Research Report on Germany

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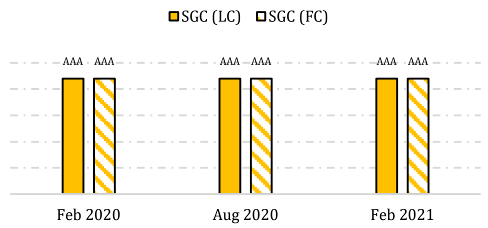
Ratings

Sovereign Government Credit (LC)	AAA
Sovereign Government Credit (FC)	AAA
Outlook (LC)	Stable
Outlook (FC)	Stable

* These ratings are unsolicited

Ratings dynamics



Main Economic Indicators of Germany

Macro indicators	2018	2019	2020
Gross gov. debt, EUR bn	2069	2053	2332
Nominal GDP, EUR bn	3356	3449	3332
Real GDP growth, %	1,3	0,6	-4,9
Gross gov. debt/GDP, %	61,6	59,5	70,0
Deficit (surplus)/GDP, %	1,8	1,5	-4,2
Inflation rate, %	1,8	1,5	-0,7
Current Account Balance/GDP, %	-	-	6,6
External debt, USD bn	-	-	6479,0*

Development indicators	2020
Inequality adj. HDI	0,87
GDP per capita, USD th	53,6

Default indicator	26.02.2021
5-Year CDS spread, Bp	10,2
10Y Gov Bond Yield, %	-0,25

Source: RAEX-Europe calculations based on data from the IMF, WB, Destatis, UN, Bloomberg
* 3Q 2020

RAEX-Europe confirmed at 'AAA' the ratings of Germany. The rating outlook is stable. The ratings were withdrawn.

RAEX-Europe confirmed the sovereign government credit rating (SGC) of Germany at 'AAA' (Highest level of creditworthiness of the government) in national currency and at 'AAA' (Highest level of creditworthiness of the government) in foreign currency. The rating outlook is stable which means that in the mid-term perspective there is a high probability of maintaining the rating score.

Summary

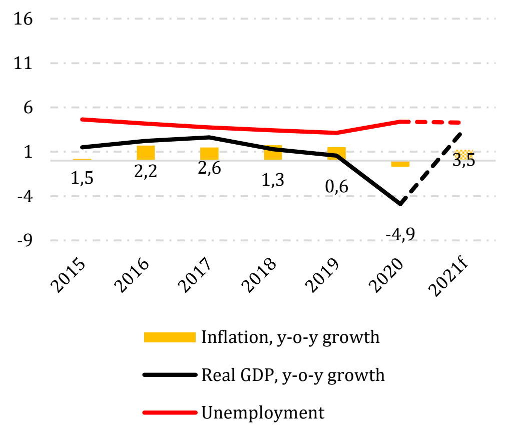
The confirmation of Germany's credit ratings at 'AAA' are mainly a projection of the outstanding development of the economy, as well as solid fiscal and external positions, which have played a key role in cushioning the negative effects of the pandemic. Moreover, despite an economic contraction in 2020, we expect a substantial recovery in 2021; while the banking system is liquid, well capitalized and has a good asset quality.

We still observe potential uncertainty in regard to the pandemic resolution as the vaccination rollout remains a question mark and the lockdowns could be extended. Thus, the predictability of the recovery remains questionable. Furthermore, the banking system profitability remains low and we anticipate a slight asset deterioration in 2021. Also, contingent liabilities remain a latent risk of materialization. Despite this, we do not anticipate the creditworthiness to be threatened in the mid-term view.

Real GDP shrank in 2020, but set to recover in 2021. As a result of the strong negative impacted caused by the coronavirus pandemic, the real output change in Germany stood at -4,9% in 2020 (see graph 1). After the economy presented an important recovery during 3Q 2020, the second wave of the virus forced the authorities to call for a second hard lockdown in the country. This affected mainly household consumption as restaurants, hotels and shops were closed. On the other hand, exports hiked and gross capital formation in the construction sector helped the economy.

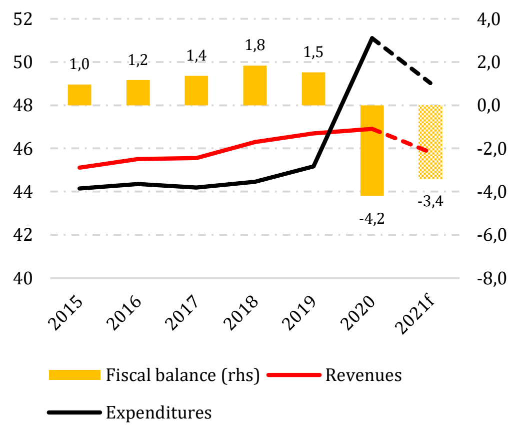
Despite this, the "Ifo Business Climate Index" saw an increase in February. In regard to manufacturing, the index showed its highest values since November 2018, while the services sector also saw an increase and for the first time in a long time, as there was optimism in the hospitality sector. Finally, the trade sector also looks less pessimistic.

Graph 1: Macroeconomic indicators, %



Source: RAEX-Europe calculations based on data from the IMF and Destatis

Graph 2: Fiscal budget dynamics, % of GDP



Source: RAEX-Europe calculations based on data from the IMF and Bundesbank

As mentioned in our previous review, the recovery remains quite hard to predict as the vaccination campaign remains uncertain and new strains and mutations of the COVID-19 virus have started to dominate. In any case, we anticipate this year to be more favorable as long as the supply of vaccines continues and inoculation is successful in the medium term. Moreover, the recent approval by the government of at-home tests, should accelerate the lifting of lockdowns, which would translate in higher household consumption. We anticipate the economy to grow at a pace of around 3,5% in real term by the end of 2021 (see graph 1).

Overall, Germany remains one of the most developed and competitive countries in the world supported by the highly ambitious export-oriented economy and still stable macroeconomic environment. GDP per capita in PPP terms is expected to be at about USD 53,6 th in 2020 and the inequality adjusted HDI was 0,869, reflecting a high level of development.

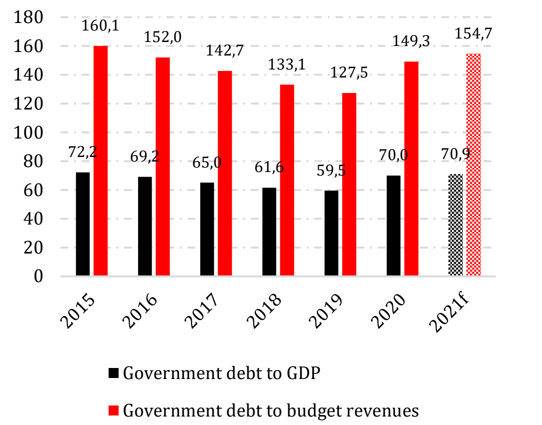
Germany was also one of the most successful countries in avoiding unemployment during the pandemic thanks to the short-term work program ("kurzarbeit") where employers, instead of laying off employees, only reduce their working hours and the government pays 60% of the salary. Thus, the unemployment rate stood at only 4,4% by the end of 2020 (see graph 1).

Finally, the inflation rate was -0,7% y-o-y as of the end of 2020 as a result of lingering lower energy prices, lower consumptions as a result of the lockdowns, and the slash of the VAT until the end of 2020 (see graph 1). At the beginning of 2021, we already started to see an increase in prices as the VAT returned to normal levels, the CO_2 levy was introduced and food prices climbed.

The demographic developments in Germany continue to be a concern as these dynamics are expected to have a direct impact on economic growth and public finances. The approval of the basic pension increases public spending while not solving the long-term pension issue. We anticipate more changes to the reform in 2025.

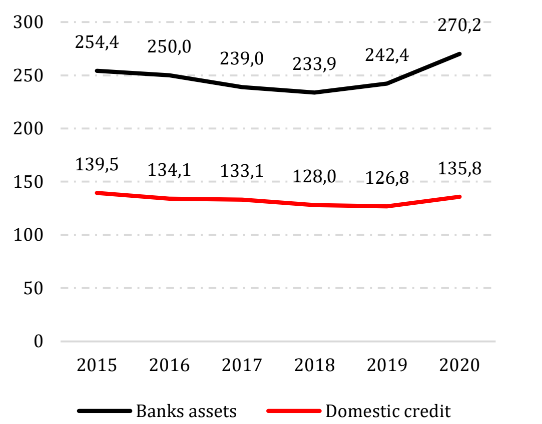
Fiscal balance better than expected in 2020. The fiscal balance turned negative in 2020 for the first time since 2011 posting a reading of around -4,2% of GDP (see graph 2). However, the reading is not as bad as we initially anticipated by the Agency back in 2020 when we projected a deficit of 5,6% of GDP. Again, the main cause of the negative dynamic was the crisis due to the COVID-19 pandemic. The central government balance showed a deficit of around EUR 86 bn mainly due to the steep hike of around 8,7% y-o-y in social benefit expenses to finance unemployment and *kurzarbeit* support. Moreover, the acquisition of personal protective equipment also resulted

Graph 3: Government debt dynamics, % of GDP



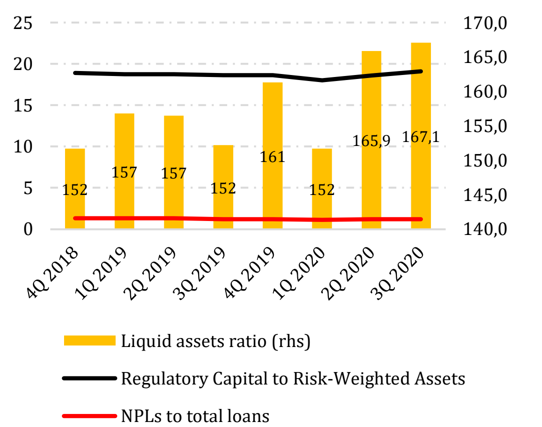
Source: RAEX-Europe calculations based on data from the IMF and Bundesbank

Graph 4: Credit to the economy dynamics, % of GDP



Source: RAEX-Europe calculations based on data from the IMF and Bundesbank

Graph 5: Financial soundness indicators, %



Source: RAEX-Europe calculations based on data from the IMF and Bundesbank

in higher expenditures. In contrast, tax revenues declined markedly. As a consequence of the lockdown, sales tax declined by 6,9% while corporate taxes saw a decrease of 13,5% y-o-y.

As mentioned in our previous review, the federal government approved supplementary budgets for around EUR 285 bn in 2020, while local governments have announced support of around EUR 140 bn. The overall measures to face the crisis remain practically unchanged from our last review.

Government debt increased substantially in order to finance the relief package. As expected, government debt to GDP hiked up to 70% by the end of 2020; however, the reading is lower than the figure of 75% we initially anticipated. Moreover, debt to budget revenues stood at 149,2% (see graph 3). As the pandemic has lingered and the government will continue to support the economy in 2021, we anticipate debt levels to remain fairly high and to start easing in 2022.

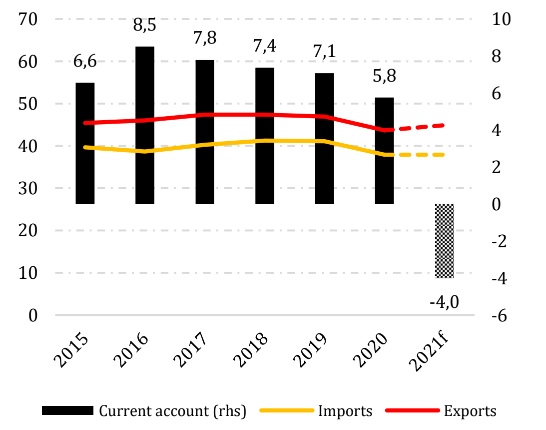
The level of the short-term debt increased to around 28% of overall debt and 20% of GDP as of 3Q 2020 also propelled by pandemic relief financing. Despite this, we consider that the level of short-term debt remains well covered by budget revenues.

In regard to the risk arising from Germany's contingent liabilities, we still consider it to be latent. According to data from Eurostat, as of 2019, government guarantees were equivalent to around 13,2% of GDP, an increase of 0,4p.p. from a year before. Moreover, liabilities of public corporations increased by about 1p.p. and stood at 91,7% of GDP in 2019 (mostly related to Landesbanken and Sparkassen). Both figures put Germany among the top-5 countries in the EU in terms of contingent liabilities. Despite this, the risk of these obligations transferring to the balance sheet of the government is fairly negligible.

Banking sector has remained resilient through the pandemic. The banking sector continued to expand in 2020. Banks' assets and domestic lending to GDP hiked by 27p.p. and 9p.p. respectively y-o-y (see graph 4). As anticipated, the reduction of the countercyclical capital buffer from 0,25% to 0% provided banks with some leeway and propelled growth in credit to the economy, which mainly picked up the pace in 2H 2020. In addition, the assistance program set up at KfW will also aid to inject financing into the economy.

The financial soundness indicators of the banking system have weathered the storm caused by the coronavirus crisis. As of 3Q 2020, the NPLs to total loans ratio stood at 1,2% based on data from the European Central Bank, the capital adequacy ratio increased up to 19,1% and the liquid assets to

Graph 6: External sector indicators, % of GDP



Source: RAEX-Europe calculations based on data from the IMF and Bundesbank

total short-term liabilities ratio hiked to 167,1% (see graph 5) as of the same date. We still anticipate asset quality to slightly deteriorate through 2021 as the negative effect of the pandemic is lagged; however, we do not believe any extraordinary changes in the soundness of the financial institutions.

In addition, the profitability of the sector continues to be depressed as compared to the EU peers. This is a reflection of the high competitiveness in the sector as the government-related banks do not have as high profit-generating incentives as commercial banks. Moreover, low interest rates and high operating costs have also hurt the bottom line.

Germany's external stance remains a core strength. The external stance of Germany remains solid despite the negative effects from the crisis. The current account recorded a surplus of 6,6% of GDP in 2020 (see graph 6), while the balance of trade of goods and services stood at 5,8%. We anticipate the current account to remain at a surplus going forward.

Support factors:

- Germany participates and is a key member of the European Union (very strong support-factor);
- The country has an extremely strong financial system which affects other countries (very strong support-factor);
- The country has a strong, stable and important reserve currency (Euro) (moderately weak support-factor).

The following developments could lead to a downgrade:

- Prolonged economic downturn as a result of an extended coronavirus pandemic which will result in a lingering deterioration in public finances;
- Substantial worsening in financial soundness indicators in the banking system.

ESG Disclosure:

Inherent factors

- Quality of fiscal policy; quality of monetary policy; natural resources; natural and climatic threats; environmental threats; Level of corruption, CPI; Government Effectiveness Index; quality of the business environment; position in Doing Business Ranking; level of investment in human capital, adjusted for inequality; Rule of Law Index; transparency of government policymaking Index; level of information transparency of the government; Political Stability and Absence of Violence/Terrorism Index; natural disasters, constant exposure to difficult natural conditions.

Drivers of change factors

- None

Next scheduled rating publication: Withdrawn. The full sovereign rating calendar can be found at [Sovereign Rating Calendar 2021]

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RATING HISTORY:

Date	Review reason	SGC		Outlook	
		National currency	Foreign currency	National currency	Foreign currency
28.08.2020	Scheduled revision of both types of ratings	AAA	AAA	Stable	Stable
28.02.2020	Scheduled revision of both types of ratings	AAA	AAA	Stable	Stable
30.08.2019	Scheduled revision of both types of ratings	AAA	AAA	Stable	Stable
01.03.2019	Scheduled revision of both types of ratings	AAA	AAA	Stable	Stable
07.09.2018	Scheduled revision of both types of ratings	AAA	AAA	Stable	Stable
09.03.2018	Scheduled revision of both types of ratings	AAA	AAA	NA	NA
15.09.2017	Scheduled revision of both types of ratings	AAA	AAA	NA	NA
17.03.2017	Scheduled revision of both types of ratings	AAA	AAA	NA	NA
23.09.2016	Scheduled revision of both types of ratings	AAA	AAA	NA	NA
15.04.2016	First assignment of both types of ratings for the country	AAA	AAA	NA	NA

Minute's summary

The rating committee for Germany was held on 26 February 2021. The quorum for the rating committee was present. After the responsible expert presented the factors, which influenced the rating assessment, the members of the committee expressed their opinions and suggestions within the framework of the Sovereign methodology. The chairman of the rating committee ensured that every member of the committee expressed his/her opinion before proceeding to the voting.

The following methodology was used for the rating assessment: Methodology for Assigning Sovereign Government Credit Ratings – Full Public Version (from April 2019). Descriptions and definitions of all rating categories can be found under the Rating scale section. The user of the rating shall read the methodology in order to have a full understanding of the rating procedure.

The definition of default can be found on the Agency's website in the section for Internal policies.

These ratings are unsolicited. The rated entity did not participate in the rating process.

Main sources of information: International Monetary Fund, World Bank, World Federation of Exchanges, World Economic Forum, Doing Business, United Nations, German Bundesbank, European Central Bank, Ministry of Finance of Germany, Deutsche Börse, Destatis, Cbonds.

ESG Disclosure

We consider Environmental, Social, and Governance (ESG) risks and opportunities in the creditworthiness analysis of our Sovereign entities. The disclosure document can be found on the Agency's website in the section: ESG factors in RAEX-Europe's Credit Ratings

Limits of the Credit Rating

During the rating assignment process, Rating-Agentur Expert RA GmbH (the Agency) used publicly available information that was considered to be reliable, complete and non-biased. The responsible expert performed the rating assessment of the country with information considered as the most reliable and up to date in accordance to the overall position of the country and the Agency's internal criteria for selecting data providers. The information and data used for this specific assessment can be considered as of sufficient quality.

Regulatory use

SGC ratings can be used for regulatory purposes according to the ESMA definition.

Conflict of interest

The responsible expert was neither influenced nor biased by third parties during the rating assessment. All employees involved in the rating assessment and revision of the rated entity have reported absence of conflicts of interests before initiation of the rating process.

Rating-Agentur Expert RA GmbH is completely independent from the activities of other agencies of the RAEX group.

Risk warning

The Agency disclaims all liability in connection with any consequences, interpretations, conclusions, recommendations and other actions directly or indirectly related to the conclusions and opinions contained in the Agency's press-release and research report.

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Office responsible for preparing the rating

The office responsible for the preparation and issuance of this credit rating is the office of Rating-Agentur Expert RA GmbH in Frankfurt am Main, Germany.

Rating-Agentur Expert RA GmbH is a credit rating agency established in Germany and therefore shall comply with all applicable regulations currently in force in the European Union.

The European Securities and Markets Authority (ESMA), the EU's direct supervisor of credit rating agencies (CRAs), has registered Rating-Agentur Expert RA GmbH as a CRA under Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 on credit rating agencies, with effect from 1 December 2015.

Rating-Agentur Expert RA GmbH applies the Code of Conduct Fundamentals for credit rating agencies issued by the International Organization of Securities Commissions (IOSCO Code) and includes the basic principles of IOSCO Code in its Code of Conduct.