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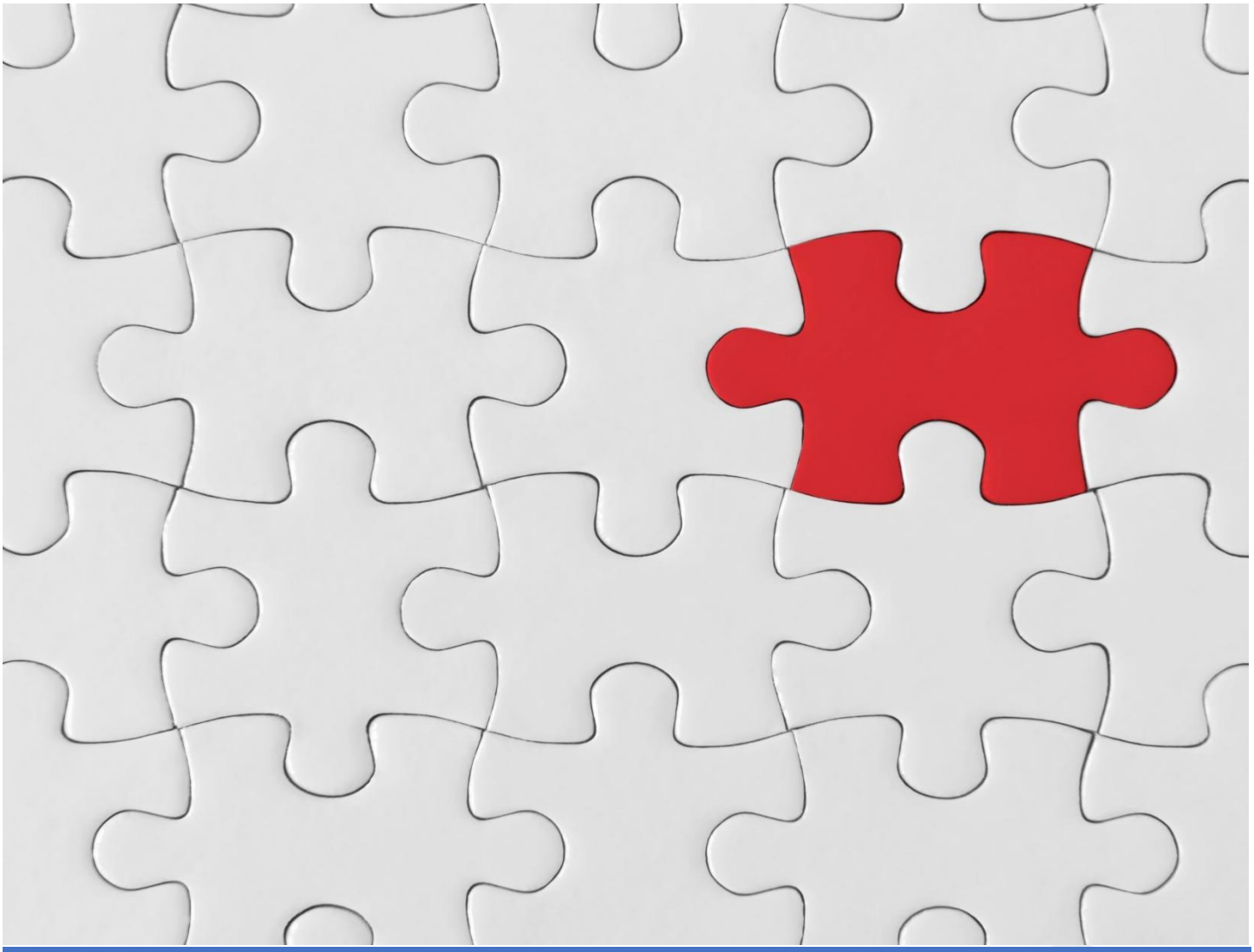

Correlation Between Credit Ratings and ESG Ratings, Their Methods and Challenges of ESG Analysis

ESG & Sustainability Transformation

Hung NINH

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ESG Transformation

info@ytt-consulting.com
ytt-consulting.com
H/O: London | UK
B/O: Hanoi | Vietnam

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ESG integration techniques can extend across asset classes. This article concentrates on the fixed-income asset class such as bonds and depts.

The direct physical infrastructure impact of climate change, corporate scandals, and the importance of human capital are ESG risks that impact bonds. These are influenced by oversight, transparency, and accountability.

Different Levels at Which ESG Factors Can Affect Bond Price Performance and Credit Risk

Broadly speaking, ESG factors can affect the price performance of a bond and its credit risk at different levels.

- Issuer and company level: These are risks that affect a specific bond issue and not the whole market. They are related to factors such as the governance of an issuer, its regulatory compliance, the strength of its balance sheet, and company-specific items, such as brand reputation. For example, the yield on the corporate debt of the car manufacturer Volkswagen rose and stayed high for a prolonged period of time in the aftermath of the fraudulent emission scandal.
- Industry and geographic level: These risks stem from wider-ranging issues affecting the entire industry or region. They can be related to regulatory and legal factors, technological changes associated with the business activity the company is involved in, and the markets it sources or sells to (e.g., the idea that utilities are relatively more exposed to climate change risks than media companies).

Some investors assume that some ESG factors might affect a bond's price performance but not actually influence an issuer's creditworthiness. This is because an ESG factor might not be considered to affect bankruptcy risk, even if it might have an impact on price performance. This would highlight a difference between a rating analysis and an asset valuation.

Good ESG risk management not only affects asset prices but can also fundamentally protect people's lives. For instance, no one was injured in the 2013 landslide at a Rio Tinto mine in Utah. Rio Tinto's laser scanning system sent early warning signals, enabling a prompt evacuation of the site. However, the 2019 Vale dam failure in Brazil cost many lives.

Continuing Evolution for Credit and ESG Since PRI Releases:

Practice in the area of credit and ESG has evolved in the past few years. By 2020, CRAs were in a different place than when the first observations were made by the PRI in 2016–2017, which was when the PRI's Statement on ESG in Credit Risk and Ratings and its report on CRAs were both released.

The PRI statement was designed to commit CRAs and fixed-income investors to incorporate ESG into credit ratings and analysis in a systematic and transparent way. As of May 2022, the statement remains open for investors and CRAs to sign.

CRA's ESG Analysis Challenges with Equity and Fixed Income:

There are global and regional CRAs. Historically, ESG analysis was not typically considered by CRAs. But this has changed in recent years. A major evolutionary step was taken by S&P (a global CRA) when it rolled out ESG as part of its credit assessments in 2019. The World Bank also launched its Sovereign ESG database in late 2019. In addition, the IMF launched its Climate Change Indicators Dashboard in April 2021.

Surveys from investors suggest that the G factor remains more important to credit investors than E and S. Credit investors argue that this is because downside risk (as in bankruptcy risk and therefore the chance of losing a credit investor's entire capital) is more important than any upside or opportunity risk. Arguably, opportunity is more important to equity investors. The upside is limited for most credit investors, but downside risk from bankruptcy will hurt returns. Credit investors view fraud prevention and governance as important factors in protecting from downside risk (negative credit events). As G is directly related to preventing downside risk, its direct relevance is easier to trace for credit investors.

Many of the challenges are similar to equity ESG ratings. These challenges include:

- The lack of transparency
- Inconsistent or changing methodologies
- The use of estimated data
- The lack of comparability through time and between providers and companies.

The following also give some specific fixed income challenges:

- Time horizon (e.g., three-month paper or 50-year bonds),
- Lack of proxy vote,
- Different levels of management engagement, and
- Unique qualities of sovereign credit.

Corporate Credit Risk Assessments:

When assessing credit risk, pre-2016 CRAs typically did not attempt to capture the environmental, ethical, or social impact of a bond issue. For example, CRAs may have somewhat ignored environmental damage measurements (e.g., CO2 emissions of a company) or environmental opportunities.

Before 2016, when analyzing a carbon-intense company, CRAs might have typically focused on other material impacts, including financial, regulatory, and legal factors, that could affect the company's credit profile. As of 2020, though, many CRAs look at a range of ESG factors (and judge materiality). They judge the company's response to ESG risks and "ESG events" and link that response to potential financial and balance sheet or cash flow considerations, such as the ability to meet debt obligations.

In addition, during 2018–2019, Moody's and S&P developed further ESG evaluation systems, which continue to evolve today.

Typically, CRAs assess the predictability and certainty of an issuer's ability to generate future cash flow to meet its debt obligations. To this end, they look at whether companies can sell their assets to cover obligations (and certain assets might be impaired through ESG concerns, such as coal assets).

The levels of litigation risk are often analyzed as well, including environmental litigation, employment litigation, and human rights violations (e.g., modern slavery laws).

To that degree, ESG risk, which comes to litigation, has always been incorporated into CRA analysis.

On the quantitative side, CRA analysis focuses on the issuer's overall bankruptcy risk, the strength of its balance sheet, and how it compares to other issuers.

Using standard credit ratio analysis, CRAs might test the following:

- How ESG factors affect an issuer's ability to convert assets into cash (profitability and cash flow analysis)
- The impact that changing yields—due to an ESG event—could have on the cost of capital, depending on the share of debt used in the issuer's capital structure (interest coverage ratio and capital structure analysis)
- The extent to which ESG-related costs affect an issuer's ability to generate profits and add to refinancing risks
- How well an issuer's management uses the assets under its control to generate sales and profit (efficiency ratios).

In summary, a CRA rating is typically:

- Based on analytical judgment (both quantitative and qualitative), using all the information deemed material by the analysts;
- Forward-looking, with a varying time horizon;
- Composed of dynamic and relative measures; and
- A statement of the relative likelihood of default.

An interested fixed-income investor may conduct different materiality assessments or judgments to a CRA. This is considered true of equity ESG ratings by many investors as well.

Indeed, credit investors typically use the information provided by credit ratings to help them price, trade, and assess the credit risk of fixed-income securities and to determine whether these are suitable investments, but ratings are not the only input.

A combination of investor research, analysis and judgment determines the suitability of a bond investment based on a range of factors, of which credit ratings may be one. Other factors may include proprietary indicators and recommendations by security analysts. It is notable that not all credit will have a rating.

With that said, credit ratings have an important role in the credit risk assessment of a bond issue and are typically used to define and limit investment mandates set by a wide range of institutional investors. Many investors in investment-grade credit have limited or no ability to invest in high-yield speculative-grade credit, for example.

Certain Fixed-Income Investors Use QESGs:

Certain fixed-income investors use quantitative ESG scores (QESGs) – not to be confused with what investors often mean by quantitative investing – in their fixed-income assessments. These QESGs might be based on quantitative data (such as carbon intensity) or be judgments based on data and/or policy (e.g. policy or commitment to align business model to science-based targets). Not all investors use the term and different investors may be referring to different proprietary systems when referring to QESGs.

Green Bonds Considered a Different Class of Credit:

Green bonds (bonds financing green projects) or bonds assessed to meet B-corp criteria are sometimes considered a different class of credit. Once certain ESG or sustainability criteria are met, a green bond's credit risk is often assessed in the same manner as a standard credit.

Typically, a green bond is a fixed-income instrument tied to projects that create an environmental benefit. Issuers use proceeds for a variety of activities aimed at contributing to climate change mitigation, adaptation, or some other environmental benefit, such as

conservation or pollution control. Examples include projects associated with renewable energy, public transportation, energy-efficient buildings and manufacturing processes, agricultural land management, waste management, and water management.

Often a green bond has some form of verification or assurance from a third-party organization. This organization ensures that the financing meets the criteria set out in the bond, though the covenants related to this will vary by different bonds. Debate continues as to what makes a bond "green" because no global consensus exists on the types of capital projects that fit within the scope of green bonds. There are, however, several frameworks, which may start to standardize with the publication of the EU Green Taxonomy and with the EU Green Bond Standard developed in 2021.

Note that B-corporation certification is a private certification issued to for-profit companies by B Lab, a global nonprofit organization that verifies social and environmental performance, public transparency, and legal accountability to balance profit and purpose.

Sovereign Credit Risk Assessment:

A country's competitiveness, growth and potential growth, governance, and political stability are all important ingredients of prosperity. There are many ESG factors to possibly take into account, including the availability and management of:

- Resources (including population trends, human capital, education, and health),
- Emerging technologies, and
- Government regulations and policies.

Beyond this though, a CRA is typically most interested in a government's ability to generate enough revenues to repay its financial debt obligations.

Each CRA uses a different framework when assessing sovereign debt, but typically looks at some form of:

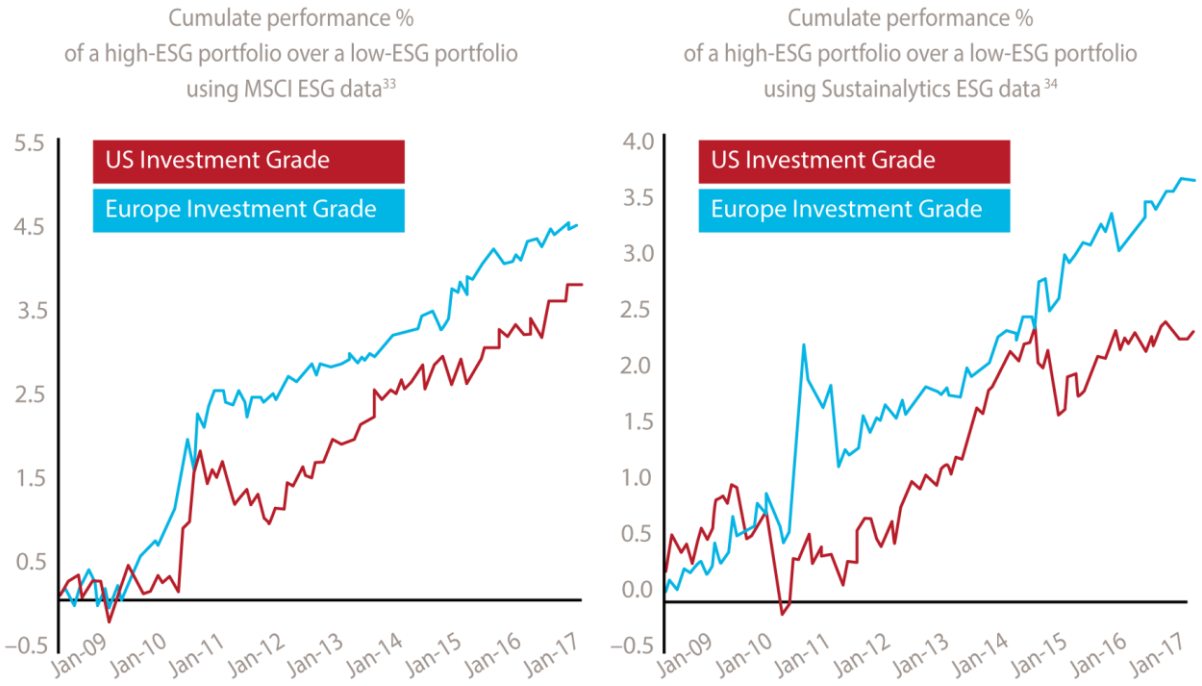
- Economic growth; and
- Governance.

The ways that E and S factors transmit to economic growth and potential can also be indirect, and the way CRAs assess this is still evolving. The G factor is a more obvious and direct assessment, which has been analyzed historically. On G, each major CRA has a different framework to assess it, so in that sense, this replicates some of the difficulties around equity stock ESG ratings.

ESG and Credit Ratings: Discussion over Relationship

The link between ESG ratings and credit ratings is still hotly debated among investors. Proponents might point to a Barclays' study looking at a high ESG portfolio versus a low ESG portfolio using two different ESG datasets (MSCI and Sustainalytics).

Exhibit: Investment-Grade Bond Portfolio Performance (High ESG over Low ESG)



Source: Barclays (2018).

The case for sustainable bond investing strengthens, but critics would point out the flaws of correlational studies as well as the short 2009–18 time period. Critics further point out that the factor attributions post-2008/2009 (the financial crisis), and some ESG ratings correlate with quality factors (though not all).

Portfolio managers are developing more sophisticated approaches beyond simple ESG tilts. They use third-party ESG data but combine the data to produce proprietary ESG metrics for that firm, including a fundamental, absolute-oriented ESG rating and a relative investment ESG score. The internal investment teams can see an ESG risk from the single-issuer level to the portfolio level, which is a value-added part of the process.

The impact can be seen in the credit default swap (CDS) market as well as on a single-issuer basis, such as with Volkswagen and emissions testing. This would be an argument for the impact an ESG event can have on CDS.

However, the timing of subsequent CDSs does not perfectly correspond to when all the information was first released. The lag in timing might suggest inefficient markets or the lagged delays that market participants have in assessing material ESG information into CDS prices.

The research on ESG and credit is historically less well developed than in equity, but interest continues to grow and techniques are developing, with CRAs recently embedding ESG into their processes. There is some evidence that ESG ratings and CDSs may have a relationship. Still, the overall principles of gathering ESG data or ratings, assessing material ESG factors, and then embedding them into asset assessment and valuation hold.

Potential Bias in Ratings:

ESG ratings in the credit area could suffer bias as is seen in other asset classes. Three key types of bias are typically encountered:

- Company size bias, where larger companies might obtain higher ratings because of the ability to dedicate more resources to nonfinancial disclosures.

- Geographical bias, where a geographical bias exists toward companies in regions with high reporting requirements or some other cultural factor (e.g., higher unionization in Europe).
- Industry and sector bias, where rating providers oversimplify industry weighting and company alignment.

Bias can potentially also be seen in how certain industries (e.g., technology) are assessed in comparison to other industries, or through the lens of other factor labels, such as "growth" or "value."

To learn more about ESG and sustainability-related models, don't hesitate to contact **YTT Consulting**!