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FEDERAL REPUBLIC OF GERMANY Long-term sovereign rating Foreign currency senior unsecured long-term debt Local currency senior unsecured long-term debt	Assigned Ratings/Outlook: AAA /stable	Type: Monitoring, unsolicited
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Rating Action

Neuss, 24 April 2020

Creditreform Rating has affirmed the unsolicited long-term sovereign rating of "AAA" for the Federal Republic of Germany. Creditreform Rating has also affirmed Germany's unsolicited ratings for foreign and local currency senior unsecured long-term debt of "AAA". The outlook remains stable.

Contents

Rating Action	1
Key Rating Drivers	1
Reasons for the Rating Decision ..	2
Macroeconomic Performance	2
Institutional Structure	6
Fiscal Sustainability	7
Foreign Exposure	10
Rating Outlook and Sensitivity ...	10
Ratings*	11
Economic Data	12
ESG Factors	12
Appendix	13

Key Rating Drivers

1. Large, wealthy and competitive economy which is well-diversified, boasting a high degree of innovation capability and featuring a long-running strong labor market development; medium-term GDP growth prospects somewhat constrained by structural challenges regarding the automotive sector and demographics
2. Near-term outlook severely dampened by the impact from the corona crisis, as very adverse effects on domestic demand and production are likely; while our baseline scenario assumes a more or less V-shaped pattern of economic development, the forecast is clouded by a high level of uncertainty and heavily dependent on the success of containing the pandemic
3. Very strong institutional set-up, coupled with benefits entailed by deep and fruitful integration in the European Union and the euro area alongside a still high degree of domestic political consensus
4. Convincing track record of prudent budget execution, with debt-to-GDP on a firm downward path; general government balance to turn sharply into deficit and debt-to-GDP to soar in the short term in light of emergency measures to counter the corona pandemic but expected to improve again beyond 2020; fiscal risks associated with Covid-19, as well as age-related costs and considerable public guarantees are somewhat mitigated by very high debt affordability and the favorable initial fiscal position
5. External position as reflected in a high and rising NIIP remains very strong and provides important buffers; current account surpluses should decline, but remain high

Reasons for the Rating Decision

Our assessment of an outstandingly high creditworthiness of the Federal Republic of Germany rests on the extraordinarily strong macro-institutional conditions, along with large fiscal and external buffers.

Macroeconomic Performance

Germany's credit rating continues to benefit from the country's exceptionally strong macroeconomic performance profile featuring a large and wealthy, diversified and competitive economy, as well as a flourishing labor market. The outbreak of the corona pandemic will likely cause a steep but temporary decline in the development of economic output and the labor market, but should not prevent further wealth accumulation in the medium term. Expectations of solid medium-term GDP growth are somewhat tempered by structural challenges regarding the automotive sector. Investment in the wake of the aspired to energy and digital transition could foster the capital accumulation and TFP necessary to counter demographic developments weighing on medium-term prospects.

In a tenth consecutive year of economic expansion, Germany's output growth continued to lose momentum. Real GDP growth came in at only 0.6% (2018: 1.5%), posting below overall euro area GDP growth (1.2%) for the second year in a row, mainly on the back of slowing gross fixed capital investment and a large negative contribution from inventories, with the latter taking 0.9 p.p. off overall GDP growth. The significant inventory reduction was based on low industrial production owing to the persistent weakness in manufacturing sector and growing exports. By the same token, investment growth declined from 3.5% to 2.6% in 2019, as investment in machinery and equipment, which accounts for close to a third of total fixed investment, almost came to a standstill (0.6%, 2018: 4.4%), also in light of uncertainty over the global trade environment and potential fallout from a no-deal Brexit. Q4-19 saw an annual decline of 2.3% in this category. Construction investment, on the other hand, gained traction in 2019 and grew by 3.9% (2018: 2.5%) amid an ongoing domestic housing boom and more vividly rising civil engineering. In fact, construction investment recorded its highest increase since 2011.

Private consumption meanwhile proved a reliable pillar, expanding by 1.6% (2018: 1.3%) and contributing 0.8 p.p. to overall GDP growth last year, buoyed by the well-performing labor market and robust increases in income along with moderate inflation. Real incomes increased by 1.2 after 1.3% in the previous year (Destatis data). Government consumption also contributed positively to overall output growth (0.5 p.p.), rising by 2.6% compared to the previous year. Against the backdrop of persistent trade tensions and corresponding muted global demand, Germany's exports only rose by 0.9% (2018: 2.1%). At the same time, import growth slowed to 1.9% (2018: 3.6%), resulting in a negative GDP growth contribution to the tune of 0.4 p.p., as seen in the prior year.

Looking at the production side of GDP, the developments described above were mirrored in two different trends in 2019, as the more domestically driven service sector and construction sector recorded high growth rates, whereas the manufacturing sector, accounting for about 22% of total output, registered a 3.7% decline in real gross value added. The latter

was particularly visible in falling output in the automotive industry, which is grappling with a structural shift towards electric mobility on the one hand and with wider reverberations from trade tensions and related lower global demand on the other hand.

Turning to the labor market, 2019 represented the 14th consecutive year of increasing employment in Germany, although the growth rate diminished noticeably to 0.9% from 1.4% recorded for 2018. Q4-19 saw the annual growth rate decelerate to 0.7%, with the number of persons employed in the ailing manufacturing sector, which accounted for about 17% of total employment in 2019, declining by 0.2% compared to Q4-18. The unemployment rate fell for the 10th year in a row to a new post-reunification low of 3.2% (2018: 3.4%). With that, Germany's unemployment rate remained well below the euro area's 7.6%. As regards labor participation, Germany remains among the best performers in the EU, with the participation rate rising from an already high level to 79.1% in Q3-19.

Looking ahead, we expect real GDP to fall sharply by about 6.1% in 2020 due to the Corona pandemic and the containment measures taken to mitigate it, which will more or less temporarily paralyze parts of the economy, and to rebound by about 4.8% in 2021. The lockdown has largely been extended to 3 May, albeit with some conditional loosening of measures, such as permitting retail shops of a certain size to re-open, for instance. We currently expect the adverse economic impact to be transitory, with the lion's share of the negative impact being visible in Q2, while acknowledging that it is hardly possible to fully grasp the scope of the impact at this stage. This will not only depend on the range and duration of the measures taken to combat the virus, but also on the development of effective medicines.

In reaction to the pandemic, German authorities are implementing comprehensive emergency measures which according to the Ministry of Finance exceed EUR 1.1tr, of which about EUR 353bn would affect the budget immediately and about EUR 820bn would be provided in the shape of guarantees. Measures for instance include up to EUR 50bn in direct support to the self-employed, free lancers and very small businesses with up to 10 employees. Companies will be able to tap into an economic stabilization fund providing EUR 100bn for recapitalization, EUR 400bn of guarantees for corporate liabilities and EUR 100bn to Germany's state-owned development bank KfW for refinancing purposes. KfW's overall guarantee framework now comes to EUR 822bn, according to the finance ministry. Small and medium-sized enterprises are for instance backed by loan guarantees of up to EUR 500,000 to enterprises with between 11 and 49 employees and up to EUR 800,000 to enterprises with between 50 and 249 employees, subject to enterprises demonstrably not having been ailing in 2019 already.

Further aid includes short-time working schemes which have also proved helpful in the global financial crisis and which, in their current version, enable companies to request support for their employees if 10% of the workforce are affected by reductions in working hours. The federal employment agency will compensate 60% of the difference in monthly net earnings due to reduced hours, as well as cover social security contributions for the lost work hours. Moreover, tax deferrals are possible and tax prepayments can be lowered corresponding to expected lower income in 2020. If a company is affected particularly

badly, enforcement measures and penalties will be handled more flexibly in 2020. For companies experiencing financial difficulties as a result of the pandemic and the related countermeasures, filing for insolvency can be suspended until end of September.

Judging by political discussions, another round of economic support to assist a possible recovery later this year or in 2021 seems conceivable, but at this stage is speculative and only highlights the degree of uncertainty around our forecasts.

On the monetary policy side, the ECB announced a Pandemic Emergency Purchase Program (PEPP) with an envelope of EUR 750bn, on top of increased net asset purchases to the tune of EUR 120bn under the existing asset purchase program (APP) until the end of the year, along with a number of measures to provide ample liquidity, among others by offering several longer-term refinancing operations. Furthermore, the ECB has adopted a comprehensive set of collateral measures to mitigate the tightening of financial conditions across the euro area. The central bank also considers measures to temporarily mitigate the effect of rating downgrades on counterparties' collateral availability. As to macroprudential measures pertaining to bank supervision, the financial regulator BaFin has, among others, lowered the countercyclical capital buffer from 0.25% to 0% from 1 April to ensure that bank lending can be maintained and to avoid procyclical effects.

The course of the economy in H2-20 rests on whether the restrictions continue or are eased or lifted towards the summer. While our baseline scenario assumes a more or less V-shaped pattern of economic development, such assumptions remain subject to high uncertainty and may experience stark revisions as more information on the fallout and a potential exit strategy become available.

Before the current crisis began to unfold, private consumption appeared set to remain a main pillar of growth in 2020. Against the backdrop of wage increases in light of a still well-performing – albeit decelerating – labor market, moderate inflation rates and a more expansionary fiscal stance (e.g. via income tax relief and lower social security contributions), private consumption seemed poised to rise this year. The consumer confidence indicator (European Commission) had stabilized around the turn of the year, following a decline that had started from a high level in 2018, before collapsing in March in view of the crisis and containment measures. With people widely confined to staying at home, private consumption now looks set to register a decline, notwithstanding some stockpiling of certain non-durables. If these restrictions are loosened or eventually lifted, household expenditure should see a rebound later this year.

Household spending is likely to be curtailed by declining employment growth and receding disposable income. According to the federal employment agency, roughly 725,000 short-time work arrangements have been reported as of 13 April. This compares with an average of about 1,300 of such arrangements per month in the year 2019, and offers a first glimpse of the extent of the initial economic fallout of the corona crisis on the labor market. Moreover, a recent round of wage negotiations in the metal and electrical industry resulted in foregone wage increases and ultimately a postponement of further negotiations until at least the end of the year in light of many companies having to embark on short-time schemes, presumably setting a blueprint for other industries.

Prior to the corona outbreak, Germany's manufacturing sector had shown first signs of a beginning recovery following a recession that had its origins in the second half of 2018 and developed further over 2019 (see above). New orders increased by 3.3% in a two-month average comparison (Jan/Feb vs. Nov/Dec). Business surveys had started to improve at the beginning of the year, with the manufacturing PMI reaching a 13-month-high in February, although the indicator was still within a territory typically associated with contraction of economic activity.

In March, the PMI saw its sharpest drop since April 2009, suggesting that gross fixed government investment will see a further significant deterioration in 2020, driven by negative growth in investment in machinery and equipment, before rebounding to some extent in 2021. Moderately increasing construction investment could prevent an overall decline of gross fixed capital investment, although the lockdown should at least slow growth in this segment as well. Government expenditure should add positively to GDP growth this year, in light of envisaged discretionary measures amounting to about 0.5% of GDP for 2020 pre-corona and with numerous emergency measures now kicking in. Net exports seemed set to pose a drag on GDP growth in 2020, with imports expected to rise stronger than exports, on the back of robust domestic demand and still ongoing uncertainty over trade relations on the global level. With the spread of the virus and impaired trade flows, both exports and imports should see negative growth rates, with export growth probably seeing a considerably steeper decline than imports. Hence, net external trade should weigh more heavily on GDP growth.

We continue to assess Germany's large domestic market and high levels of personal wealth as factors enhancing Germany's macroeconomic resilience. Germany remains the fourth largest economy in the world and the largest economy in the euro area (2019: USD 3.86tr), according to the IMF, with a per capita income of USD 53,567 (2019, PPP terms). High productivity levels remain a German strong point, reflected in a nominal productivity per hour worked that stood 23.2% above EU-28 level in 2018, despite a slight decrease, but stressing high per capita income. We think that the presence of high value-added industries and a good degree of diversification will contribute to sustaining high income levels. Germany's diversification ratio, i.e. the ratio of the gross value added (GVA) of services to industry stood at 2.3 in Q4-19, making it one of the highest ones in the euro area (3.0). The large manufacturing sector with its strong global players has been suffering under the less cooperative trading environment over the last two years, mirrored by a declining GVA of 21.3% in Q4-19 compared to 23.0% two years before. Nevertheless, the share compares high with the euro area's 16.3% as of Q4-19. Also noteworthy, Germany's GVA share of construction (Q4-19: 5.7%, up from 5.3% a year earlier) has now exceeded the level recorded for the euro area as a whole (Q4-19: 5.5%), paying testament to Germany's booming housing market and increased public construction investment.

Germany's favorable and innovative business environment adds another credit positive element. According to the latest World Bank's Doing Business ranking, Germany climbed two notches to 22nd out of 190 economies, significantly above the EU-27 median (40). The country exhibits particularly strong performance regarding insolvency framework (4) and enforcing contracts (13). In terms of starting a new business, Germany only occupies rank

125. Looking at the World Economic Forum's (WEF) latest global competitiveness report, Germany has dropped three ranks to 7th, rendering it the second most competitive EU country after the Netherlands as per this ranking. According to the WEF, the German economy remains at the top when it comes to innovation capability (rank 1), and performs very well regarding business dynamism (rank 5), skills (rank 5) and infrastructure (rank 8).

While in 2019, as in the preceding years, higher labor participation and the immigration of foreign workers more than offset age-related demographic effects and emigration from Germany, this will become more challenging further out. We reiterate that Germany's medium-term growth prospects seem somewhat clouded by a projected sharp decline in its working-age population, owing to unfavorable demographic trends that could constrain future labor supply. Drawing on projections from the EU 2018 Ageing Report, the German working-age population is forecast to shrink by 4.7% between 2018 and 2030, one of the steepest declines in the European Union. Against this backdrop and in view of recently softer real labor productivity growth (0.9% 19 vs. 16, EA: 1.3%), TFP growth and capital accumulation come to the fore as regards ensuring sustained GDP growth over the coming years.

While the public sector investment-to-GDP ratio remains below the EU-27 level (3.0%) and well below levels seen in AAA-peers, it has been rising over the last few years, reaching 2.5% in 2019 (AMECO), as authorities have increased efforts to lift investment levels. Apart from fostering social housing and plans to overhaul parts of the federal highway and the railway network, the National Reform Program 2020 highlights plans to improve education and research infrastructure as well as digital infrastructure. With regard to the latter, the corona crisis and the related need for people to work from home and have their children educated online is currently dramatically increasing the urgency of enhancing digital capacities and most probably acting as a catalyst to accelerate those.

We are aware of continued efforts to foster the energy transition towards renewables and sustainability more generally, which should entail respective investment. The Climate Action Program 2030 adopted in September 2019, making the national greenhouse gas reduction target of at least 55% by 2030 (compared to 1990) legally binding, and that foresees climate neutrality by 2050, includes a number of sectoral policies aimed at reducing emissions, which overall looked set to start off necessary investment in greener products, processes and technology, with likely knock-on effects to private sector investment. The Climate Package also touches on initiatives in agriculture, waste management, and an increased role for R&D and sustainable finance, to name but a few. Whether such developments can still be prioritized once the fallout from the pandemic becomes clearer will have to be seen. Judging from the current perspective, investment in the health sector and in disaster prevention or precautionary measures respectively are envisaged to be stepped up substantially.

Institutional Structure

We continue to view Germany's very strong institutional framework, in combination with a deep and fruitful integration into the EU and the euro area, as a key strength. Monetary policy, as well as supervision of systemically relevant financial institutions is in the hands

of the independent, highly credible and accountable ECB. Germany's economic clout within the euro area, i.e. being the largest member in terms of population and economic size, arguably compensates to some extent for a formal lack of monetary policy flexibility. Trends in HICP inflation in Germany and the euro area have been closely aligned over the last decade, and broadly the same holds with regard to interest rate differentials.

Adding to the impression of an exceptionally sound institutional set-up are the World Bank's Worldwide Governance Indicators (WGIs), according to which Germany ranks well above the euro area median as regards major categories, although somewhat below its AAA-peers of our rating universe. As to the indicator 'voice and accountability', which captures the transparency of policymaking and citizens' participation rights, the country was placed at rank 11 out of 209 economies, slightly behind Denmark, the Netherlands and Luxembourg (DK: 5, NL: 7, LU:8), whereas with regard to 'government effectiveness', the gap is somewhat larger, with Germany occupying rank 15 versus 7 for Denmark, 8 for the Netherlands and 10 for Luxembourg.

Like many other countries in Europe, Germany has been experiencing higher political fragmentation over the recent years, as demonstrated by the presence of 7 parties in the Bundestag (treating CDU and CSU as two separate parties) after the 2017 federal election, leading to a longer time span to form a government. Nevertheless, Germany's political system remains characterized by a high level of stability and cohesiveness as well as generally consensus-seeking attitudes. With the unexpected resignation of Annegret Kramp-Karrenbauer as CDU party leader this February, the race over leadership as well as candidate for chancellorship has been kicked off. We view an early election ahead of the prospective September 2021 federal election as less likely against the corona backdrop, but tensions may rise again in 2021.

Given Germany's track record of stable governments, we do not envisage an early election having a major bearing on our assessment of Germany's creditworthiness. Looking at the latest polls, CDU/CSU would be set to obtain the highest share of votes (about 33%), followed by the Green party (about 20%), which according to most pollsters has overtaken the Social Democrats (SPD) as the second strongest party, pointing to the possibility of a black-green coalition.

Fiscal Sustainability

Germany's firmly downward trending debt-to-GDP ratio, very high debt affordability, and prudent budget execution testify to limited fiscal sustainability risks, which will have to be seen against challenges from elevated public guarantees and age-related spending pressures in the medium term. The former could rise significantly as a consequence of the Corona crisis.

Concluding 2019 with a general government surplus of EUR 49.8bn or 1.4% of GDP in 2019 (2018: 1.9%), Germany recorded its eighth consecutive year of positive budget balance. All layers of government continued to show surpluses in 2019. Lackluster economic activity and some tax relief had revenue growth slowing to 3.6% (2018: 4.8%), with tax income increasing by 3.1% (2018: 4.5%) and social security contributions expanding by 4.4% (2018:

4.3%). The fact that most of the jobs created in that year were subject to social security contributions proved supportive. General government expenditure was stepped up by 4.6%, compared to 3.4% in the preceding year, driven by stronger growing monetary social benefits and compensation of employees.

2020 will likely see an abrupt end to the prolonged phase of headline surpluses, due to the assumed sharp decline of the economic output (see above), the associated lower tax revenue and to the comprehensive emergency measures taken to combat corona. According to the finance ministry, the total amount of budgetary measures comes to EUR 353.3bn and the total amount of guarantees would add up to EUR 819.7bn. This aside, the government's 2020 budget plan had envisaged a lower general government budget surplus compared to 2019, amounting to about $\frac{3}{4}$ % of GDP, on the back of intended implementation of priority measures relating to education, research and digital technology, along with improvements in childcare services and tax reductions benefitting especially families. Measures under the Climate Action Program 2030, including e.g. the introduction of CO₂ pricing for sectors not covered by the EU Emission Trading System, lower railway ticket prices and subsidies for electric mobility were to add to this, although they were envisaged to be implemented as budgetary neutral as possible, leaving mainly the German states and municipalities to continue on a surplus in 2020, whereas the federal budget would have returned to balance.

Amid suspension of the debt brake as laid down in the German Basic Law, parliament adopted a supplementary federal budget to the tune of EUR 156bn (approx. 4.5% of GDP) to finance the emergency measures, of which 33.5bn represents assumed lower revenue, and 122.5bn are dedicated to spending increases. We would tentatively pencil in a deficit of about 6.5% of GDP, acknowledging that this remains subject to possibly stark revisions. Bearing in mind the substantial risks surrounding the current situation, the deficit could thus be markedly higher. It is not known for how much longer containment measures affecting production and services will have to remain in place, either fully or partially, or whether there may be a second wave of rising infections requiring a return to stricter restrictions, let alone how many insolvencies and unemployed the country will end up with, to illustrate a few major uncertainties.

We deem fiscal risks as limited against the backdrop of strong debt affordability and prudent debt management, which have resulted in considerable fiscal space to act in order to shield households and companies from the fallout of the crisis. The government debt-to-GDP ratio has been on a firm downward trend since 2012, falling from 81.1% to 59.8% in 2019 (2018: 61.9%) and thus below the 60% reference value as per the Maastricht Treaty for the first time since 2002. In nominal terms, the debt level was reduced by 7.8% to EUR 2.053bn over this period. We expect the debt-to-GDP to experience a strong increase to a level of approx. 72%, before falling back from 2021 onward.

Interest payments dropped by 13.2% in 2019, to EUR 27.5bn. Measured against general government revenue, interest outlays stood at a mere 1.7% in 2019. Germany's exceptionally beneficial debt affordability metrics will likely be sustained, as the sovereign will be able to operate in a very low interest-rate environment going forward, thanks to even more accommodative monetary policy and to the safe haven status that German government

bonds continue to enjoy. Having started 2019 in positive territory, the 10y bund yield declined in the wake of the deteriorating economic development, falling into negative territory from May 2019. The fast developing corona pandemic led the yield to mark a new all-time low at -0.84 on 9 March, before bouncing back somewhat, and displayed considerable volatility owing to the news flow on measures to contain the spread of the virus; yet remaining on low and negative levels.

Turning to the medium-term fiscal outlook, we would continue to flag some risks arising from unfavorable demographic developments in Germany. The country's population is expected to grow by a moderate 1.2% between 2018 and 2030, with net migration expected to contribute less over this period. Although birthrates have increased somewhat in recent years, the natural growth rate of the population remains negative. Meanwhile, the retiring baby boomer generation will put pressure on Germany's public finances. Age-related expenditure was projected to rise by 2.1 p.p. between 2016-30, corresponding to the third-strongest increase in the EU-27, mainly driven by rising pension spending (1.4 p.p.) and long term care spending (+0.4 p.p.). However, this projection does not yet account for increasing costs due to pension commitments made in 2018 and 2019 (minimum replacement ratio of 48% by 2025 and cap of 20% on pension contributions), nor for costs incurred by the introduction of a basic pension as envisaged from 2021. The latter would top up low pensions for those who have demonstrably contributed to the social system through employment, raising children or caring for the elderly for at least 33 years, and comes with high administrative cost. Due to corona-linked obstacles, its start may be delayed.

Further risks that have to be mentioned relate to sizeable, although declining, public guarantees, which amounted to 12.84% of GDP in 18 (17: 13.44%). ESM guarantees (a maximum of EUR 189.9bn) worth 5.5% of 2019 GDP would have to be added to that. These numbers could climb significantly, as the German government may have to take stakes in various large and/or systemically relevant companies as a consequence of the Corona crisis, which should be monitored closely. The same holds true as regards the EUR 500bn corona package agreed among the Eurogroup on 9 April, which would involve guarantees to enhance the firepower of the European Investment Bank (EIB) and to support a proposed temporary EU-wide short-time work scheme (SURE). Developments pertaining to a currently debated EU recovery fund to help kick-start the economy once restrictions are widely lifted also have to be monitored in this context.

Looking at the banking sector, we continue to consider risks as limited, notwithstanding a slight deterioration of some key metrics. Deleveraging seems to have come to a halt or reversed slightly in 2019, with banks increasing their assets to 219.2% of GDP as of Q3-19 (2018: 207.2%). We note that capital buffers as per CET 1 ratio (EBA data) have further decreased to 14.5% as of Q4-19 (Q4-18: 15.4%), falling somewhat below EU-28 level (15.0% in Q4-19). On a more positive note, NPL levels have stayed at a very low level (1.3% in Q4-19 and Q4-18), thus staying well below the EU average of 2.7%. However, banks' profitability remains a major challenge, not least in view of a persistently low interest rate environment and high competition in the still relatively crowded domestic market. Return on assets compares very poorly to most EU countries, and continued to fall in 2019.

Judging by house price developments, the housing boom has lost some momentum. According to Eurostat, house prices in Q4-19 were up by 5.7%, compared to 6.2% a year earlier. In a three-year comparison, house price growth was down to 19.3% in Q4-19, as opposed to 22.4% a year before. Favorable mortgage rates, rising disposable incomes and net migration remained supportive factors, although the latter two less so compared to 2018. As Deutsche Bundesbank points out, while price increases in cities continued to show signs of overvaluation in 2019, although dynamics also abated somewhat, they generally seemed broadly aligned with fundamentals. We would reiterate our conclusion that there is no palpable evidence for a credit-fueled housing boom, as the outstanding volume of mortgage loans moved broadly in line with nominal GDP in 2019. Moreover, private households' balance sheets look healthy in light of a broadly stable debt-to-disposable income ratio over the past few years and only a slight pickup to 87.3% as of Q3-19, which is still well below the EU-27 median of about 92%.

Foreign Exposure

Turning to the external sector, we note that Germany's net international investment position (NIIP) increased by a record EUR 355bn in 2019, to about EUR 2.4tr, or 71% of GDP, from 62.0% in 2018. According to Bundesbank, the increase was driven in large part by positive valuation effects, in the face of a stock market rally and of lower interest rates compared with the end of 2018. The weaker euro also played its part. In this environment, external assets benefited to a greater extent than liabilities, with the result that almost half of the overall increase in the NIIP can be attributed to net positive valuation effects. Overall, we continue to view Germany's position as a large net external creditor as a mitigating factor to risks stemming from its position as an open economy highly integrated in global value chains. OECD data pertaining to the share of domestic value added embodied in foreign final demand (2016) shows that Germany exhibited the highest reading among the seven largest economies in the world, suggesting a particularly high sensitivity to global trade dynamics.

Germany's current account surplus last year narrowed further to 7.1% of GDP (2018: 7.4%), yet still represented one of the highest surpluses in the world. The main reason for the shrinking positive balance was a lower goods surplus in relation to GDP, due to softer external demand. The balance in goods trade decreased from 6.8 to 6.5% of GDP. Another factor contributing to the smaller current account surplus was a lower deficit in the secondary income balance. Further ahead, our expectation of a smaller trade surplus should remain the main driver for a further shrinking current account surplus, although an assumed economic rebound could slow this development beyond 2020. Generally, we expect Germany to continue to exhibit large surpluses against the rest of the world.

Rating Outlook and Sensitivity

Our rating outlook for Germany's long-term credit ratings is stable, as we assume that the risk situation underlying the key factors affecting sovereign credit risk – including macroeconomic performance, institutional structure, fiscal sustainability, and foreign exposure – is likely to remain fundamentally unchanged over the next twelve months.

Given the current considerable economic and financial market uncertainty and the very dynamic development of the corona pandemic, the assessment and interpretation of economic developments is significantly more difficult than under normal circumstances for the near future, as is the case for other indicators.

We could lower our rating or the outlook if the spread of the virus has a stronger and longer-lasting impact on the German economy than we expect at this stage. The sovereign's ratings could come under particular downward pressure if we observe material adverse effects on Germany's medium-term potential growth. This could be the case if the consequences of the pandemic and the impact on demand and production are more pronounced than assumed, implying that disruption of value-chains extends well into the second half of the year and beyond, and if policy-makers fail to mitigate the economic fallout. Germany's high degree of trade openness leaves its economy particularly susceptible to a prolonged period of weak growth in the EU and the global economy, as well as to enhanced protectionist streaks, at a time when the important automotive sector is already grappling with structural shifts.

Moreover, a negative rating action could also be prompted if fiscal metrics, contrary to our belief, follow a sustained deteriorating trend over a longer period of time, possibly exacerbated by materializing contingent liabilities and/or if age-related expenditures cannot be kept in check.

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Ratings*

Long-term sovereign rating	AAA /stable
Foreign currency senior unsecured long-term debt	AAA /stable
Local currency senior unsecured long-term debt	AAA /stable

*) Unsolicited

Economic Data

[in %, otherwise noted]	2014	2015	2016	2017	2018	2019	2020e
Real GDP growth	2.2	1.7	2.2	2.5	1.5	0.6	-6.1
GDP per capita (PPP, USD)	46,520	47,411	48,577	50,522	52,386	53,567	n.a.
HICP inflation rate, y-o-y change	0.8	0.7	0.4	1.7	1.9	1.4	0.5
Default history (years since default)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Life expectancy at birth (years)	81.2	80.7	81.0	81.1	81.0	n.a.	n.a.
Fiscal balance/GDP	0.6	0.9	1.2	1.2	1.9	1.4	-6.5
Current account balance/GDP	7.2	8.6	8.5	7.8	7.4	7.1	n.a.
External debt/GDP	153.5	151.0	152.2	147.0	145.5	144.8	n.a.

Source: International Monetary Fund, Eurostat, own estimates

ESG Factors

While there is no universal and commonly agreed typology or definition of environment, social, and governance (ESG) criteria, Creditreform Rating views ESG factors as an essential yardstick for assessing the sustainability of a state. Creditreform Rating thus takes account of ESG factors in its decision-making process before arriving at a sovereign credit rating. In the following, we explain how and to what degree any of the key drivers behind the credit rating or the related outlook is associated with what we understand to be an ESG factor, and outline why these ESG factors were material to the credit rating or rating outlook.

For further information on the conceptual approach pertaining to ESG factors in public finance and the relevance of ESG factors to sovereign credit ratings and to Creditreform Rating credit ratings more generally, we refer to the basic documentation, which lays down [key principles of the impact of ESG factors on credit ratings](#).

ESG Factor Box

Environmental Quality	Ecological Risks	Ressource Management	Education	Health	Demographics
Labor	Equality	Technology & Infrastructure	Saftey & Security	Judicial system	Quality of Public Services
Integrity of Public Officials	Quality and Efficacy of Regulations	Civil Liberties/ Political Participation	Market Access	Business Environment	Data Transparency

Environment	Social	Governance	Highly significant	Significant	Less significant	Hardly significant
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The governance dimension plays a pivotal role in forming our opinion on the creditworthiness of the sovereign. As the World Bank's Worldwide Governance Indicators Rule of Law, Government Effectiveness, Voice and Accountability, and Control of corruption have a material impact

on Creditreform Rating's assessment of the sovereign's institutional set-up, which we regard as a key rating driver, we consider the ESG factors 'Judicial System and Property Rights', 'Quality of Public Services and Policies', 'Civil Liberties and Political Participation', and 'Integrity of Public Officials' as highly significant to the credit rating.

Since indicators relating to the competitive stance of the sovereign such as the World Bank's Ease of Doing Business index and the World Economic Forum's Global Competitiveness Indicator add further input to our rating or adjustments thereof, we judge the ESG factor 'Business Environment' as significant.

The social dimension plays an important role in forming our opinion on the creditworthiness of the sovereign. Labor market metrics constitute crucial goalposts in Creditreform Rating's considerations on macroeconomic performance of the sovereign, and we regard the ESG factor 'Labor' as significant to the credit rating or adjustments thereof. Indicators or projections providing insight into likely demographic developments and related cost represent a social component affecting our rating or adjustments thereof. We regard the ESG factor 'Demographics' as less significant.

While Covid-19 may have significant adverse effects on several components in our ESG factor framework in the medium to long term, it has not been visible in the relevant metrics we consider in the context of ESG factors – though it has a significant bearing concerning economic prospects and public finances. To be sure, we will follow ESG dynamics closely in this regard.

Appendix

Rating History

Event	Publication Date	Rating /Outlook
Initial Rating	29.07.2016	AAA /stable
Monitoring	30.06.2017	AAA /stable
Monitoring	27.04.2018	AAA /stable
Monitoring	26.04.2019	AAA /stable
Monitoring	24.04.2020	AAA /stable

Regulatory Requirements

In 2011 Creditreform Rating AG (CRAG) was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

This sovereign rating is an unsolicited credit rating. Neither the rated sovereign nor a related third party participated in the credit rating process. Creditreform Rating AG had no access to the accounts, representatives or other relevant internal documents for the rated entity or a related third party. Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

Unsolicited Credit Rating	
With Rated Entity or Related Third Party Participation	NO
With Access to Internal Documents	NO
With Access to Management	NO

The rating was conducted on the basis of CRAG's "[Sovereign Ratings](#)" methodology (v1.2, July 2016) in conjunction with its basic document "[Rating Criteria and Definitions](#)" (v1.3, January 2018). CRAG ensures that methodologies, models and key rating assumptions for determining sovereign credit ratings are properly maintained, up-to-date, and subject to a comprehensive review on a periodic basis. A complete description of CRAG's rating methodologies and basic document "Rating Criteria and Definitions" is published on the following internet page: www.creditreform-rating.de/en/regulatory-requirements/.

To prepare this credit rating, CRAG has used the following substantially material sources: International Monetary Fund, World Bank, Organization for Economic Co-operation and Development, Eurostat, European Commission, European Banking Authority, European Central Bank, World Economic Forum, Destatis, Deutsche Bundesbank, Bundesministerium der Finanzen, Bundesagentur für Arbeit, Bundesanstalt für Finanzdienstleistungsaufsicht.

A Rating Committee was called consisting of highly qualified analysts of CRAG. The quality and extent of information available on the rated entity was considered satisfactory. The analysts and committee members declared that the rules of the Code of Conduct were complied with. No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks. The analysts presented the results of the quantitative and qualitative analyses and provided the Committee with a recommendation for the rating decision. After the discussion of the relevant quantitative and qualitative risk factors, the Rating Committee arrived at a unanimous rating decision. The weighting of all risk factors is described in CRAG's "Sovereign Ratings" methodology. The main arguments that were raised in the discussion are summarized in the "Reasons for the Rating Decision".

As regards the rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the credit rating report. There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRAG website. In case of providing ancillary services to the rated entity, CRAG will disclose all ancillary services in the credit rating report.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks is indicated clearly and prominently in the rating report; the first release is indicated as "initial rating"; other updates are indicated as an "update", "upgrade or downgrade", "not rated", "affirmed", "selective default" or "default".

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available on the ESMA website: <https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml>.

An explanatory statement of the meaning of each rating category and the definition of default are available in the credit rating methodologies disclosed on the website.

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