T. Rowe Price
INVEST WITH CONFIDENCE

T. Rowe Price ESG Integration

GUIDELINES FOR INCORPORATING ENVIRONMENTAL AND SOCIAL FACTORS

At T. Rowe Price, we strive to help our clients reach their long-term financial goals through a thoughtful, disciplined approach to managing investments. Consistent with that mission, we have an obligation to understand the long-term sustainability of a company's business model and the factors that could cause it to change. In this process, our dedicated, in-house research analysts consider tangible investment factors such as financial information, valuation, and macroeconomics in tandem with intangible investment factors related to the environment, society, and corporate governance.

As identifying the potential impact of environmental, social, or governance (ESG) factors can be a more subjective process than traditional financial analysis, each of our investors defines a potential investment's ESG-related risk and reward based on its industry, geography, and company dynamics. Our research analysts work closely with our in-house ESG specialists to determine which factors will be most material to the underlying fundamentals of a particular investment.

When it comes to integrating environmental and social factors into investment decisions, we believe special considerations need to be taken into account. First, environmental and social factors are generally intertwined with industry and/or regional trends, meaning a tailored approach is important. Second, the quality and availability of environmental and social data is not uniform across geographies or sectors, making a fundamental (or active) investment approach more valuable.

Integration of environmental and social factors into our investment process starts with the initial research at the inception of an investment idea and continues through the life of the investment. This analysis is applied to multiple stages and includes such steps as:

- identification and monitoring of environmental and social data for company analysis;
- consideration of environmental and social risks or "red flags" through fundamental analysis;
- consideration of environmental/social risks and/or tailwinds in portfolio construction;
- engagement with boards or managements; and
- proxy voting.

IDENTIFYING THE APPROPRIATE ENVIRONMENTAL AND SOCIAL FACTORS

While terminology in the asset management industry tends to group environmental, social, and governance factors into one ESG bucket, we believe the "E" and "S" factors need to be treated differently than the "G" factors in the investment process. Corporate governance standards are well established around the world and more uniformly disclosed. This is not the case when it comes to disclosure of environmental and social data. When determining which data points to evaluate across an industry/region, we take a thoughtful analysis of each criterion and ask ourselves a series of questions, including:

- Is the factor material to the underlying investment?
- Is the factor a meaningful contributor to environmental or societal burdens/tailwinds?
- Is there a data point underpinning that factor?

- Is the data point a quantitative or qualitative assessment?
- If the data point is qualitative, what level of subjectivity has been incorporated?
- Are the data uniformly disclosed? Are issuers using the same reporting standard?
- Are the data commonly disclosed within an industry/region?

ENVIRONMENTAL AND SOCIAL FACTORS IN THE INVESTMENT PROCESS

At T. Rowe Price, we have integrated (or embedded) ESG analysis into the investment process, meaning the responsibility for integrating ESG factors into investment decisions lies with our analysts and portfolio managers. In order to support our investment professionals' capacity to incorporate ESG factors into their decision-making, we have specialists in ESG and legislative affairs within our investment research teams who work with our analysts and portfolio managers to delve into situations where these issues are particularly significant.

ASSET CLASS CONSIDERATIONS FOR ENVIRONMENTAL AND SOCIAL FACTORS

Across various asset classes, the integration of environmental and social factors remains a component of the investment process, but the selection of factors can be differentiated between asset classes. The following graphic includes a non-exhaustive list of factors used across each component of the investment process with asset class considerations.

FINANCIAL ANALYSIS	VALUATION	MACROECONOMICS & INDUSTRY ANALYSIS	ENVIRONMENTAL	SOCIAL	GOVERNANCE
Equities and Bonds Balance sheet quality Capital structure Cash flow growth Debt/equity Dividend sustainability Earnings growth/quality Earnings track record EPS "surprise" potential FCF/debt Inventory turnover Leverage ratios Management quality Off-balance sheet items Operating margins Operational effectiveness Receivables turnover Scenario analysis **Sovereign Bonds** Balance of trade Cash reserves External debt Fiscal performance Foreign liquidity Government finances	**Equities** DCF Dividend yield EV/EBITDA Price/book Price/earnings FCF yield **Corporate Bonds** Credit spread risk Default risk Rating downgrade risk Spread per unit of leverage Yield to maturity **Sovereign Bonds** Spread to gov't. benchmark Spread per unity of leverage Yield to maturity	**Equities and Bonds** Barriers to entry Competitive dynamics Cost of capital Economic growth Foreign exchange Industry cost curves Industry life cycle Inflation Market share gain/loss Industry growth Population growth Pricing power Real wage growth Supply/demand balance Supply/demand elasticity Threat of substitutes Yield curve **Sovereign Bonds** Debt ceilings/limits Demographics Economic growth Monetary flexibility Tax collection dynamics Tax structure Trade balance	**Equities and Bonds** Adaptability of sourcing Biodiversity impact Emissions intensity Environ. track record Hazardous chemicals use Impact of carbon taxation Integration of eco-design "New cities" infrastructure Pesticide safety standards Product end-of-life Regulatory dynamics Site restoration provisions Stranded asset risk Sustainable product sales Sustainable raw materials Waste recycling (mgmt.) Water intensity **Sovereign Bonds** Agricultural capacity Air pollution/emissions Climate change impact Ecosystem quality Energy dependency Energy resources Risk of stranded assets Water resources	**Equities and Bonds** Access to skilled labor Bribery/corruption record Conflict minerals sourcing Customer preference shift Data privacy standards Diversity statistics Fair trade sourcing Health and safety record Lobbying standards Local community relations Marketing standards Product safety record Robotics integration Stakeholder relations Supply chain standards Talent retention Technology shift **Sovereign Bonds** Crime and safety Education levels Employment levels Food security Human rights Poverty Public Health Trust in institutions	**Equities and Bonds** Accounting standards Audit practices Board composition Board expertise Financial transparency Mgmt. remuneration **Equities** Antitakeover provisions Share issuance policies Shareholder rights **Corporate Bonds** Bond covenants **Sovereign Bonds** Bond covenants Corruption Institutional strength Rule of law Trust in institutions

SECTOR CONSIDERATIONS FOR ENVIRONMENTAL AND SOCIAL FACTORS

Our approach to environmental and social factor integration is highly differentiated at the sector and industry level. Materiality to the underlying business model is one of the key determinants used in our analysis.

	ENVIRONMENTAL FACTORS	SOCIAL FACTORS
Consumer Discretionary	Eco-design product/electric vehicles Responsible sourcing (cotton, synthetic textiles, etc.) Waste management	Treatment of workers in the supply chain Employee relations (unions/"living wage" workers) Customer behavior (online shift)
Consumer Staples	Organic products HCFCs phase-out Responsible sourcing (palm oil and other agri-products)	Fair trade products Supply chain management (vulnerable agri-chains) Human health impact (sugar, tobacco, etc.)
Energy	Methane emissions Risk of stranded assets Refinery/chemical emissions	Employee and contractor health and safety Relations with local communities Bribery and corruption
Financials	Sustainable financing Environmentally-related products (drought protection) Natural catastrophe risk	Human capital management (talent retention) Cybersecurity Business ethics
Health Care	Water usage Waste disposal	Product safety Cybersecurity Appropriate marketing/lobbying practices
Industrials	Energy-efficient products Intermodal transportation shifts Manufacturing environmental footprint	Bribery and corruption (aerospace and defense) Product safety Robotics
Information Technology	"Smart" appliances and infrastructure Water usage (semiconductors) Product end-of-life	Data privacy Responsible sourcing (conflict minerals) Human capital management (talent retention)
Materials	Emissions Efficient building products Responsible pesticide usage	Employee and contractor health and safety Relations with local communities Bribery and corruption
Real Estate	Eco-friendly buildings "New cities" infrastructure	Local communities/affordable housing Demographic shift/aging population
Telecommunications	Intelligent and efficient network infrastructure	Cybersecurity Improving lives through connectivity Responsible sourcing (conflict minerals)
Utilities	Shift toward distributed power Electric mix shift toward renewables/grid stability Stranded assets	Employee and contractor health and safety Relations with local communities Human health impact (particulate emissions)

APPLYING ENVIRONMENTAL AND SOCIAL FACTORS TO PORTFOLIO CONSTRUCTION

Our ESG integration process asserts that any specific environmental or social factor is just one component of the overall investment decision, which is made in tandem with other investment components such as financial analysis, valuation, macroeconomic, factors, and portfolio risk management. As such, our ESG integration process doesn't yield blanket exclusions or prohibitions based solely on any specific environmental or social factor. At T. Rowe Price, we implement limited sets of official exclusions at times, all of which reflect our interpretation of legal requirements or market expectations in the region, such as:

1. We maintain a global exclusion list on issuers with significant business ties to the government of the Republic of Sudan and its connection to human rights abuse.
2. In the UK, Luxembourg and Canadian registered portfolios, we maintain an exclusion policy on certain issuers deemed to be engaged in the manufacture, production, or assembly of cluster-munitions systems.
3. In our Australian registered portfolios, we maintain an exclusion policy on issuers engaged in the manufacture of tobacco products.
4. All portfolios can be subject to sanction-related exclusions. At any point in time, a portfolio may be prohibited from investing in certain sovereign or corporate instruments associated with targeted U.S. or international sanctions.

Our philosophy is that exclusions established solely due to environmental and/or social factors need to be paired with a specific client's values requirement. As the decision to make these exclusions is made without consideration of other investment components (e.g. financial analysis, valuation, etc.), there is the potential for a trade-off of financial return in exchange for achieving a "values"-driven target.

ENGAGEMENT ON ENVIRONMENTAL AND SOCIAL ISSUES

We believe it is incumbent on T. Rowe Price as an asset manager to safeguard our clients' interests through active ownership, monitoring, and engagement with companies and other issuers we believe to be applying a substandard level of oversight in certain key areas. In our experience, such engagement is most effective when it is directly led by our fund managers and reflects their view that a serious concern is present but potentially may be ameliorated through our efforts. These are the situations where we have and will continue to concentrate our investment of time and resources because we believe they have the highest probability of a successful outcome for our clients.

Occasionally, we participate with other investors in industry-level initiatives aimed at improving disclosure or business practices on a market-wide level. However, the central focus of our engagement program is at the company level. Generally, we do not identify broad themes and then engage with multiple companies on the same issue. We believe our company-specific approach results in the highest impact because it is aligned with our core investment approach: active management rooted in fundamental investment analysis. (More information on our engagement practices is available in our Engagement Policy document.)

PROXY VOTING

Proxy voting is a critical component of our approach to corporate governance. We offer our clients a high degree of transparency related to the votes we cast on their behalf. Disclosure of our proxy voting guidelines and voting record can be found on our corporate website.

Shareholder proposals of an environmental or social nature have become more frequent in recent years. It is T. Rowe Price policy to take a case-by-case approach to analyzing these proposals. To do this, we utilize research reports from our external proxy advisor, company filings and sustainability reports, public research from other investors and nongovernmental organizations, our internal industry research analysts, and our in-house sustainability experts. Generally speaking, we support well-targeted proposals addressing concerns that are particularly relevant for a company's business that have not yet been adequately addressed by management. (More information on our proxy voting practices is available in our Proxy Voting Policies & Procedures document.)

FREQUENTLY ASKED QUESTIONS

Q: What determines if a factor is material to an underlying investment?

A: We deem an environmental or social factor as material when it has the potential to sway an investment's risk/reward profile enough to make it no longer attractive. Our investment professionals can use many techniques to evaluate the impact of an environmental or social factor, including:

1. embedding specific data into a financial model;
2. scenario analysis overlaid on a base-case model; or
3. considering the factor risk across the portfolio.

Q: What determines if a factor is a meaningful contributor to environmental/social burdens/tailwinds?

A: We use several external sources to help guide us in understanding environmental and social pressure points. We believe these are relevant to the investment process, as issuers contributing to these pressures are likely to face greater societal scrutiny over time. This could come in the form of more regulatory burdens, taxation, litigation, and/or consumer dissatisfaction. Conversely, issuers that act as "solutions providers" likely have much more sustainable business models. Some of the external sources we use include:

- United Nations Sustainable Development Goals
- United Nations Global Compact Principles
- OECD Guidelines for Multinational Enterprises

Q: How does your investment process reflect climate change considerations?

A: The implications of climate change are creating rapidly changing regulations and consumer demands around the world. Our investment professionals capture the impact of climate change as part of their ESG analysis, which is embedded in our investment process. Climate change implications are considered in company and industry research, investment decisions, and engagements with management teams.

We believe that speaking with company managements and other stakeholders about climate change is a good way to gather valuable investment insights as to the management's process for assessing long-term risks and helps reinforce the notion that climate-related risk assessment should remain a priority. We believe companies that engage in long-term strategic planning, including in-depth analysis of ESG factors such as climate change, benefit from that experience. Looking inward to assess their own mission and purpose, to think about how the competitive landscape is evolving over long periods of time, and to consider how changes in the broader community might affect the company are all processes that improve the alignment of the company's direction with the interests of long-term shareholders. Furthermore, when a company's radar is tuned into long-term climate and societal shifts, it may be better positioned to create new opportunities.

Engagement with management teams or board members on climate change is usually conducted as part of a multifaceted discussion on many investment considerations for that particular company but occasionally could focus only on climate change implications. Given that T. Rowe Price has predominantly actively managed portfolios, we have the option not to invest in a company with onerous climate change risk. As a result, our engagements on specific ESG issues like climate change tend to be in-depth discussions, where we believe our engagement can be effective.

The table below outlines some examples of climate change issues our investment professionals consider across various sectors.

SECTOR	EXAMPLES OF CLIMATE CHANGE FACTORS
Consumer Discretionary	Electric vehicles, eco-design consumer products, apparel and footwear supply chain impact
Consumer Staples	Responsible palm oil sourcing, HCFCs phase-out, organic products
Energy	Long-term oil and gas demand, fugitive methane emissions, gas flaring, risk of stranded assets, refinery and chemical plant emissions
Financials	Sustainable financing, environmental-related insurance products (e.g., drought protection)
Health Care	Water usage, waste disposal
Industrials	Energy efficiency products, intermodal transportation shifts
Information Technology	"Smart" appliances and infrastructure, software applications leveraging consumer demand patterns
Materials	Emissions, efficient building products, agri-businesses, impact of fertilizers/pesticides, GMOs
Real Estate	Eco-friendly buildings, "new cities" infrastructure
Telecommunications	Intelligent and efficient network infrastructure
Utilities	Shift from centralized to distributed power networks, grid stability, renewables growth within electricity mix, risk of stranded assets, electricity storage, energy efficiency

IMPORTANT INFORMATION

This material is provided for informational purposes only and is not intended to be investment advice or a recommendation to take any particular investment action.

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