

# MACROECONOMIC IMPACT on AXESOR CREDIT RATINGS

2020

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# 1 Executive Summary

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Credit risk is sensitive to the economic cycles, increasing in times of economic crisis and decreasing when the economic climate is healthy. The connection between economic cycle and the considered default is thus an important factor in the risk estimation.

**Axesor** has analysed the performance of the default in relation to some of the Spanish main macroeconomic magnitudes, GDP (Gross Domestic Product) and Unemployment Rate.

In the first section of the document, historical series of the [National Statistical Institute](#) have been used to compare the year-on-year rates of variation of the magnitudes with the default rate observed by **Axesor**. It is observed that the default rate behaves in a suitable manner regarding the macroeconomic magnitudes and therefore to the economic cycle.

In the second section of the document, the projection of the default rate in 2019 it is displayed, where it can be noted a correct adjustment of the Axesor default rate regarding the main Spanish macroeconomic indexes.

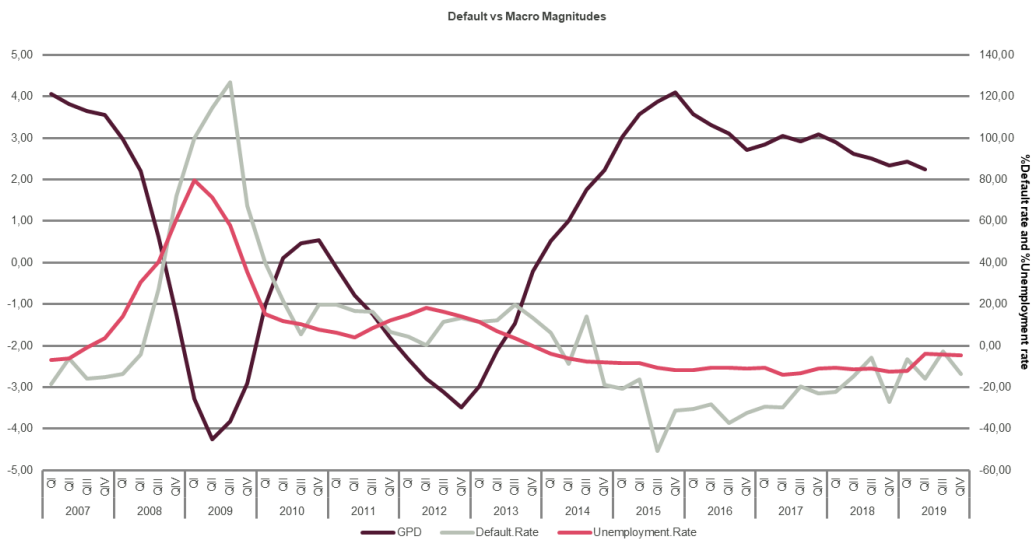
Finally, in sections 3 and 4, it is observed the ratings' distribution granted by **Axesor** with a historical depth of several years and where it is show a displacement to better levels of risk over the last years.

Review Area of the Audit and Compliance Department realises quarterly tests with the aim of identifying the impact of the macroeconomic changes in the ratings.

## 2 Historical performance of the default rate versus main Spanish macro magnitudes

In this section, the historical performance of the Axesor default rate versus the main Spanish macroeconomic magnitudes (GDP and Unemployment Rate) is investigated, which give a systematic view of the structure and behaviour of the economic process.

The following chart shows a joint vision of the performance of the different macro magnitudes together with the default variable along historical series.



On a global manner, it is observed that:

- The Axesor default rate has a direct relationship with the unemployment rate, that is, the default rate grows in the same way as unemployment, and the reverse with respect to GDP, if inflation is high, companies are more difficult to generate profits and grow, but the rate of default increases.
- The Unemployment Rate continues to decline, at the last quarter of 2019 it stands at 13.78%, with a year-on-year drop of 4.65 percentage points compared to the same quarter of the previous year.
- Regarding the annual variation of the GDP, it is observed that the strong growth continued until 2016, maintained balanced since then, with positives contributions.

### 3 Projection of the default rate

The values of the macroeconomic indexes are obtained from the INE source (National Statistical Institute), which is updated every three months.

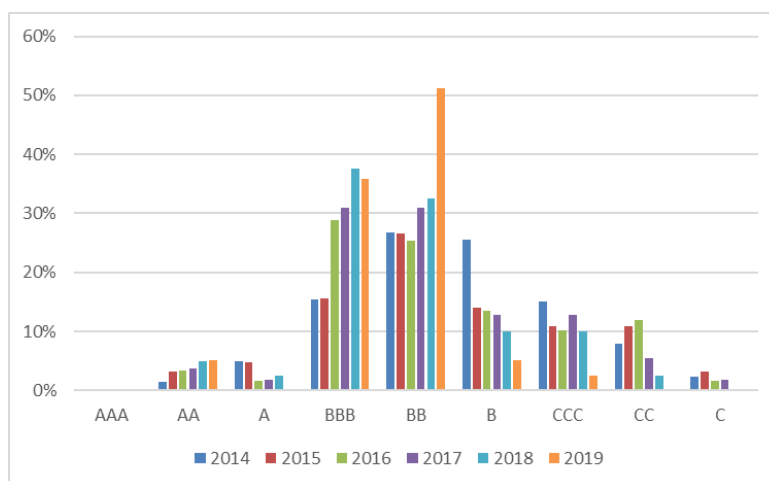
The values of the main macroeconomic magnitudes in the first quarter of 2019 were:

MACROECONOMIC INDEXES		2019	Annual Variation 2019
GPD	The Gross Domestic Product is an economic indicator that shows the global production of goods and services associated to a country during a certain period of time	110.33	2.25 %
Unemployment Rate	The Unemployment Rate is calculated as a quotient between the number of the unemployed and the total active population.	13.78	-4.65%

If the quarterly default rate is estimated with these macroeconomic indicators, the predicted default rate value will be at around 0.45, where in a 95% confidence interval, the 12-month default rate will be on the interval (0.17, 0.75).

## 4 Ratings' distribution

The following chart shows the ratings' distribution over the last years:



Observing the historical distribution, there is a movement of the ratings toward the centre of the distribution in the last year.

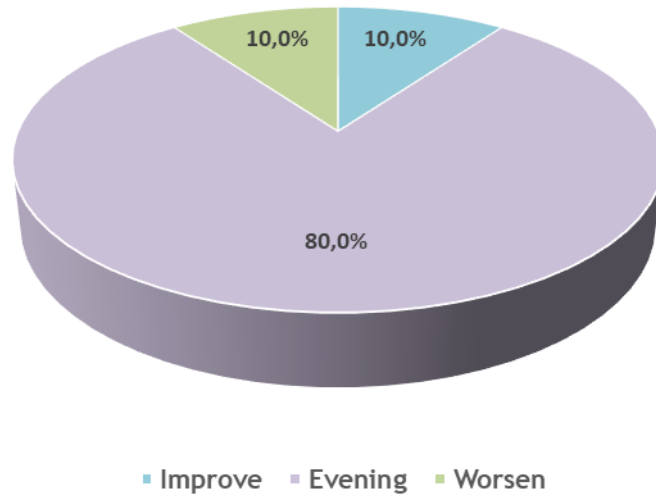
Specifically, for the last quarter of 2019, we have the following ratings' distribution:

- 0.00% of the companies are qualified with high risk ratings (CC-D).
- 95% of the companies have a medium risk (BBB-CCC).
- 5% of the companies have a low risk (AAA-A).

## 5 Rating's transition

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The following chart shows the changes observed in the ratings between all qualified companies in the last quarter of 2019 compared to the previous year.



The aggregated results show that in each risk level, more than 90% of the companies maintain their ratings.

It can be concluded therefore that the transition of the ratings remains stable.