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.

Key Rating Drivers

Exceptional Credit Strength: Germany's 'AAA' rating reflects its diversified, high-value-added economy, strong institutions and record of sound public finances that have enabled a robust policy response to the pandemic shock. Germany's position as the primary benchmark issuer in the eurozone ensures significant financing flexibility. Its large, structural current account surplus (CAS) supports its net external creditor position.

Recovery Momentum Lost: The German economy grew by 2.9% in 2021, a weaker performance than we expected at the time of the last rating review in October 2021. The large export-oriented manufacturing sector mitigated the economic shock from the pandemic lockdowns relative to its EU peers in 2020. However, the global supply-chain disruptions have had a large adverse impact on the manufacturing sector since 3Q21. The level of GDP was still 1% below its pre-pandemic value at end-2021.

Downside Risks and High Inflation: Fitch Ratings' latest forecast is a gradual slowdown to 2.5% GDP growth in 2022 and 2.1% in 2023, in line with the overall eurozone trend. However, there are significant downside risks related to a more severe economic fallout of the war in Ukraine and the sanctions against Russia, for example, through a cut to gas supplies or further supply-chain disruptions, higher energy prices or shortages in raw materials. Inflation, annual HICP, increased to 7.6% in March 2022, driven by the surge in energy prices.

New Fiscal Stimulus in 2022: The 'traffic-light' coalition government formed in late 2021 has decided on fiscal stimulus packages to foster energy transition and to mitigate the economic impact of the war in Ukraine in parallel with the withdrawal of pandemic support measures. The stimulus will be around EUR35 billion in 2022, about 1% of GDP, following a smaller-than-expected budget deficit of 3.7% of GDP in 2021, helped by buoyant tax revenue.

Medium-term Fiscal Uncertainty: The government committed to maintaining sound fiscal policies and in particular to meet requirements of the constitutional debt brake. At the same time, it has announced large, multi-year public investments projects, including EUR200 billion on the green energy transition and EUR100 billion to improve military infrastructure. In light of the expenditure pressures and their off-budget financing, we expect the underlying general government deficit to decline only gradually and not to fall below 2% of GDP until 2025.

Stable Debt Ratio, Higher Yields: General government debt was 70% of GDP in 2021, compared with 69% in 2020 and the pre-pandemic low of 59% reached in 2019. The German public debt level is above the current 'AAA' median of 48% of GDP and, according to our baseline scenario, is unlikely to decline meaningfully until 2025. Longer yields have increased by almost 100bp since the last rating review.

Resilient External Position: Germany's strong external position was resilient to the global shocks in 2020 and 2021. The CAS widened to 7.5% of GDP in 2021, very close to its pre-pandemic value of 7.4% of GDP in 2019. We forecast a narrowing of the CAS to 5%-6% of GDP in 2022 and 2023, mainly due to the terms of trade shock triggered by the surge in imported energy prices.

Countercyclical Capital Buffer to Rise: The pandemic-driven state support to the economy ensured German banks' overall adequate performance in 2021, helping maintain the sector's solid 'a' asset quality and mid-'bbb' earnings characteristics. In response to accelerating home prices during the pandemic, the German banking regulator will raise the countercyclical capital buffer to 0.75% of banks' overall risk-weighted assets (RWAs) in February 2023.

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

	2021
GDP (USDbn)	4,213
Population (m)	83.6

Source: Fitch Ratings

Applicable Criteria

Sovereign Rating Criteria (April 2022)
Country Ceilings Criteria (July 2020)

Related Research

Fitch Affirms Germany at 'AAA'; Outlook Stable (April 2022)
Global Economic Outlook (March 2022)
Interactive Sovereign Rating Model
Fitch Fiscal Index - Analytical Tool
Click here for more Fitch Ratings content on Germany

Analysts

Greg Kiss
+49 69 768076 198
gergely.kiss@fitchratings.com

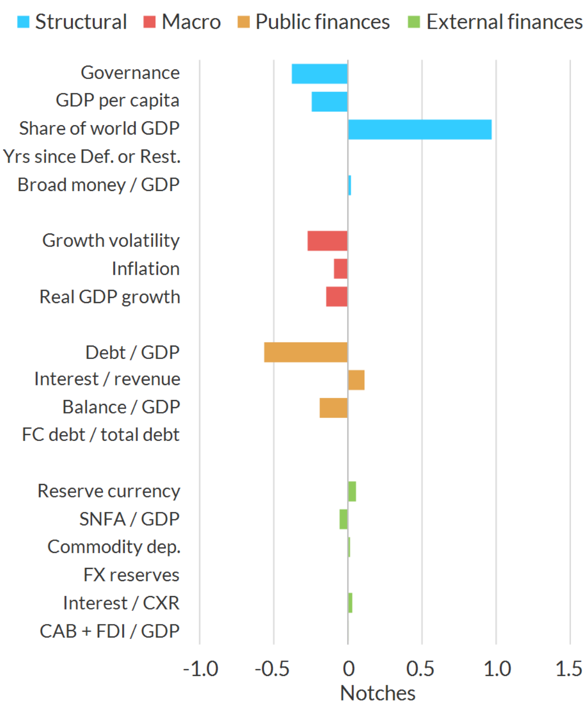
Hannah Dimpker
+49 69 768076 263
hannah.dimpker@fitchratings.com

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.

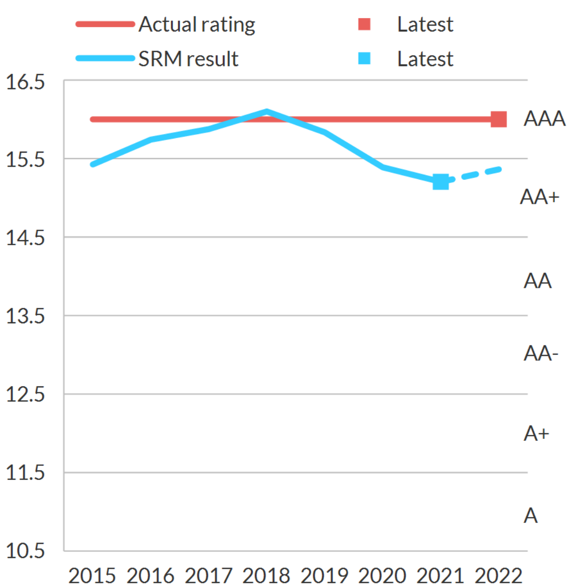
Macroeconomic outlook, policies and prospects: +1 notch, to offset the deterioration in the SRM output driven by volatility from the pandemic shock, including on GDP growth.

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



Rating Derivation History (last 10 reviews)

Review Date	LT FC IDR	SRM Result[ab]	QO S	M	PF	EF
29 Apr 22	AAA	AA+	0	+1	0	0
29 Oct 2021	AAA	AA+	0	+1	0	0
30 Apr 2021	AAA	AA+	0	+1	0	0
6 Nov 2020	AAA	AA+	0	+1	0	0
12 Jun 2020	AAA	AAA	0	0	0	0
17 Jan 2020	AAA	AAA	0	0	0	0
19 Jul 2019	AAA	AAA	0	0	0	0
25 Jan 2019	AAA	AAA	0	0	0	0
3 Aug 2018	AAA	AAA	0	0	0	0
9 Feb 2018	AAA	AAA	0	0	0	0

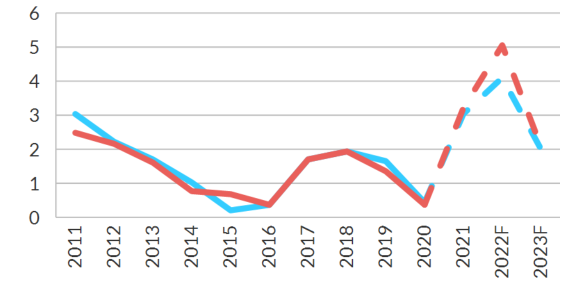
[a] The latest rating uses the SRM result for 2021 in the chart (this will roll forward to 2022 in July 2022).
[b] Historical SRM results in this table may differ from the chart, which is based on our latest data, due to data revisions.
Abbreviations: LT FC IDR = Long-Term Foreign-Currency Issuer Default Rating; SRM = Sovereign Rating Model; QO = Qualitative Overlay
Source: Fitch Ratings

Peer Analysis

Germany — AAA Median

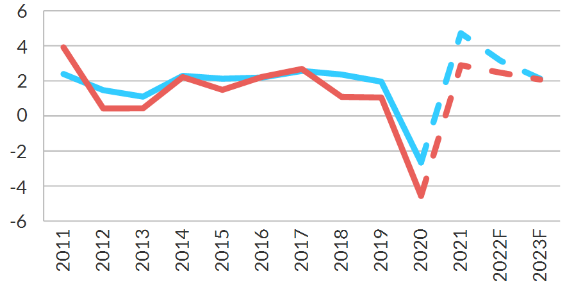
Consumer Price Inflation

(annual avg, %)



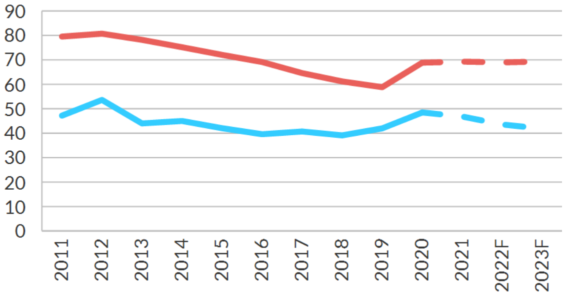
Real GDP Growth

(%)



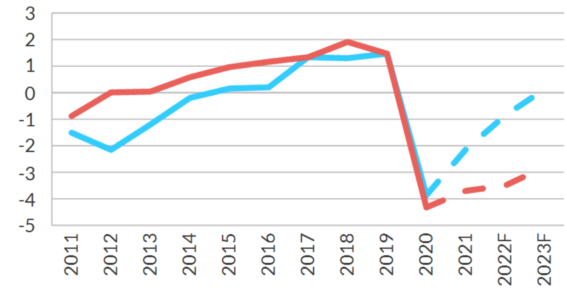
Gross General Government Debt

(% GDP)



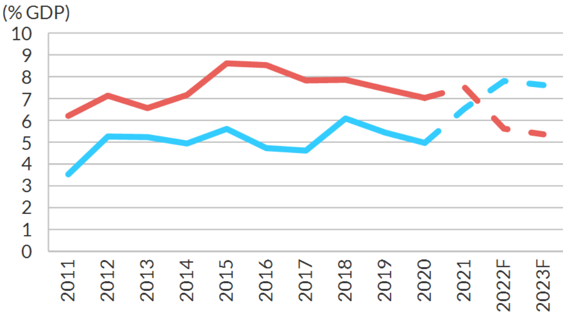
General Government Balance

(% GDP)



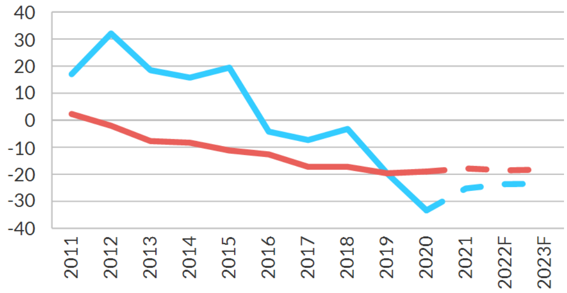
Current Account Balance

(% GDP)



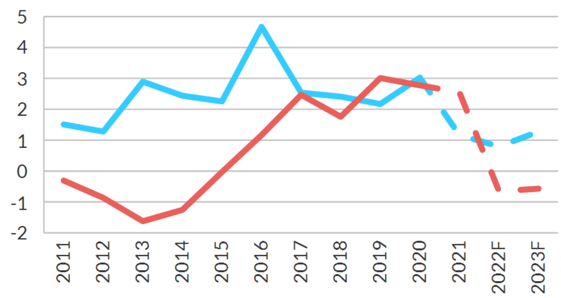
Net External Debt

(% GDP)



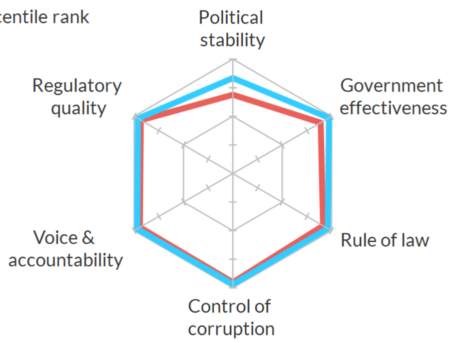
Real Private-Sector Credit Growth

(%)



Governance Indicators

Percentile rank



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

Peer Analysis

2021[a]	Germany	AAA median	AA median	A median
Structural features				
GDP per capita (USD) [SRM]	50,391	66,095	46,681	27,287
Share in world GDP (%) [SRM]	4.5	0.0	0.0	0.0
Composite governance indicator (percentile, latest) [SRM][b]	88.6	93.8	84.1	75.6
Human development index (percentile, latest)	97.3	95.4	88.7	81.9
Broad money (% GDP) [SRM]	102.5	91.7	97.6	88.2
Private credit (% GDP, 3-year average)	84.4	123.7	101.8	72.5
Dollarisation ratio (% bank deposits, latest)	-	15.4	12.3	10.3
Bank system capital ratio (% assets, latest)	18.6	14.8	15.9	15.3
Macroeconomic performance and policies				
Real GDP growth (%, 3-year average) [SRM]	0.3	2.2	2.3	3.8
Real GDP growth volatility (complex standard deviation) [SRM]	2.6	1.9	2.2	3.1
Consumer price inflation (%, 3-year average) [SRM]	2.9	1.8	2.2	2.3
Unemployment rate (%)	3.5	5.4	5.1	6.3
Public finances (general government)[c]				
Balance (% GDP, 3-year average) [SRM]	-3.8	-0.1	-0.4	-2.1
Primary balance (% GDP, 3-year average)	-3.4	1.3	1.1	-0.4
Interest payments (% revenue, 3-year average) [SRM]	1.0	3.6	3.8	4.7
Gross debt (% revenue, 3-year average)	148.1	115.0	134.8	137.0
Gross debt (% GDP, 3-year average) [SRM]	69.0	43.6	39.7	42.8
Net debt (% GDP, 3-year average)	56.1	36.6	26.9	38.7
FC debt (% gross debt, 3-year average) [SRM]	0.6	0.0	1.0	10.8
External finances[c]				
Current account balance (% GDP, 3-year average)	6.7	4.6	1.6	0.8
Current account balance + net FDI (% GDP, 3-year avg.) [SRM]	6.8	2.3	0.6	2.2
Commodity dependence (% CXR) [SRM]	10.3	13.8	14.9	11.5
Gross external debt (% GDP, 3-year average)	192.8	169.1	114.3	65.2
Net external debt (% GDP, 3-year average)	-18.5	6.5	-9.4	-6.3
Gross sovereign external debt (% GXD, 3-year average)	34.9	12.2	16.2	17.5
Sovereign net foreign assets (% GDP, 3-year average) [SRM]	-7.7	-2.8	4.9	11.7
External interest service (% CXR, 3-year average) [SRM]	2.6	7.2	4.1	2.4
Foreign-exchange reserves (months of CXP) [SRM]	2.4	1.5	2.9	4.4
Liquidity ratio	34.9	49.5	57.5	107.6

[a] 3-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

- Germany has a high-value-added, diversified and open economy with a competitive manufacturing sector, and effective political and social institutions.
- Public debt management in Germany is sound and the sovereign's modern debt repayment record is unblemished.
- The interest payment/revenue ratio is only 1%, well below the 'AAA' median.
- Germany is the primary benchmark issuer for the eurozone, which affords it significant financing flexibility following a prolonged period of extremely low yields across the curve.
- Large CAS, exceeding the peer median, reflect Germany's competitiveness and high income from foreign assets. Germany has a strong international investment position.

Weaknesses

- Governance indicators are below the rating peer median.
- Germany has an MPI score of '3' (high vulnerability), the only developed market according to the latest Macroprudential Risk Monitor (August 2021).

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

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 (GGGD) over the medium term, for example, due to persistent expenditure pressures or growth under-performance.

Structural: A material increase in fiscal risk-sharing at the EU level leading to a further marked increase in GGGD/GDP, without offsetting benefits from greater eurozone resilience and institutional strength. As a core member of the monetary union, Germany is financially exposed to the broader liabilities of the eurozone.

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

	2018	2019	2020	2021	2022F	2023F
Macroeconomic indicators and policy						
Real GDP growth (%)	1.1	1.1	-4.6	2.9	2.5	2.1
Unemployment (%)	3.4	3.2	3.9	3.5	3.1	2.9
Consumer price inflation (annual average % change)	1.9	1.4	0.4	3.2	5.1	2.1
Policy interest rate (annual average, %)	0.0	0.0	0.0	0.0	0.0	0.2
General government balance (% GDP)	1.9	1.5	-4.3	-3.7	-3.5	-2.8
Gross general government debt (% GDP)	61.2	58.8	68.9	69.3	69.0	69.3
EUR per USD (annual average)	0.8	0.9	0.9	0.8	0.9	0.9
Real private credit growth (%)	1.8	3.0	2.8	2.5	-0.7	-0.6
External finance						
Merchandise trade balance (USDbn)	266.4	242.5	218.1	296.8	218.3	213.9
Current account balance (% GDP)	7.9	7.4	7.0	7.5	5.6	5.4
Gross external debt (% GDP)	153.5	163.5	204.1	182.3	192.0	192.3
Net external debt (% GDP)	-17.3	-19.6	-19.0	-17.9	-18.5	-18.3
External debt service (principal + interest, USDbn)	748.1	715.2	733.3	860.5	840.1	896.2
Official international reserves including gold (USDbn)	198.0	224.0	268.4	364.5	386.7	406.5
Gross external financing requirement (% int. reserves)	190.9	191.2	187.3	182.0	149.8	156.0
Real GDP growth (%)						
US	2.9	2.3	-3.4	5.7	3.5	1.6
China	6.7	6.0	2.2	8.1	4.8	5.1
Eurozone	1.9	1.3	-6.4	5.3	3.0	2.3
World	3.2	2.6	-3.3	5.9	3.5	2.8
Oil (USD/barrel)	71.5	64.1	43.3	70.6	100.0	80.0

Source: Fitch Ratings

Sources and Uses

Public Finances (General Government)

(EURbn)	2022	2023
Uses	**495.7**	**488.9**
Budget deficit	129.9	107.7
MLT amortisation	365.8	381.1
Domestic	352.0	366.8
External	13.8	14.4
Sources	**495.7**	**488.9**
Gross borrowing	458.5	488.9
Domestic	444.7	474.5
External	13.8	14.4
Privatisation	0.0	0.0
Other	37.1	-0.0
Change in deposits (- = increase)	0.0	-0.0

Source: Fitch Ratings

External Finances

(USDbn)	2022	2023
Uses	**546.1**	**603.5**
Current account deficit	-232.6	-229.1
MLT amortisation	778.7	832.6
Sovereign	15.3	15.9
Non-sovereign	763.4	816.7
Sources	**546.1**	**603.5**
Gross MLT borrowing	1,179.4	1,233.3
Sovereign	226.3	226.9
Non-sovereign	953.1	1,006.4
FDI	1.1	1.1
Other	-628.6	-628.6
Change in FX reserves (- = increase)	-5.8	-2.3

Source: Fitch Ratings

Credit Developments

Recovery Momentum Lost, Downside Risks

The growth rate of the German economy was 2.9% in 2021, a weaker performance than expected at the time of the last rating review in October 2021. The global supply-chain disruptions slowed significantly the post-pandemic recovery of the German economy in 2H21. The large German manufacturing sector initially mitigated the economic shock from the pandemic lockdowns with the country being less affected than its EU peers.

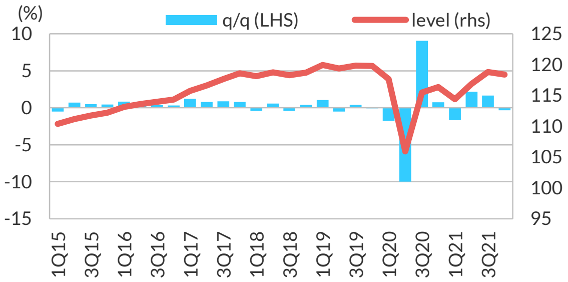
However, more recently it led to a larger impact from the supply-chain disruptions. Quarterly GDP growth was 1.7% in 3Q21 but the economy contracted by 0.3% in 4Q21, leaving GDP is 1% below its pre-pandemic value. In both quarters the German economy underperformed the eurozone average. Furthermore, the economic weakness prevailed in 1Q22 despite the reopening of the economy. GDP growth for 1Q22 is estimated to be 0.2%, the same as in the eurozone.

Fitch's latest forecast, in the March 2022 Global Economic Outlook, is for a gradual slowdown to 2.5% GDP growth in 2022 and 2.1% in 2023, in line with the overall eurozone trend. However, there are significant risks related to the more severe economic fallout of the war in Ukraine and the sanctions against Russia, for example, through a cut to gas supplies or further supply=chain disruptions, higher energy prices or shortages in raw materials.

Germany is particularly exposed to a potential sudden cut to Russian energy supplies as Russian oil and gas have an estimated 24% share in total energy consumption. Net energy imports were EUR55 billion in 2020, the highest among EU members, equivalent to 65% of total energy consumption. The Bundesbank estimates that in a severe scenario of energy rationing the German economy could contract by 2% in 2022 and the level of GDP would be almost 5pp lower than in the ECB's baseline forecast in March 2022.

Uneven Recovery

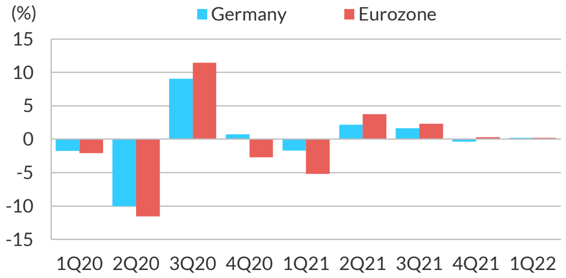
GDP level and q/q dynamics



Source: Fitch Ratings, Haver

Momentum Lost

q/q GDP growth



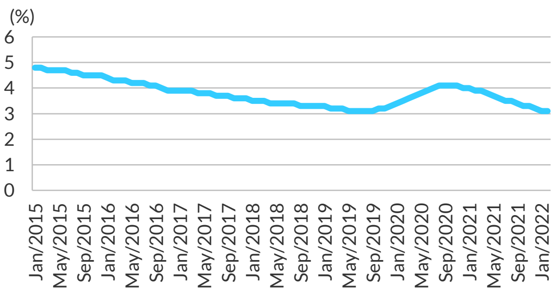
Source: Fitch Ratings, Haver

Sound Fundamentals

Notwithstanding the energy- and sanction-related risks, domestic fundamentals are sound and could support growth as pandemic-related restrictions were lifted in 1Q22. In particular, the pent-up demand and high household savings rate, which peaked above 20% of disposable income, could translate into higher consumption growth. The new wave of green and digital investments could also boost growth potential over the forecast horizon.

Resilient Labour Market

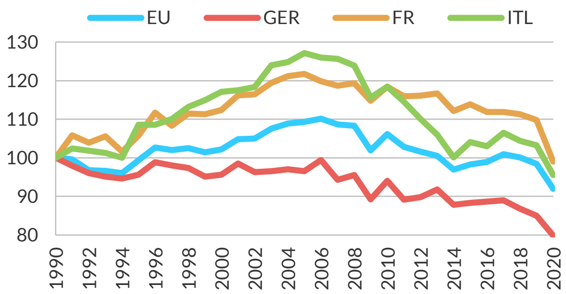
Unemployment rate



Source: Fitch Ratings, Haver

Total Energy

1990=100



Source: Fitch Ratings, Eurostat

The labour market was resilient to the pandemic shock and also more recently to the global supply-chain disruptions. The unemployment rate has continued its declining trend in 2H21, despite the economic weakness. The unemployment rate was 3.1% in January and February 2022, the same as the pre-pandemic low in 2019.

The German economy has improved its energy efficiency significantly over the past three decades. Total annual energy consumption has declined by more than 10% between 1990 and 2019. This was a better performance than the EU average and also the best performance among the three largest EU economies. Furthermore, the real GDP has increased by more than 50% over this period, thus the energy intensity (output/energy) improved by more than 60%.

Very High Inflation

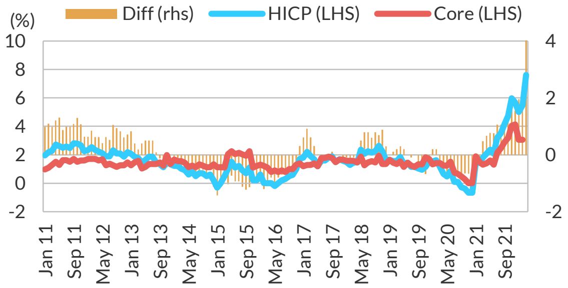
Inflation has continued to increase since the last rating review and the HICP index reached 7.6% in March and 7.8% in April according to the flash estimate. These are the highest inflation figures in Germany since 1981. The sharp inflation increase is driven by the surge in energy prices. Core inflation, HICP excluding energy and unprocessed food, was 3.3% in March 2022. The gap between HICP and core indices widened to more than 4pp, the highest since the launch of the euro.

As the core inflation also exceeds the ECB's 2% HICP target and has been well above its pre-pandemic average of 1.4% for a year, the underlying inflation pressure has also become more widespread in the German economy. The German public has historically had a strong aversion to high inflation, so a prolonged period of high inflation could lead to more adverse economic effects than in most other eurozone members through weakening confidence.

The GDP deflator has followed a similar trend to the inflation indicators in recent quarters and reached a record 4.9% in 4Q21. While the HICP in Germany is practically the same as the eurozone average, the GDP deflator is almost 2pp higher than the eurozone average of 3.1%. The high GDP deflator partly reflects the strong price increases in the construction sector, while the surge in imported energy prices has a dampening effect on the GDP deflator, through the deterioration in the term of trade.

German Inflation

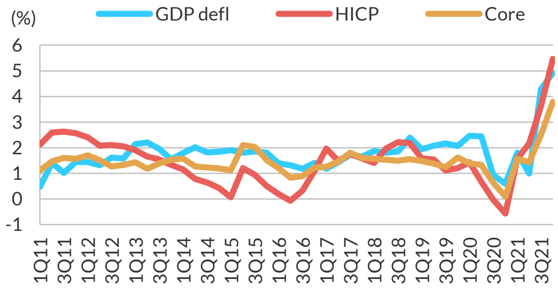
yoy



Source: Fitch Ratings, Haver

Price Trends

GDP, HICP, core: yoy



Source: Fitch Ratings, Haver

New Fiscal Stimulus in 2022

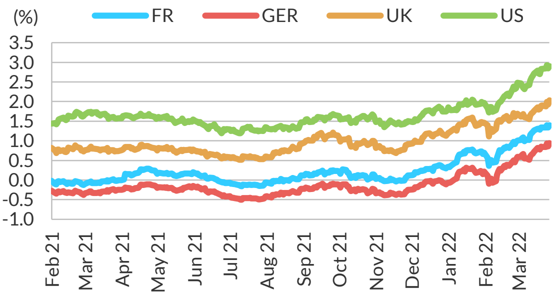
The traffic-light coalition government formed in late 2021 has decided on fiscal stimulus packages to foster energy transition and mitigate the economic impact of the war in Ukraine parallel with the withdrawal of the pandemic support measures. The fiscal stimulus includes in the short run compensation for higher energy prices and tax cuts. The stimulus will be around EUR35 billion in 2022, about 1% of GDP, following a smaller-than-expected budget deficit of 3.7% of GDP in 2021, helped by buoyant tax revenue. Notwithstanding the new stimulus and the economic weakness, we expect a modest decline in the budget deficit to 3.5% of GDP in 2022, as the generous pandemic-related support schemes have been terminated.

Medium-Term Uncertainty, Less Transparency

The fiscal stance beyond this year is more uncertain. The government committed itself to maintaining sound fiscal policies and in particular to meet requirements of the constitutional debt brake, a very small structural budget deficit (0.35% of GDP) at the central government level over the medium term. At the same time, the government has announced large, multi-year public investments projects, including EUR200 billion on the green energy transition and EUR100 billion to improve the military infrastructure. However, a large part of this will come from extra-budgetary funds, which will not be reflected in the annual deficits according to recent changes to public sector accounting. In our view, these changes will erode the transparency of the German public finance framework and the debt brake rule will be less binding for the underlying fiscal stance in the coming years.

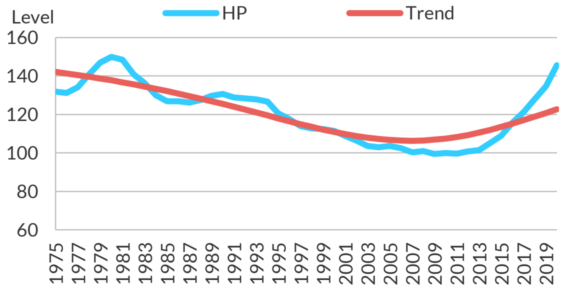
In light of the expenditure pressures and their off-budget financing, Fitch expects the underlying general government deficit, on an ESA basis, to decline only gradually and not to fall below 2% of GDP until 2025. The recently published Stability programme of the government has a similar path for the ESA budget deficit: 2% in 2023 and 1.75% in 2024.

Long yields
G7



Source: Fitch Ratings, Haver

Overvalued Housing Market
House Prices



Source: Fitch Ratings

Higher Yields, Resilient External Position

Longer yields have increased by almost 100bp since the last rating review and the 10-year yield was close to 0.9% at end-April 2022. However, the higher yields will only lead to very gradual increase in interest costs, given the almost seven-year average maturity of central government debt.

Germany's strong external position was resilient to the global shocks in 2020 and 2021. The CAS widened to 7.5% of GDP in 2021, very close to its pre-pandemic value of 7.4% of GDP in 2019. We forecast a narrowing of the CAS to 5%-6% of GDP in 2022 and 2023, due mainly to the terms of trade shock triggered by the surge in imported energy prices.

Sound Banks, Macroprudential Risks

The pandemic-driven state support to the economy has ensured German banks' overall adequate performance in 2021, helping to maintain the banking sector's solid 'a' asset quality and mid-'bbb' earnings characteristics. The banks have benefitted from an extension of some state support measures until end-2Q22 to accommodate the resurgence of the pandemic at the beginning of the year. However, modest profitability will remain banks' main weakness compared with other western European banking sectors.

We expect no material direct asset-quality impact from the war in Ukraine in the short term, as the German financial sector has limited direct exposure to Russia. We expect loan quality to deteriorate only modestly, with an expected non-performing loan ratio unlikely to exceed 2% in the medium term, subject to second-order effects that are difficult to predict. Pressure on profitability and asset quality could arise from spill-over effects of the sanctions on Russia, if these severely and durably derail Germany's post-pandemic economic recovery, resulting in lower revenue and higher credit losses than in our base case.

In response to accelerating home prices during the pandemic, the German banking regulator will raise the countercyclical capital buffer to 0.75% of banks' overall RWAs in February 2023 from 0% and activate a supplemental systemic risk buffer of 200bp on residential mortgage RWAs. The sector's sound capitalisation should enable banks to meet this requirement almost entirely with existing excess capital. We believe that the strong increase of about 140bp in interest rates on new mortgage loans in Germany since early 2022 partly reflects the new buffer requirements. However, this is also likely to weigh on demand for mortgage loans, on which banks have been highly reliant to stabilise their earnings in the past few years.

Germany's MPI score of '3' (high vulnerability) reflects the combination of a jump in the credit/GDP ratio in 2020 and sustained strong increases in home prices. The drivers of the credit/GDP move were similar to other developed markets: real credit growth was supported by monetary and fiscal policy measures and demand for liquidity from business, while GDP contracted sharply. We expect the credit/GDP ratio to fall in 2021 due to the economic rebound. The recent increase in credit ratios is therefore unlikely to be a robust signal of elevated financial vulnerability.

The strong home price rises have been prolonged and Fitch's macroprudential indicator shows that the real house price level is 19% above its long-term trend. House price rises were driven by large demand and supply imbalances, which are likely to persist in the next few years due to limited construction activity.

Public Debt Dynamics

General government debt was 70% of GDP in 2021, compared with 69% in 2020 and a pre-pandemic low of 59% reached in 2019. The German public debt level is above the current 'AAA' median of 48% of GDP and, according to our baseline scenario, is unlikely to decline meaningfully until 2025. Although the deficit will continue to shrink, GDP growth is expected to slow towards 1% medium term potential rate and inflation rate falls back after the temporary spike, slightly below the ECB's revised target of 2%.

Debt Dynamics – Fitch's Baseline Assumptions

	2019	2020	2021	2022	2023	2024	2025
Gross general government debt (% of GDP)	58.8	68.9	69.3	69.0	69.3	69.4	69.4
Primary balance (% of GDP)	2.3	-3.7	-3.2	-3.1	-2.5	-2.0	-1.5
Real GDP growth (%)	1.1	-4.6	2.9	2.5	2.1	1.5	1.0
Average nominal effective interest rate (%)	1.3	1.0	0.7	0.5	0.4	0.5	0.6
EUR/USD (annual average)	0.9	0.9	0.8	0.9	0.9	0.9	0.9
GDP deflator (%)	2.1	1.2	3.0	1.7	1.6	1.8	1.8
Stock-flow adjustments (% of GDP)	0.0	0.0	-0.6	0.9	0.0	0.0	0.0

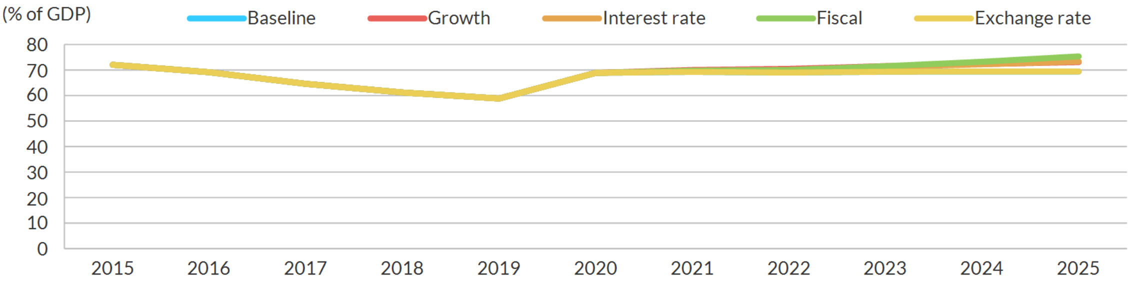
Source: Fitch Ratings

Debt Sensitivity Analysis: Fitch's Scenario Assumptions

Growth	GDP growth 1.6% lower (half standard deviation lower)
Interest rate	Marginal interest rate 250bp higher
Fiscal	Stable primary balance deficit of 3% of GDP starting 2022

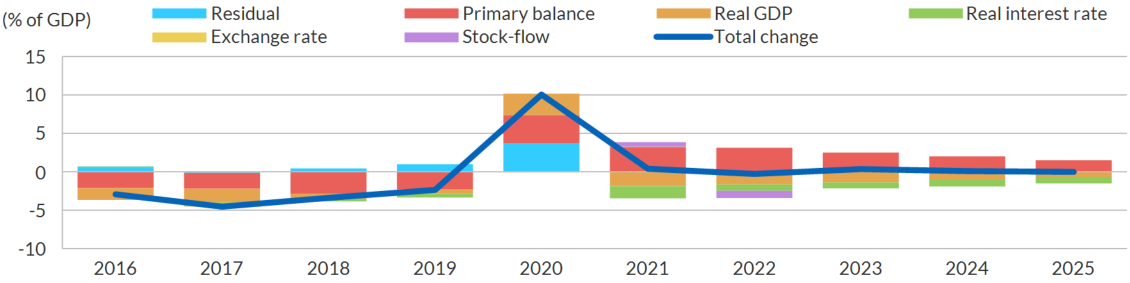
Source: Fitch Ratings

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)	2015	2016	2017	2018	2019	2020	2021	2022F	2023F
Revenue	45.1	45.6	45.5	46.2	46.4	46.6	46.8	46.4	46.6
Expenditure	44.2	44.4	44.1	44.3	44.9	51.0	50.5	49.9	49.4
o/w interest payments	1.4	1.2	1.0	0.9	0.8	0.6	0.5	0.4	0.3
Interest payments (% revenue)	3.1	2.6	2.3	2.0	1.7	1.3	1.0	0.8	0.6
Primary balance	2.2	2.1	2.1	2.8	2.3	-3.7	-3.2	-3.1	-2.5
Overall balance	1.0	1.2	1.3	1.9	1.5	-4.3	-3.7	-3.5	-2.8
Gross government debt	72.0	69.1	64.6	61.2	58.8	68.9	69.3	69.0	69.3
% of government revenue	159.6	151.6	142.1	132.5	126.8	147.7	148.0	148.7	148.8
Domestic debt	71.8	68.9	64.3	61.0	58.6	68.6	69.0	68.8	69.1
External debt	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Local currency	71.6	68.6	64.1	60.7	58.4	68.4	68.9	68.6	69.0
Foreign currency	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Central government deposits	10.2	10.4	10.8	10.8	10.8	13.6	12.8	12.3	11.9
Net government debt	61.9	58.7	53.7	50.3	48.0	55.3	56.4	56.7	57.5
Financing		-1.2	-1.3	-1.9	-1.5	4.3	3.7	3.5	2.8
Domestic borrowing		-0.5	-1.5	-1.5	-0.5	8.0	4.3	2.5	2.8
External borrowing		-0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0	0.0
Other financing		-0.7	0.2	-0.5	-1.0	-3.6	-0.6	1.0	-0.0
Change in deposits (- = increase)		-0.6	-0.9	-0.3	-0.3	-2.4	0.0	0.0	-0.0
Privatisation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other		-0.1	1.1	-0.1	-0.7	-1.2	-0.6	1.0	-0.0

Source: Fitch Ratings, Ministry of Finance

Balance of Payments

(USDbn)	2015	2016	2017	2018	2019	2020	2021	2022F	2023F
Current account	288.7	295.2	288.6	312.8	289.6	269.1	317.1	232.6	229.1
% GDP	8.6	8.5	7.8	7.9	7.4	7.0	7.5	5.6	5.4
Goods	275.6	279.8	288.0	266.4	242.5	218.1	296.8	218.3	213.9
Services	-20.5	-23.3	-27.4	-20.4	-23.0	4.0	4.8	5.7	6.7
Primary income	76.8	83.8	85.2	124.2	124.4	106.1	67.5	60.5	60.5
Secondary income	-43.2	-45.1	-57.2	-57.4	-54.3	-59.1	-52.0	-52.0	-52.0
Capital account	0.0	2.4	-3.5	1.0	-0.6	-5.6	-5.6	-5.6	-5.6
Financial account	259.4	288.8	312.6	292.2	227.8	268.0	316.5	232.0	228.5
Direct investment	68.4	47.1	36.3	28.1	85.5	-1.1	-1.1	-1.1	-1.1
Portfolio investment	210.0	220.1	232.2	180.4	81.2	56.8	30.8	30.8	30.8
Derivatives	33.8	31.6	12.7	26.6	27.6	111.7	111.7	111.7	111.7
Other investments	-50.4	-11.9	32.9	56.6	34.1	100.7	174.8	84.8	84.8
Net errors and omissions	-29.3	-8.8	27.5	-21.6	-61.2	4.5	5.0	5.0	5.0
Change in reserves (+ = increase)	-2.4	1.9	-1.5	0.5	-0.6	-0.1	0.3	5.8	2.3
International reserves, incl. gold	174.0	185.5	200.0	198.0	224.0	268.4	364.5	386.7	406.5
Liquidity ratio (%)	40.7	45.1	45.4	39.5	43.0	43.2	34.9	35.1	34.4
Memo									
Current external receipts (CXR)	1,880.4	1,906.4	2,051.4	2,239.0	2,155.9	1,980.1	2,106.8	2,130.5	2,191.9
Current external payments (CXP)	1,591.7	1,611.2	1,762.8	1,926.2	1,866.3	1,711.0	1,789.7	1,897.9	1,962.8
CXR growth (%)	-10.9	1.4	7.6	9.1	-3.7	-8.2	6.4	1.1	2.9
CXP growth (%)	-13.1	1.2	9.4	9.3	-3.1	-8.3	4.6	6.0	3.4
Gross external financing requirement	427.1	347.3	332.7	381.7	378.6	419.6	488.6	546.1	603.5
% International reserves	221.6	199.6	179.4	190.9	191.2	187.3	182.0	149.8	156.0
Net external borrowing	-20.9	126.5	81.1	145.4	2.9	403.0	325.7	365.7	365.7

Source: Fitch Ratings, IMF

External Debt and Assets

(USDbn)	2015	2016	2017	2018	2019	2020	2021	2022F	2023F
Gross external debt	5,728.7	5,711.6	6,323.3	6,109.1	6,366.9	7,815.2	7,679.9	7,949.2	8,218.5
% GDP	170.9	165.0	171.5	153.5	163.5	204.1	182.3	192.0	192.3
% CXR	304.7	299.6	308.2	272.9	295.3	394.7	364.5	373.1	374.9
Short-term debt (% GXD)	43.9	45.6	45.1	45.3	45.9	48.4	49.3	47.6	46.1
By debtor									
Sovereign	2,049.3	2,026.3	2,215.5	2,135.5	2,035.8	2,527.0	2,728.3	2,929.6	3,130.9
Monetary authorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General government	2,049.3	2,026.3	2,215.5	2,135.5	2,035.8	2,527.0	2,728.3	2,929.6	3,130.9
Banks	2,142.4	2,150.0	2,286.5	2,084.7	2,356.5	2,872.0	2,940.0	3,008.1	3,076.1
Other sectors	1,537.0	1,535.2	1,821.3	1,888.9	1,974.5	2,416.2	2,011.6	2,011.6	2,011.6
Gross external assets (non-equity)	6,104.4	6,149.6	6,959.1	6,795.9	7,131.7	8,542.4	8,432.2	8,716.9	8,999.3
Sovereign	1,202.7	1,358.6	1,705.9	1,689.4	1,605.6	2,073.3	2,494.6	2,770.8	3,042.6
International reserves, incl. gold	174.0	185.5	200.0	198.0	224.0	268.4	364.5	386.7	406.5
Other sovereign assets	1,028.8	1,173.1	1,505.9	1,491.3	1,381.6	1,804.9	2,130.1	2,384.1	2,636.0
Banks	2,600.5	2,466.8	2,517.5	2,435.7	2,697.3	3,091.7	3,084.6	3,077.5	3,070.4
Other sectors	2,301.5	2,324.4	2,735.6	2,816.1	2,900.3	2,900.3	2,900.3	2,900.3	2,900.3
Net external debt	-375.7	-438.0	-635.8	-686.7	-764.9	-727.2	-752.3	-767.8	-780.8
% GDP	-11.2	-12.7	-17.2	-17.3	-19.6	-19.0	-17.9	-18.5	-18.3
Sovereign	846.9	668.0	509.5	446.0	430.4	453.3	281.0	190.4	102.3
Banks	-458.1	-316.8	-231.1	-351.0	-340.8	-219.6	-144.5	-69.4	5.7
Other sectors	-764.5	-789.2	-914.3	-767.6	-888.8	-888.8	-888.8	-888.8	-888.8
International investment position									
Assets	8,593.4	8,730.4	10,153.7	9,902.5	10,650.7	12,629.3	12,466.4	12,887.3	13,304.8
Liabilities	7,058.3	7,033.6	7,951.1	7,478.8	7,866.5	9,501.1	9,336.7	9,664.1	9,991.5
Net	1,535.1	1,696.8	2,202.5	2,423.7	2,784.3	3,128.1	3,129.7	3,223.2	3,313.3
Net sovereign	-846.9	-668.0	-509.5	-446.0	-430.4	-453.3	-281.0	-190.4	-102.3
% GDP	-25.3	-19.3	-13.8	-11.2	-11.1	-11.8	-6.7	-4.6	-2.4
External debt service (principal + interest)	785.9	704.5	677.2	748.1	715.2	733.3	860.5	840.1	896.2
Interest (% CXR)	3.7	3.3	2.7	2.4	2.2	2.3	2.6	2.9	2.9

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			15.2 = AA+
Input Indicator	Weight (%)	2020	2021	2022	Adjustment to Final Data	Final Data	Coefficient	Output (notches)
Structural features								**11.85**
Governance indicators (percentile)	20.3	n.a.	88.6	n.a.	-	88.6	0.074	6.54
GDP per capita (USD)	13.3	n.a.	50,391	n.a.	Percentile	84.7	0.042	3.53
Nominal GDP (% world GDP)	13.2	n.a.	4.58	n.a.	Natural log	1.5	0.596	0.91
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.	102.5	n.a.	Natural log	4.6	0.188	0.87
Macroeconomic performance, policies and prospects								**-0.96**
Real GDP growth volatility	5.1	n.a.	2.6	n.a.	Natural log	1.0	-0.815	-0.79
Consumer price inflation	2.9	0.4	3.2	5.1	3-yr avg.[b]	3.4	-0.058	-0.20
Real GDP growth	2.4	-4.6	2.9	2.5	3-yr avg.	0.3	0.076	0.02
Public finances								**-1.76**
Gross general govt debt (% GDP)	8.3	68.9	69.9	69.6	3-yr avg.	69.4	-0.022	-1.52
General govt interest (% revenue)	4.5	1.3	1.0	0.8	3-yr avg.	1.0	-0.043	-0.05
General govt fiscal balance (% GDP)	2.6	-4.3	-4.3	-3.5	3-yr avg.	-4.0	0.048	-0.19
FC debt (% of total general govt debt)	2.4	0.7	0.6	0.6	3-yr avg.	0.6	-0.006	-0.00
External finances								**1.59**
Reserve currency (RC) flexibility	7.8	n.a.	3.1	n.a.	RC score 0 - 4.5[c]	3.1	0.549	1.73
SNFA (% of GDP)	7.3	-11.8	-6.7	-4.6	3-yr avg.	-7.7	0.011	-0.09
Commodity dependence	1.1	n.a.	10.3	n.a.	Latest	10.3	-0.004	-0.04
FX reserves (months of CXP)	1.8	n.a.	2.4	n.a.	n.a. if RC score> 0	0.0	0.036	0
External interest service (% CXR)	0.4	2.3	2.6	2.9	3-yr avg.	2.6	-0.006	-0.02
CAB + net FDI (% GDP)	0.1	7.1	7.6	5.6	3-yr avg.	6.8	0.001	0.01
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 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 2016	AAA	F1+	Stable	AAA	F1+	Stable	AAA
17 Jun 2004	AAA	F1+	Stable	AAA	-	Stable	AAA
21 Sep 2000	AAA	F1+	Stable	AAA	-	Stable	-
26 Oct 1995	AAA	F1+	-	AAA	-	-	-
10 Aug 1994	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	2	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 organizations, 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 World Bank Governance Indicators 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 World Bank Governance Indicators 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 World Bank Governance Indicators 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 a record of more than 20 years without a restructuring of public debt and 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.