84.3	75.0
Human development index (percentile, latest)	95.7	94.7	89.4	82.2
Broad money (% GDP) [SRM]	99.4	93.3	100.3	90.1
Private credit (% GDP, 3-year average)	82.3	121.6	104.2	74.6
Dollarisation ratio (% bank deposits, latest)	-	16.7	12.7	10.3
Bank system capital ratio (% assets, latest)	18.5	15.0	16.1	15.7
Macroeconomic performance and policies				
Real GDP growth (%, 3-year average) [SRM]	1.5	2.1	2.2	3.7
Real GDP growth volatility (complex standard deviation) [SRM]	2.2	1.9	2.3	2.9
Consumer price inflation (%, 3-year average) [SRM]	5.9	1.8	2.2	2.3
Unemployment rate (%)	3.0	5.4	5.0	6.4
Public finances (general government)[c]				
Balance (% GDP, 3-year average) [SRM]	-3.2	-0.2	-0.8	-2.3
Primary balance (% GDP, 3-year average)	-2.7	1.1	0.8	-0.5
Interest payments (% revenue, 3-year average) [SRM]	1.0	3.8	3.7	4.6
Gross debt (% revenue, 3-year average)	144.1	113.5	138.1	134.0
Gross debt (% GDP, 3-year average) [SRM]	67.6	44.1	39.8	40.9
Net debt (% GDP, 3-year average)	55.3	37.5	27.9	35.9
FC debt (% gross debt, 3-year average) [SRM]	2.5	0.0	0.8	10.5
External finances[c]				
Current account balance (% GDP, 3-year average)	5.7	4.8	1.0	0.9
Current account balance + net FDI (% GDP, 3-year avg.) [SRM]	3.8	2.0	0.6	2.3
Commodity dependence (% CXR) [SRM]	10.2	14.3	15.0	11.5
Gross external debt (% GDP, 3-year average)	188.8	173.8	117.8	65.2
Net external debt (% GDP, 3-year average)	-14.3	15.3	-1.9	-7.9
Gross sovereign external debt (% GXD, 3-year average)	31.6	12.2	16.9	18.9
Sovereign net foreign assets (% GDP, 3-year average) [SRM]	-9.9	-4.9	4.9	11.8
External interest service (% CXR, 3-year average) [SRM]	2.3	7.3	4.5	2.4
Foreign-exchange reserves (months of CXP) [SRM]	1.6	1.4	2.9	4.5
Liquidity ratio	37.7	50.2	59.4	99.8

[a] Three-year averages are centred on this year. Fitch does not forecast indicators labelled 'latest', meaning data may be lagging.
[b] Composite of all six World Bank Worldwide Governance Indicators (see chart on the previous page).
[c] See Appendix 2: Data Notes and Conventions for details of data treatment for public finances and external finances.
Source: Fitch Ratings, Statistical Office, Ministry of Finance, IMF, World Bank, United Nations

Supplementary Information

BSI / MPI = a / 3. About the BSI and MPI: Fitch's bank systemic indicator (BSI) equates to a weighted average Viability Rating. The macro-prudential risk indicator (MPI) focuses on one potential source of financial stress, ranging from '3' – high potential vulnerability to financial stress over the medium term based on trends in credit expansion, equity and property prices and real exchange rates – to '1' – low likelihood. For more information, refer to Fitch's most recent Macro-Prudential Risk Monitor report.

Year cured from the most recent default or restructuring event, since 1980 = No event.

The de facto exchange-rate regime, based on the latest IMF Annual Report on Exchange Arrangements and Exchange Restrictions report, is 'Free floating (EMU)'.

Rating Factors

Strengths

- High value-added, diversified and open and wealthy economy.
- High governance standards, as measures by the World Bank Worldwide Governance Indicators (WBGIs) although slightly lagging behind the 'AAA' median.
- Status of a primary benchmark issuer for the eurozone, which affords Germany with ample financing flexibility.
- Long average maturity of debt, at around 7.5 years, which limits the effects of rising funding cost on the government's balance sheet.
- Healthy labour market, with the lowest unemployment rate among EU countries at 3% and one of the highest employment rates (81% of total population).
- Strong external position, as reflected in a record of high current account surpluses that resulted in a large positive net international investment position (73% of GDP estimated for 2022).

Weaknesses

- High dependence on Russian gas at the time of the outbreak of the war in Ukraine, which exposes Germany to risk of gas rationing and high cost of diversification of its energy sources.
- Ageing population. According to the European Commission's projections, Germany's working age population will shrink by 7.4% by 2030.

Rating	Sovereign
AAA	**Germany**
	Australia
	Denmark
	Luxembourg
	Netherlands
	Norway
	Singapore
	Sweden
	Switzerland
	United States of America
AA+	Austria
	Canada
	Finland
	New Zealand

Source: Fitch Ratings

Rating Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- **Public Finances:** Failure to stabilise gross general government debt over the medium term, for example due to a more severe and persistent macroeconomic shock or sustained expenditure pressures.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- The ratings are at the highest level on Fitch's scale and cannot be upgraded.

Forecast Summary

	2019	2020	2021	2022E	2023F	2024F
Macroeconomic indicators and policy						
Real GDP growth (%)	1.1	-3.7	2.6	1.8	0.1	1.4
Unemployment (%)	3.0	3.7	3.6	3.0	3.2	3.1
Consumer price inflation (annual average % change)	1.4	0.4	3.2	8.7	5.8	3.1
Policy interest rate (annual average, %)	0.0	0.0	0.0	0.7	3.7	3.8
General government balance (% GDP)	1.5	-4.3	-3.7	-2.6	-3.1	-2.6
Gross general government debt (% GDP)	58.8	68.1	68.8	66.8	67.2	67.1
EUR per USD (annual average)	0.9	0.9	0.8	1.0	0.9	1.0
Real private credit growth (%)	2.6	2.5	2.0	0.9	-3.0	-0.8
External finance						
Merchandise trade balance (USDtrn)	0.2	0.2	0.2	0.1	0.2	0.2
Current account balance (% GDP)	7.6	7.1	7.4	4.5	5.2	5.4
Gross external debt (% GDP)	166.7	203.7	181.9	195.2	189.4	185.9
Net external debt (% GDP)	-18.2	-19.5	-13.6	-14.7	-14.6	-14.9
External debt service (principal + interest, USDtrn)	0.7	0.8	0.9	0.8	0.9	0.9
Official international reserves including gold (USDtrn)	0.2	0.3	0.3	0.3	0.3	0.3
Gross external financing requirement (% int. reserves)	197.5	196.1	189.3	195.3	197.2	201.1
Real GDP growth (%)						
US	2.3	-3.4	5.7	2.1	1.0	0.8
China	6.0	2.2	8.4	3.0	5.2	4.8
Eurozone	1.3	-6.4	5.4	3.5	0.8	1.4
World	2.6	-3.3	6.1	2.7	2.0	2.4
Oil (USD/barrel)	64.1	43.3	70.6	98.6	85.0	75.0

Source: Fitch Ratings

Sources and Uses

Public Finances (General Government)

(EURbn)	2022	2023
Uses	**469.5**	**511.0**
Budget deficit	101.3	124.9
MLT amortisation	368.2	386.1
Domestic	354.3	371.6
External	13.9	14.6
Sources	**469.5**	**511.0**
Gross borrowing	410.1	493.9
Domestic	375.9	398.5
External	34.3	95.4
Privatisation	0.0	0.0
Other	59.3	17.1
Change in deposits (- = increase)	0.0	0.0

Source: Fitch Ratings

External Finances

(USDtrn)	2022	2023
Uses	**0.6**	**0.6**
Current account deficit	-0.2	-0.2
MLT amortisation	0.8	0.8
Sovereign	0.0	0.0
Non-sovereign	0.7	0.8
Sources	**0.6**	**0.6**
Gross MLT borrowing	1.0	1.0
Sovereign	0.0	0.0
Non-sovereign	1.0	1.0
FDI	-0.1	-0.1
Other	-0.4	-0.3
Change in FX reserves (- = increase)	0.0	0.0

Source: Fitch Ratings

Credit Developments

German Economy Is Likely to Avoid Recession in 2023

Germany has been the hardest hit of the major eurozone economies by the energy shock and supply-chain constraints. That shock has abated slightly, mostly due to falling energy prices and high gas storage levels across the European continent combined with warm winter, resulting in a smaller-than-expected decline in output. As a result, we raised our growth forecast for Germany in 2023 to 0.1% from -0.5% at the time of the previous review in October. Given the higher base and also our expectation for interest rates to stay higher for longer, we now expect the economy to expand by only 1.4% in 2024, down from 2.3% previously.

GDP stalled in 1Q23 (compared to our forecast of -0.3% qoq) following a 0.4% contraction in 4Q22. Private consumption drove the economic slowdown, as households were hit by a loss of purchasing power and consumed less energy. Easing supply-chain constraints helped sectors, such as automotive, as they worked through a larger-than-usual pipeline of orders. This helped compensate for a decline in energy-intensive sectors.

Between 2Q22 and 3Q22 the German economy came back to its pre-pandemic levels in real terms, slower than the eurozone economy, which reached this level already in 3Q21. The comparatively weaker economic performance in 2022 has opened a gap between the two, with the eurozone economy around 2.4pp higher in real terms compared to pre-pandemic levels than Germany as of end-2022. Under our baseline scenario, this gap will carry into 2023 although it will decline slightly, to 2 pp.

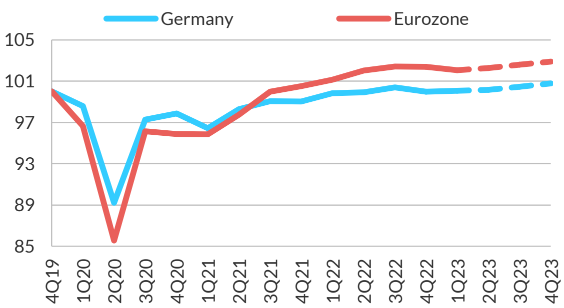
Inflation Remains High Despite a Fall in Energy Prices

Inflation eased somewhat after peaking at 10.6% in October 2022 (measured by Harmonised Index of Consumer Prices, HICP) but remained high, at 7.6% in April. The pass-through of lower wholesale energy prices into retail prices is difficult to estimate, as it depends on energy companies' pricing strategies as well as the price at which they bought gas for reserves over winter.

The change in HICP consumer basket weights at the beginning of 2023 is likely to contribute to a slower decline in the price index, as the weights of energy products have been substantially reduced. We estimate that the cost of housing, electricity, water, gas and other fuels declined by 11pp (to 22% of the basket in 2023, from 33% in 2022) due to lower utilisation of energy by households and the corporate sector. It is not yet known how the government's energy subsidies are affecting inflation metrics.

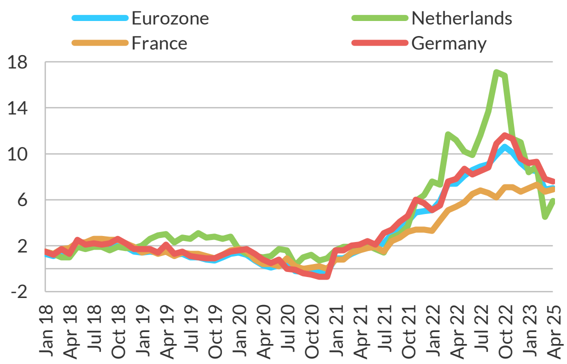
Core inflation continued increasing, reaching 5.6% in April from 3.9% the year earlier, in line with the eurozone. As the energy shock abates, we expect the headline inflation to be driven by second-round effects. Wage growth remains moderate for now, helped by the gradual expiry of the wage negotiation contracts and the government's one-off, tax-free inflation bonus (each employee can receive up to EUR3,000 in tax-free inflation bonus in both 2022 and 2023). However, recent demands voiced by some of the larger labour unions point to high wage pressures in the environment of a tight labour market.

Recovery of the German Economy Lags Eurozone
Real GDP, index (4Q19 = 100)



Source: Fitch Ratings, Eurostat

Inflation Comparable to Neighbours
% change, yoy



Source: Fitch Ratings, Eurostat

Labour Market Remains Very Tight

Germany's labour market remains one of the tightest in the eurozone. We expect the rate of unemployment to rise slightly due to a slowdown in job growth, to 3.2% in 2023 from 3.0% in 2022, but to stay significantly below 3.7% in 2020. Job creation remains robust, with employment rising on average by 2.3% in the final three quarters of 2022 (2Q22-4Q22) and employment barometers of the Ifo Institute pointing in favour of workforce expansion in the short term. The labour force is growing slowly and the federal government estimates that 70% of jobs created in 2022 were filled by immigrants.

The pressure on wages has so far been limited (at +2.4% in 4Q22), owing to a gradual expiry of the negotiated wage agreements and the government's relief measure, which allows the companies to grant up to EUR3,000 in one-off, tax-free inflation bonus in between October 2022 and December 2024. However, the current wage demands are high, with some unions asking for as much as a 10.5%–15% increase in base salary. Most recently, the union of Germany's postal service negotiated an 11.5% rise from April 2024, following a payment of a EUR3,000 inflation bonus before that date. In our view, Deutsche Post's wage agreement sets a precedent for large wage adjustments in other sectors of the economy, although they will be phased in gradually (in 2023, around 11 million wage settlements will expire, about a quarter of the country's workforce).

Fiscal Deficits Will Narrow Only Gradually Owing to Extraordinary Spending on Defence, Climate

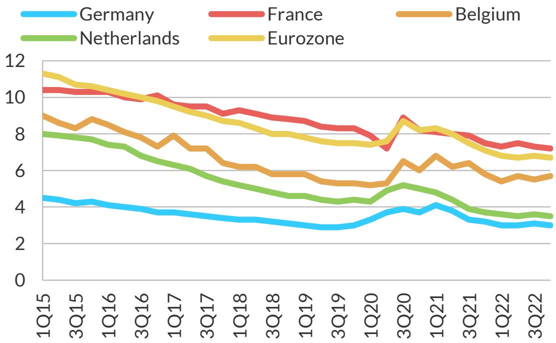
We expect Germany's general government fiscal balance to widen to 3.1% of GDP in 2023 from 2.6% in 2022, despite a sizeable energy support package and additional military expenditure announced in response to the outbreak of the war in Ukraine. Our forecast for the 2023 deficit is now lower than our expectation of 3.5% in our previous review, mostly due to lower energy prices, which we expect to translate into smaller spending on the energy package.

Following the outbreak of war in Ukraine, the German government announced a EUR200 billion spending programme (5.2% of GDP) to shield the economy from high energy prices and nationalisation of crucial energy trading companies, including Uniper SE. We previously estimated that only half of these funds would be utilised, given high energy price assumptions underlying the government's estimates (gas spot price from October 2022). We now expect less spending given the further fall in prices, which not only lowers the cost of subsidy but also the cost of supporting the energy trading companies. In 2022, EUR30 billion (0.8% of GDP) was spent.

We expect the fiscal deficit to narrow to 2.6% in 2024 (which is worse than a balanced budget of the 'AAA' rated median, but smaller than the eurozone's 3.3%-of-GDP deficit) and for it to continue falling to around 1% of GDP in the long term. Our forecast for gradual deficit reduction reflects the increasing cost of debt service and the uncertainty around the government's spending plans on defence and climate change. The German parliament has approved sizeable spending limits for the two expenditure items amounting to EUR100 billion (2.6% of GDP) for the armed forces and EUR177.5 (4.4% of GDP) for the Climate and Transformation Fund. However, spending execution under these funds has proved to be slow, for example, only EUR8 billion is now earmarked in 2023 for military expenses (no spending in 2022). Spending under the Climate and Transformation Fund in 2022 was only EUR5.2 billion (0.1% of GDP).

Labour Market Is Very Tight

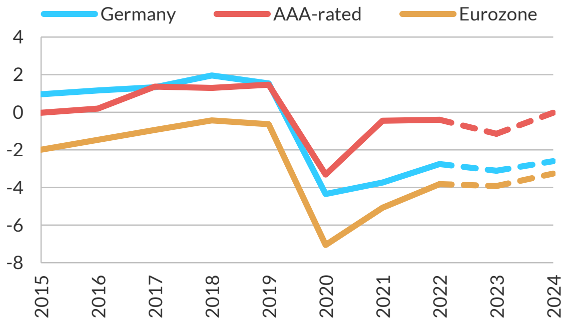
Seasonally adjusted unemployment rate (%)



Source: Fitch Ratings, Eurostat

Germany's Fiscal Balance Will Narrow Gradually, in line with Eurozone

Fiscal balance, % of GDP



Source: Fitch Ratings, Eurostat, IMF

Debt Burden to Stabilise in the Medium Term

Moderate fiscal deficits and tepid economic growth will lead to a stabilisation of the general government debt burden at around 67% of GDP in the medium term, around 8pp-of-GDP higher than the pre-pandemic level of 58.8%. This compares favourably to the eurozone average at about 106% of GDP, but it is significantly above the 'AAA' rated median at 40% of GDP. From 2024, government debt should start to decline, with the debt-to-GDP ratio falling to 66% by 2026. Debt could fall faster if the cash reserves accumulated during the pandemic are run down.

Rising debt-servicing costs will make the reduction of debt accumulated during the pandemic more challenging. Germany's bond yields have increased substantially since the start of the monetary tightening cycle, to 2.3% at the beginning of April from only 0.2% in February 2022. The long maturity of Germany's debt at 7.6 years means that the pass-through of the higher financing cost will be gradual. Notwithstanding the long average maturity of debt, we estimate that around 23% of total debt will mature in less than one year, the highest share of debt among the EU countries. We expect the interest payments-to-revenue ratio to increase to 1.4% in 2024 from 0.9% in 2022, above the 'AAA' rated median of 0.9%.

Banking Sector Outlook Is Negative, but Ratings Should Be Resilient to an Economic Slowdown

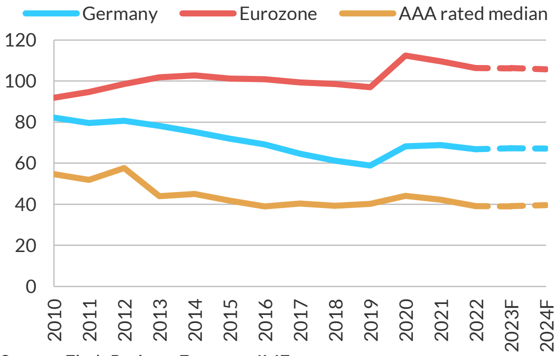
The German banking sector's 'a' Banking System Indicator reflects resilient asset quality and sound capitalisation and funding and liquidity. This should limit the impact on German banks' credit profiles from the energy crisis and economic slowdown. The latter is likely to damp business conditions for banks, as reflected in Fitch's deteriorating 2023 sector outlook. Fitch expects lower lending volumes and increasing loan impairment charges, resulting in overall lower sector profitability.

German banks' funding profiles benefit from a deep deposit base, which is the largest in Europe with about EUR4.6 trillion in total deposits and a sector loan-to-deposit ratio below 100%. A large portion of deposits are sticky retail deposits, which should also mitigate the impact of rising interest rates.

Risks stemming from the real estate market are mitigated by the very high share of fixed-rate mortgage contracts (typically for 10 years) and sound, affordability-focused underwriting standards. Fitch expects house prices to decline only slightly over the next 24 months, following a decade of sustained, robust price growth, which also limits the banks' potential losses. Were house prices to fall by 30% and unemployment were to rise to 10%, banks' losses would amount to 0.7% of the affected loan volume, according to the analysis by the Bundesbank.

Debt Burden Above AAA Median

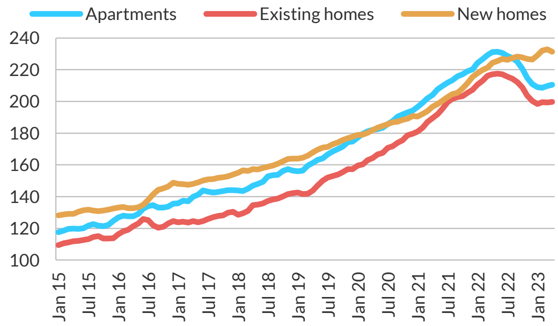
General government debt/GDP



Source: Fitch Ratings, Eurostat, IMF

Only Small Correction in Real Estate Prices

Index, August 2005 - 100



Source: Fitch Ratings, Europace AG

Germany's MPI score of '3' (high vulnerability) reflects the combination of a jump in the credit-to-GDP ratio during the pandemic and sustained strong increases in home prices. The drivers of the credit-to-GDP growth were similar to other developed markets: real credit growth was supported by monetary and fiscal policy measures and demand for liquidity from businesses, while GDP contracted sharply. We expect the credit-to-GDP ratio to have fallen in 2022 due to the economic slowdown. In our view, the sharp increase in credit ratios is unlikely to be a credible signal of elevated financial vulnerability in this case.

Public Debt Dynamics

Germany's GGGD-to-GDP ratio peaked at 68.8% of GDP in 2021 and we expect it to fall to 67.1% by the end of 2023, supported by strong nominal GDP growth. The German debt ratio is significantly above the 'AAA' median at around 40% of GDP. From 2024, government debt should decline gradually, with the debt-to-GDP ratio falling to 66% by 2026. Debt could fall faster if the cash reserves accumulated during the pandemic are run down.

Debt Dynamics - Fitch's Baseline Assumptions

	2020	2021	2022	2023	2024	2025	2026
Gross general government debt (% of GDP)	68.1	68.8	66.8	67.2	67.1	66.6	66.3
Primary balance (% of GDP)	-3.7	-3.2	-2.2	-2.7	-2.0	-1.5	-1.0
Real GDP growth (%)	-3.7	2.6	1.8	0.1	1.4	2.3	1.5
Average nominal effective interest rate (%)	1.1	0.9	0.7	0.7	1.0	1.3	1.5
EUR/USD (annual avg)	0.9	0.8	1.0	0.9	1.0	1.0	1.0
GDP deflator (%)	1.4	3.0	5.6	4.1	2.8	2.0	2.0
Stock-flow adjustments (% of GDP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

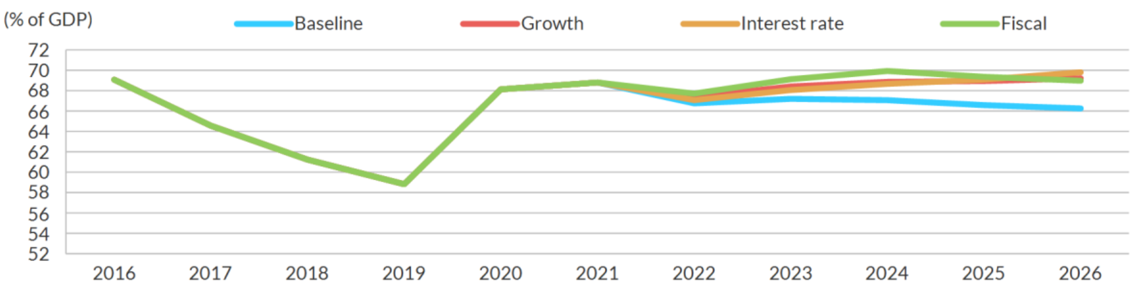
Source: Fitch Ratings

Debt Sensitivity Analysis: Fitch's Scenario Assumptions

Growth	GDP growth 0.9% lower (half standard deviation lower)
Interest rate	Marginal interest rate 250bp higher
Fiscal	Primary balance 1 pp of GDP lower in years 2023 - 2024

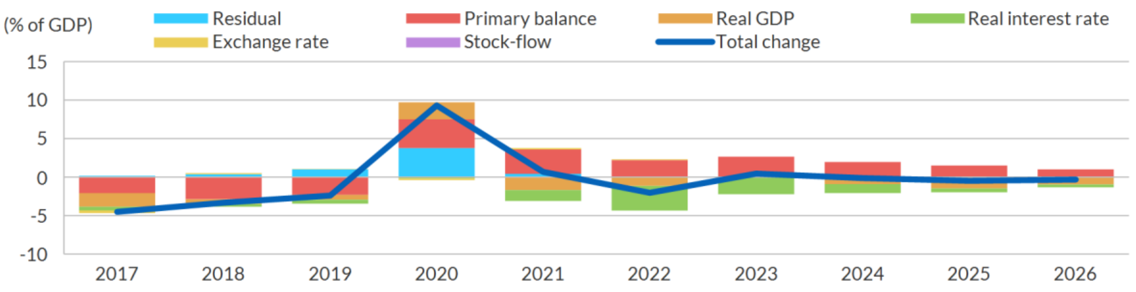
Source: Fitch Ratings

Sensitivity Analysis
Gross general government debt



Source: Fitch Ratings, Fitch Debt Dynamics Model

Baseline Scenario: Debt Creating Flows
Change in gross general government debt



Source: Fitch Ratings, Fitch Debt Dynamics Model

About the Public Debt Dynamics

Fitch uses stylised projections for a sovereign's gross general government debt/GDP ratio to illustrate the sustainability of its debt burden and its sensitivity to economic growth, the cost of borrowing, fiscal policy and the exchange rate.

Data Tables

General Government Summary

(% GDP)	2016	2017	2018	2019	2020	2021	2022E	2023F	2024F
Revenue	45.6	45.5	46.2	46.4	46.2	47.6	47.2	46.0	45.3
Expenditure	44.4	44.1	44.3	44.9	50.5	51.4	49.8	49.1	47.9
o/w interest payments	1.2	1.0	0.9	0.8	0.6	0.6	0.4	0.5	0.6
Interest payments (% revenue)	2.6	2.3	2.0	1.7	1.4	1.2	0.9	1.0	1.4
Primary balance	2.1	2.1	2.9	2.3	-3.7	-3.2	-2.2	-2.7	-2.0
Overall balance	1.2	1.3	1.9	1.5	-4.3	-3.7	-2.6	-3.1	-2.6
Gross government debt	69.1	64.6	61.2	58.8	68.1	68.8	66.8	67.2	67.1
% of government revenue	151.5	142.0	132.5	126.7	147.6	144.4	141.5	146.2	148.1
Domestic debt	-	33.0	32.4	30.6	37.1	40.2	37.9	37.1	36.1
External debt	-	31.6	28.8	28.2	31.0	28.6	28.8	30.1	30.9
Local currency	66.1	61.4	58.5	56.3	65.6	67.0	65.1	65.6	65.5
Foreign currency	3.0	3.1	2.7	2.5	2.5	1.8	1.7	1.6	1.6
Central government deposits	10.4	10.8	10.8	10.8	13.4	13.1	12.2	11.7	11.2
Net government debt	58.7	53.7	50.4	48.1	54.7	55.7	54.6	55.5	55.8
Financing		-1.3	-1.9	-1.5	4.3	3.7	2.6	3.1	2.6
Domestic borrowing		-	0.4	-0.8	5.8	5.1	0.6	0.7	0.5
External borrowing		-	-3.2	-0.2	4.9	-3.0	0.5	2.0	2.1
Other financing		-	0.8	-0.5	-6.4	1.7	1.5	0.4	0.0
Change in deposits (- = increase)		-0.9	-0.3	-0.3	-2.4	-0.4	0.0	0.0	0.0
Privatisation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		-	1.2	-0.2	-3.9	2.1	1.5	0.4	0.0

Source: Fitch Ratings, Ministry of Finance

Balance of Payments

(USDtrn)	2016	2017	2018	2019	2020	2021	2022E	2023F	2024F
Current account	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
% GDP	8.5	7.8	8.0	7.6	7.1	7.4	4.5	5.2	5.4
Goods	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Primary income	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Secondary income	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Capital account	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2
Direct investment	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
Portfolio investment	0.2	0.2	0.2	0.1	0.1	0.3	0.1	0.1	0.1
Derivatives	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Other investments	0.0	0.0	0.1	0.0	0.1	-0.2	-0.1	0.0	0.0
Net errors and omissions	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0	0.0
Change in reserves (+ = increase)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International reserves, incl. gold	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
Liquidity ratio (%)	45.1	45.4	39.5	42.2	42.5	34.9	37.7	36.1	36.3
Memo									
Current external receipts (CXR)	1.9	2.1	2.2	2.2	2.0	2.4	2.4	2.4	2.5
Current external payments (CXP)	1.6	1.8	1.9	1.9	1.7	2.1	2.2	2.2	2.3
CXR growth (%)	1.4	7.6	9.6	-3.3	-7.7	19.1	-0.3	2.3	3.4
CXP growth (%)	1.2	9.4	9.6	-2.7	-7.8	19.8	6.0	0.8	3.0
Gross external financing requirement	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.6
% International reserves	199.6	179.4	188.8	197.5	196.1	189.3	195.3	197.2	201.1
Net external borrowing	0.1	0.1	0.2	0.0	0.4	0.6	0.2	0.1	0.1

Source: Fitch Ratings, IMF

External Debt and Assets

(USDtrn)	2016	2017	2018	2019	2020	2021	2022E	2023F	2024F
Gross external debt	5.7	6.3	6.2	6.5	7.9	7.7	7.9	8.1	8.2
% GDP	165.0	171.5	156.0	166.7	203.7	181.9	195.2	189.4	185.9
% CXR	299.6	308.2	276.0	298.6	393.2	323.5	332.4	330.5	324.7
Short-term debt (% GXD)	45.6	45.1	44.8	45.1	47.9	50.8	49.5	48.7	48.0
By debtor									
Sovereign	2.0	2.2	2.2	2.1	2.5	2.5	2.5	2.5	2.4
Monetary authorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General government	2.0	2.2	2.2	2.1	2.5	2.5	2.5	2.5	2.4
Banks	2.2	2.3	2.1	2.4	2.9	2.7	2.7	2.8	2.9
Other sectors	1.5	1.8	1.9	2.0	2.5	2.6	2.7	2.7	2.8
Gross external assets (non-equity)	6.1	7.0	6.8	7.2	8.6	8.3	8.5	8.7	8.8
Sovereign	1.4	1.7	1.7	1.6	2.1	2.1	2.1	2.1	2.1
International reserves, incl. gold	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
Other sovereign assets	1.2	1.5	1.5	1.4	1.8	1.8	1.8	1.8	1.8
Banks	2.5	2.5	2.4	2.7	3.1	2.7	2.9	2.9	3.0
Other sectors	2.3	2.8	2.7	2.9	3.5	3.5	3.6	3.7	3.8
Net external debt	-0.4	-0.7	-0.6	-0.7	-0.8	-0.6	-0.6	-0.6	-0.7
% GDP	-12.7	-18.6	-16.2	-18.2	-19.5	-13.6	-14.7	-14.6	-14.9
Sovereign	0.7	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3
Banks	-0.3	-0.2	-0.3	-0.3	-0.2	-0.1	-0.1	-0.1	0.0
Other sectors	-0.8	-1.0	-0.8	-0.9	-1.0	-0.9	-0.9	-1.0	-1.0
International investment position									
Assets	8.7	10.2	10.1	10.8	12.9	12.9	13.3	13.5	13.8
Liabilities	7.4	8.5	8.0	8.5	10.2	10.1	10.3	10.5	10.7
Net	1.3	1.7	2.0	2.3	2.7	2.9	3.0	3.0	3.1
Net sovereign	-0.7	-0.5	-0.5	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3
% GDP	-19.3	-13.8	-12.2	-11.9	-11.6	-9.7	-10.8	-9.4	-7.8
External debt service (principal + interest)	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.9	0.9
Interest (% CXR)	3.3	2.7	2.4	2.2	2.1	1.6	2.6	2.6	2.6

Source: Fitch Ratings, central bank, IMF, World Bank

Full Rating Derivation

Long-Term Foreign-Currency Issuer Default Rating (SRM + QO)	AAA

Sovereign Rating Model						Applied Rating[d]		AA+
					Model Result and Predicted Rating			15.23 = AA+
Input Indicator	**Weight (%)**	**2021**	**2022**	**2023**	**Adjustment to Final Data**	**Final Data**	**Coefficient**	**Output (notches)**
Structural features								**11.75**
Governance indicators (percentile)	20.3	n.a.	89.4	n.a.	-	89.4	0.074	6.60
GDP per capita (USD)	13.3	n.a.	48,375	n.a.	Percentile	82.1	0.042	3.42
Nominal GDP (% world GDP)	13.2	n.a.	4.26	n.a.	Natural log	1.4	0.596	0.86
Most recent default or restructuring	5.0	n.a.	None	n.a.	Inverse 0-1[a]	0.0	-2.017	0
Broad money (% GDP)	1.4	n.a.	99.4	n.a.	Natural log	4.6	0.188	0.87
Macroeconomic performance, policies and prospects								**-0.87**
Real GDP growth volatility	5.1	n.a.	2.2	n.a.	Natural log	0.8	-0.815	-0.64
Consumer price inflation	2.9	3.2	8.7	5.8	3-yr avg.[b]	5.9	-0.058	-0.34
Real GDP growth	2.4	2.6	1.8	0.1	3-yr avg.	1.5	0.076	0.11
Public finances								**-1.69**
Gross general govt debt (% GDP)	8.3	68.8	66.7	67.2	3-yr avg.	67.6	-0.022	-1.48
General govt interest (% revenue)	4.5	1.2	0.9	1.0	3-yr avg.	1.0	-0.043	-0.04
General govt fiscal balance (% GDP)	2.6	-3.7	-2.7	-3.1	3-yr avg.	-3.2	0.048	-0.15
FC debt (% of total general govt debt)	2.4	2.5	2.6	2.4	3-yr avg.	2.5	-0.006	-0.02
External finances								**1.55**
Reserve currency (RC) flexibility	7.8	n.a.	3.1	n.a.	RC score 0 - 4.5[c]	3.1	0.549	1.71
SNFA (% of GDP)	7.3	-9.7	-9.7	-8.5	3-yr avg.	-9.3	0.011	-0.11
Commodity dependence	1.1	n.a.	10.2	n.a.	Latest	10.2	-0.004	-0.04
FX reserves (months of CXP)	1.8	n.a.	1.6	n.a.	n.a. if RC score> 0	0.0	0.036	0
External interest service (% CXR)	0.4	1.6	2.6	2.6	3-yr avg.	2.3	-0.006	-0.01
CAB + net FDI (% GDP)	0.1	4.6	3.1	3.7	3-yr avg.	3.8	0.001	0.00
Intercept Term (constant across all sovereigns)								**4.49**

[a] Inverse 0-1 scale, declining weight; [b] of truncated value (2%-50%); [c] Declining weight; [d] Sovereign rating committee can override SRM Predicted Rating if a marginal change in the Model Result leads to a notch change which is judged to be temporary or caused by a re-estimation of the SRM, a process that Fitch undertakes on at least an annual basis. Please refer to the Rating Action Commentary for further information when the Applied Rating differs from the Predicted Rating.
Note: This table contains data as at the date of the most recent rating action. There may be minor differences to data presented elsewhere in this report, which may have been updated where appropriate, for example in the event of subsequent data releases.
Source: Fitch Ratings

Qualitative Overlay (notch adjustment, range +/-3)	**+1**
Structural features	0
Macroeconomic outlook, policies and prospects	+1
Public finances	0
External finances	0

Source: Fitch Ratings

About the SRM and QO

Fitch's SRM is the agency's proprietary multiple regression rating model that employs 18 variables based on three-year centred averages, including one year of forecasts, to produce a score equivalent to a Long-Term Foreign-Currency Issuer Default Rating (LT FC IDR). Fitch's QO is a forward-looking qualitative framework designed to allow for adjustment to the SRM output to assign the final rating, reflecting factors within our criteria that are not fully quantifiable and/or not fully reflected in the SRM.

Supplementary Ratings

Local-Currency Rating

As Germany's Long-Term Foreign-Currency IDR is 'AAA', there is no capacity for upward notching of the Long-Term Local-Currency IDR, which is therefore also 'AAA'.

Country Ceiling

Fitch assigns a Country Ceiling of 'AAA' to Germany. The agency views the risk of the imposition of capital or exchange controls within the eurozone as low but not negligible. Fitch therefore imposes a maximum Country Ceiling uplift of six notches above the Long-Term Foreign-Currency IDR for eurozone member states. Germany's 'AAA' Country Ceiling reflects minimal risk of capital controls being imposed that would prevent or materially impede the private sector's ability to convert local currency into foreign currency and make transfers to non-resident creditors.

Full Rating History

	Foreign-Currency Rating			Local-Currency Rating			
Date	Long-Term	Short-Term	Outlook/Watch	Long-Term	Short-Term	Outlook/Watch	Country Ceiling
22 Jul 16	AAA	F1+	Stable	AAA	F1+	Stable	AAA
17 Jun 04	AAA	F1+	Stable	AAA	-	Stable	AAA
21 Sep 00	AAA	F1+	Stable	AAA	-	Stable	-
26 Oct 95	AAA	F1+	-	AAA	-	-	-
10 Aug 94	AAA	-	-	-	-	-	-

Source: Fitch Ratings

Appendix 1: Environmental, Social and Governance (ESG)

Credit Relevance Scores

General Issues	Key Sovereign Issues	SRM	QO	Score[a]
Environmental (E)				
GHG Emissions and Air Quality	Emissions and air pollution as a constraint on GDP growth	2	2	2
Energy Management	Energy resource management, including potential for 'stranded assets', affecting exports, government revenues and GDP	3	3	3
Water Resources and Management	Water resource availability and management as a constraint on GDP growth	2	2	2
Biodiversity and Natural Resource Management	Natural resource management, including potential for 'stranded assets', affecting exports, government revenues and GDP	3	2	3
Natural Disasters and Climate Change	Impact of adverse climate trends, and likelihood of and resilience to shocks	3	2	3
Social (S)				
Human Rights and Political Freedoms	Social stability, voice and accountability, regime legitimacy	4	2	4 +
Human Development, Health and Education	Impact of human development, health and education on GDP per capita and GDP growth	3	2	3
Employment and Income Equality	Impact of unemployment and income equality on GDP per capita, GDP growth and political and social stability	3	2	3
Public Safety and Security	Impact of public safety and security on business environment and/or economic performance	3	2	3
Demographic Trends	Population decline or aging, rapidly rising youth population; pensions sustainability	3	2	3
Governance (G)				
Political Stability and Rights	Political divisions and vested interests; geo-political risks including conflict, security threats and violence; policy capacity: unpredictable policy shifts or stasis	5	2	5 +
Rule of Law, Institutional & Regulatory Quality, Control of Corruption	Government effectiveness, control of corruption, rule of law, regulatory quality	5	2	5 +
International Relations and Trade	Trade agreements, membership of international organisations, bilateral relations; sanctions or other costly international actions	3	2	3
Creditor Rights	Willingness to service and repay debt	4	2	4 +
Data Quality and Transparency	Availability, limitations and reliability of economic and financial data, including transparency of public debt and contingent liabilities	3	2	3

Source: Fitch Ratings

About ESG Credit Relevance Scores

The scores signify the credit relevance of the respective E, S and G issues to the sovereign entity's credit rating, according to the following scale:

- 5 – Highly relevant to the rating, a key rating driver with a high weight.
- 4 – Relevant to the rating, a rating driver.
- 3 – Relevant, but only has an impact on the entity rating in combination with other factors.
- 2 – Irrelevant to the entity rating but relevant to the sector (sovereigns).
- 1 – Irrelevant to the entity rating and irrelevant to the sector (sovereigns)

The score for each 'General Issue' is comprised of a component SRM and QO score, and is simply the higher of the two. SRM scores are fixed across all sovereigns as the weights in the SRM are the same for all sovereigns; QO component scores vary across all sovereigns.

All scores of '4' or '5' result in a negative impact on the rating, unless indicated otherwise. Where a positive impact is occurring, the score of '4' or '5' is appended with a '+' symbol. Scores of '3', '2' and '1' do not have a direction of impact assigned.

Please refer to ESG Relevance Scores for Sovereigns for further information on the framework, including 'Sovereign Rating Criteria References' (which identify specific potentially related SRM variables and QO factors for each 'General Issue').

Credit-Relevant ESG Derivation

Germany has an ESG Relevance Score of '5[+]' for Political Stability and Rights as WBGI have the highest weight in Fitch's SRM and are therefore highly relevant to the rating and a key rating driver with a high weight. As Germany has a percentile rank above 50 for the respective governance indicator, this has a positive impact on the credit profile.

Germany has an ESG Relevance Score of '5[+]' for Rule of Law, Institutional & Regulatory Quality and Control of Corruption as WBGI have the highest weight in Fitch's SRM and are therefore highly relevant to the rating and are a key rating driver with a high weight. As Germany has a percentile rank above 50 for the respective governance indicators, this has a positive impact on the credit profile.

Germany has an ESG Relevance Score of '4[+]'for Human Rights and Political Freedoms as the Voice and Accountability pillar of the WBGI is relevant to the rating and a rating driver. As Germany has a percentile rank above 50 for the respective governance indicator, this has a positive impact on the credit profile.

Germany has an ESG Relevance Score of '4[+]' for Creditor Rights as willingness to service and repay debt is relevant to the rating and is a rating driver for Germany, as for all sovereigns As Germany has record of 20+ years without a restructuring of public debt, which is captured in our SRM variable, this has a positive impact on the credit profile.

Except for the matters discussed above, the highest level of ESG credit relevance, if present, is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or to the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit. www.fitchratings.com/esg

Appendix 2: Data Notes and Conventions

Acronyms

Acronyms used in the above table and elsewhere in report are: Gross Domestic Product (GDP), Current External Receipts (CXR), Current External Payments (CXP), Current Account Balance (CAB), Foreign Direct Investment (FDI), World Bank Worldwide Governance Indicators (WBGI), Sovereign Rating Model (SRM), Qualitative Overlay (QO). For a full list of indicator definitions, please refer to the most recent Sovereign Data Comparator.

Medians

Medians underlying the SRM relative to rating category chart on the Rating Summary page and as reported in the Peer Analysis table on page 4 are long-term historical medians. These are based on actual data since 2000 for all sovereign-year observations when the sovereign was in the respective rating category at year-end. Current year ratings and data are excluded.

Chart medians on page 3 are based on data for sovereigns in the respective rating category at the end of each year. Latest ratings are used for the current year and forecast period.

Notes for Germany

All data are on a calendar-year basis, which aligns with the domestic fiscal year for this sovereign.

Public finances data referenced in this report relate to the consolidated general government, as per our principal approach, unless specifically noted otherwise where cited.

The external balance sheet data referenced in this report are derived from the international investment position dataset, as per our principal approach.

The ratings above were unsolicited and have been provided by Fitch as a service to investors.