YTT. Consulting
Strategy and Sustainability

Different Approaches To Integrating ESG In the Investment Process & Stock Picking

ESG & Sustainability Transformation

Hung NINH

12/2023

ESG Transformation

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

Different Approaches To Integrating ESG In the Investment Process & Stock Picking

A firm can use a multitude of approaches to integrate ESG analysis into its investment process. This section provides a summary of these approaches.

What is important to note is that ESG analysis can be either qualitative or quantitative (sometimes contracted to "quant"). Similarly, the way the analysis is integrated can also be purely qualitative (e.g., opinion on quality of management added to the investment thesis) or quantified (e.g., impact on financial models or valuation). Some techniques could be considered a hybrid of both techniques, such as scorecards, where a qualitative judgment is turned into a quantitative score.

These tools and techniques cover different types of strategy (passive, systematic, fundamental, active or activist) and different asset classes. Certain tools tend to be asset class or strategy specific.

Qualitative ESG Analysis:

Qualitative ESG analysis is likely to be used in investment processes that are based on company-specific research, fundamental analysis, and stock picking.

- Investment teams analyze ESG data to form an opinion on a firm's ability to manage certain ESG issues.
- They combine this opinion with their financial analysis by linking specific aspects of the company's ESG risk-management strategy to different value drivers (e.g., costs, revenues, profits, and capital expenditure requirements).
- Analysts and portfolio managers then seek to integrate their opinion in a quantified way into their financial models by adjusting assumptions used in the model (e.g., growth, margins, or costs of capital).

Certain qualitative techniques might be more suitable (or weighted differently) for different asset classes. For instance, a judgment on management incentives (a part of G analysis) could have more weight in public equity and private equity, have less weight for fixed-income investors, and be deemed irrelevant for sovereign bond investors.

Quantitative ESG Analysis:

Quantitative ESG (QESG) analysis is likely to be used in investment processes that use quant models to identify attractive investment opportunities. In such cases, the ESG data are typically aggregated into an ESG factor (an ESG score), which is added to the quant models. This could be a screen that creates the investment universe or a quant model used to adjust valuations based on several factors (including ESG).

Quantitative, Systematic, and Thematic Approaches to Integrated ESG Analysis:

Quantitative practitioners might assess ESG factors at the research stage typically using a third-party database or a mix of third-party data and internal proprietary data. This assessment is typically done with large datasets of stocks or bonds, rather than individual company assessment, though some firms will create their own proprietary scores from individual company assessment. The data gathering can be similar to that done by fundamental investors but tends to be over larger datasets. For instance, a global dataset might contain 2,000 to 4,000 companies with 100 data points per company.

Quantitative factor investors typically integrate ESG factors alongside other factors, such as value, size, momentum, growth, and volatility. Some of these factors might be from third-party models.

ESG data are included in their investment processes and could result in upward or downward adjustments to the weights of securities, including to zero. For instance, a strong score on an environmental factor might be sought. Systematic approaches can attempt to derive correlations to understand how ESG factors might affect financial performance over time and then weight those ESG factors appropriately. Investors can try to assess relationships in existing ESG third-party scores as well as proprietary scores. Algorithmic approaches use ESG data (e.g., scraped from internet news articles to adjust company or sector weights after parsing the ESG data through rules-based formulas).

Passive and index approaches might tilt toward ESG factors chosen by investors. For instance, the Japanese Government Pension Investment Fund has created, with index providers, gender-tilted, rules-based indexes to invest in. These could be considered rules-based strategies. This shows that asset owners can set certain mandate rules accordingly to integrate ESG across differing strategies and in line with their own ESG polices and philosophies.

Thematic funds might assess alignment with priority themes, which could have an ESG nature (e.g., climate, gender). This alignment can be done with a material opportunity mapping process or using ESG data to adjust weights accordingly.

Application Programming Interfaces:

Investors use application programming interfaces (APIs) to compile and assess data. APIs are used to more easily access and interface with underlying databases and other datasets.

Companies are more forthcoming with their sustainability practices, and financial practitioners are increasingly using APIs to compile and integrate this rapidly growing dataset into their processes. The number of total unique ESG data points captured is on the rise.

Artificial Intelligence and Algorithms:

- Much of the ESG data available on companies is unstructured. Artificial intelligence (AI) and machine learning algorithms attempt to bring structure and numerical value to part of that unstructured dataset. Some practitioners
- focus on using AI techniques to measure ESG performance tied to measures developed by the Sustainability Accounting Standards Board (SASB),
- attempt to provide immediate access to scores based on material ESG events as they occur, or
- focus on intangible ESG factors, such as corporate culture, that could drive company value.

Natural language processing (NLP) and other quantitative techniques are likely to continue to develop over time. NLP is broadly defined as the automatic manipulation of natural language, such as speech and text, by software. In particular, investors are interested in how to program computers to process and analyze large amounts of natural language data related to ESG. The aim is to obtain a computer capable of "understanding" the ESG contents of documents, including the contextual nuances of the language within them. The technology can then accurately extract information and insights contained in the documents as well as categorize and organize the documents themselves.

Highlights between the Quantitative Approaches and Qualitative Approaches and Terminology Confusion:

Combining this information can be confusing because of the different meanings investors give to the term quantitative. As a description of an analytical technique, it tends to be used when a numeric score is assigned. But it can also be used to describe a whole class of investment strategy that tends to use stock, bond, derivative, or other security factor properties as the main basis for investment.

In terms of investment strategies, quantitative investing can be known as "systematic investing." It can include the following strategies:

- High-frequency trading
- Use of algorithms based on news or factors and statistical arbitrage
- Trend following
- Risk parity
- Use of beta strategies

The approach tends to use heavy mathematical modeling, computing power, and data analysis, potentially including machine and natural language learning processes. Some firms use these approaches exclusively, and some use them to supplement human decision making.

Typically, computer and mathematical models are built and then backtested. Where these models use ESG data or information (e.g., through raw data or ratings agencies), this is considered a form of ESG integration. This produces many challenges because the length of time series for ESG data (usually 7–15 years, depending on the series) is much shorter than for financial data. This typically might be viewed as a quantitative investment form of integrating ESG technique.

Qualitative forms of analysis typically use human judgment of non-numerical forms of analysis. However, advances in techniques are blurring these traditional boundaries. For instance, machine learning's use of natural language processing and scanning of management commentary from meeting transcripts are using those qualitative words in a quantitative fashion.

Fundamental active strategies, where human judgment is used, tend to use ESG techniques that have both qualitative and quantitative elements to them but are typically not considered quantitative investment. And similarly, with quantitative investment strategies that use ESG ratings data, those ESG ratings data might be based on qualitative human judgment.

Overall, ESG techniques can be considered quantitative or qualitative or have elements of both. Investment strategies are typically classified as:

- Quantitative (systematic, algorithmic),
- Fundamental,
- Active,
- Passive, or
- Beta.

Investors interchange the term quantitative but provide different meanings when applying it to overall investment strategies and processes rather than specific ESG integration techniques.

Tools and Elements of ESG Analysis:

Regardless of whether the ESG analysis is classified as qualitative or quantitative, investors use many types of tools. These tools and elements of ESG analysis can include the following:

Red flag indicators – Securities with high ESG risk are flagged and investigated further or excluded. For instance, a company that has a board that lacks majority independence might be flagged for deep scrutiny on management incentives or simply be excluded from an investable universe.

Company questionnaires and management interviews – For example, if the detail on management aspects or other material ESG information is insufficient, the investor might ask the company for specific data. Or the investor might have a prepared list of standard ESG data they ask for. These questionnaires are also used in parallel with regular company meetings, where investors and companies meet to discuss the most material ESG issues.

Checks with outside experts – For instance, an investor might interview key industry thought leaders or other stakeholders of the company, including customers, suppliers, or regulators. These checks might be complemented via interviews, surveys, or third-party sourcing, such as the use of expert networks.

Watch lists – These lists might include securities with high ESG risk added to a watchlist for monitoring, or securities with high ESG opportunities that are put on a watchlist for possible investment. For instance, once an investor has assessed ESG risks or opportunities, a news or stock price watchlist is created and monitored for stock price entry levels or for change in ESG events. For example, a highly carbon-intense company identified with high E risk might be monitored against changing policies on carbon taxes.

Internal ESG research – This research could be based on a variety of techniques and data sources. Proprietary ESG research and analysis is performed, and the output can be provided in scores, rankings, or reports. The research can be based on a variety of data sources, and proprietary ESG research or scores could be created. Furthermore, research could consist of the following:

- Materiality frameworks;
- ESG-integrated research notes;
- Research dashboards;
- Strengths, weaknesses, opportunities, and threats (SWOT) analysis with ESG factors;
- Scenario analysis; and
- Relative rankings.

External ESG research – For this research, sell-side, ESG specialists, or third-party databases can all be used, and a materiality framework is created.

ESG agenda items at investment committee – or chief information officer–level meetings – One technique to ensure consistent integration is to ensure an ESG section as a standing item at committee meetings. This approach might guarantee scrutiny from senior level investors and signal importance to the investment firm.

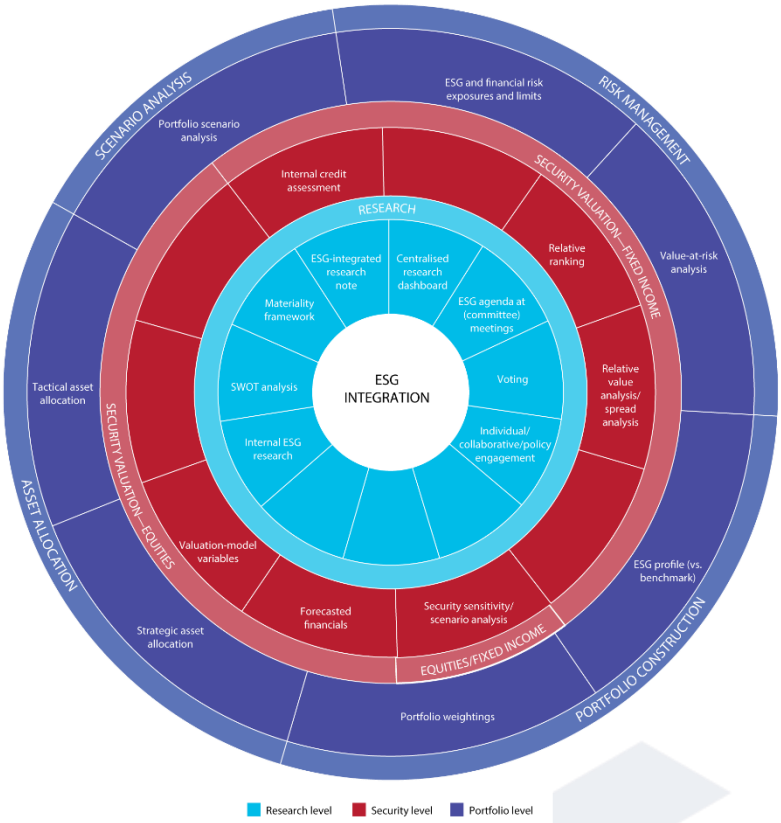
Elements of ESG Integration:

The elements of ESG integration include the following:

- Adjusting forecast financials (e.g., revenue, operating cost, asset book value, capital expenditure)
- Adjusting valuation models or multiples (e.g., discount rates, terminal values, ratios)
- Adjusting credit risk and duration
- Managing risk, including exposure limits, scenario analysis, and value-at-risk models
- ESG factor tilts
- ESG momentum tilts
- Strategic asset allocation, including thematic and ESG objective tilts
- Tactical asset allocation
- ESG controversies and positive ESG events

This can be summed up by the ESG integration framework shown in Exhibit.

Exhibit: ESG Integration Framework



Source: CFA Institute 2018, in collaboration with PRI.

The ESG integration framework, shown in Exhibit, is not meant to illustrate the perfect ESG-integrated investment process. Because every firm is unique, the ESG integration techniques of one firm are not necessarily the right techniques for all firms. However, many firms will use a selection of the techniques referenced in the figure.

Firms typically use various tools and techniques to identify material factors. These tools can be qualitative or quantitative, or a mix of both.

Differences between Company or Business Analysis and Security Analysis:

Many investment practitioners make two distinctions in fundamental investment analysis:

- The difference between a company or business assessment, and
- A security, stock, bond, or convertible (or other tradeable construct, including derivatives) assessment.

While the differences are often interchanged in ordinary language, many investors give them different meanings. Stocks and bonds can have properties that companies do not, such as stock beta or volatility, which are potentially expressed in different ways.

A company or business assessment typically examines fundamental properties of a business, such as its competitive advantages (or lack of), sometimes described as a business moat (after the popular Warren Buffett Annual Letters). These properties could appear in the company's products or services, suppliers, employees, management, organizational structure, incentives, corporate culture, or resources (natural, intellectual, or innovation). Many of these properties could be considered as under an ESG category. For instance, natural capital could be under E, corporate culture or supplier analysis under S, and management structure or incentives under G.

A business might have strong aspects of ESG, which lead to an assessment of a strong or competitive advantage, that can then lead to a positive judgment on that business or company.

The statistical properties of a company stock or bond might differ from its fundamental business properties. For instance, beta or stock volatility are properties of a stock, not of a company or business per se. This distinction is important because of the debate among investors who use security factors to invest. The debate here is whether these properties are ESG components that are robust QESG stock or bond factors.

This debate is important because of how an assessment of the strength or weakness of a company or business can then lead to a valuation of its securities.

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