

T.RowePrice®

SUSTAINABLE INVESTING

Environmental, Social, and Governance

ESG

2019 Report





3	FOREWORD
4	2019 IN REVIEW
	Responsible Investing
	Governance
6	ESG INVESTING APPROACH
	Investing with ESG Insights
	Responsible Investing Indicator Model (RIIM)
	Aligning to Global ESG Frameworks
12	ESG INTEGRATION IN ACTION
	Investment Analyst Case Studies
	Portfolio Manager Perspectives
20	FOCUS THEMES
	Climate Change—Rising Risks Not Yet Factored in by Markets
	The Impact of Income Inequality
	Public Versus Private Company Engagement
28	ENGAGEMENT
	Program Overview 2019 Activity
30	PROXY VOTING
	Program Overview 2019 Activity
	Shareholder Proposals in the Spotlight
34	COLLABORATIVE ENGAGEMENT AND INDUSTRY LEADERSHIP
37	RESOURCES
	Accountability
	ESG Team

CONTENTS

Our mission is to help our clients reach their long-term financial goals. Consistent with that objective, we have an obligation to understand the long-term sustainability of the companies in which we invest. Which is why environmental, social, and governance factors are key considerations in our investment approach.

Visit our website or contact T. Rowe Price for our complete range of ESG resources including insights, white papers, voting records, and engagement and responsible investing policies.

troweprice.com/ESG

When we decided to bolster our in-house environmental, social, and governance (ESG) capabilities in 2017 with the addition of a responsible investing team, our objective was to build a research function that would help our investors gain better insights on the securities in which they invest. It would enhance the deep insights we were already generating on the governance side. The value that a proactive and systematic ESG integration process brings is to help investors more clearly identify long-term trends and how companies or other issuers are positioned against them. It also helps us identify companies that are generating profits at the expense of other stakeholders—a business strategy that will rarely be successful over the long term.

At T. Rowe Price, we have a history of building “value added” capabilities into our investment research platform—this has included a data insights team, quantitative tools, and an analyst dedicated to policy and regulatory research. Extending the research platform beyond traditional security analysis is not new to us, but environmental and social analysis brings a unique set of challenges. Specifically, it comes with an underdeveloped dataset—which is partly quantitative, partly qualitative, and not uniformly reported—and has a tendency to get confused with ethically based investment philosophies.

The dataset challenge is a formidable one. In order to overcome it, we have invested heavily to build our proprietary Responsible Investing Indicator Model (RIIM). In building RIIM, we have created a better filter of the environmental and social datasets that are oriented to fact-based indicators and material to that particular investment. All the data is readily accessible to portfolio managers and analysts on their desktops.

I wanted to emphasize the issue of environmental and social data, in particular, in this year’s letter as we have found heightened ESG interest is impacting our interactions with our clients, the companies in which we invest, and regulators. On the client side, we see more clients wanting to add some level of “ESG” to their portfolios—be it ESG integration or reflecting specific values in their portfolios.

What you will see from us on product construction is continued incorporation of ESG factors across our suite of products—simply using environmental, social, and governance factors to make better investment decisions. Also, we plan to launch more products aimed at clients who want to express values goals in their portfolios. In the first quarter of 2020, we launched a new sustainable range of products for European clients, which excludes certain types of investments (namely adult entertainment, assault-style weapons, coal producers, controversial weapons, tobacco producers, and companies with conduct-based issues).

We intend to launch more ESG-oriented products in the coming years—you can expect our incorporation of environmental and social datasets in the portfolio construction process to be thoughtful and implemented in a robust way.

Our discussions with companies and regulators have mainly focused on corporate disclosure. We have found that many of our investee companies are looking for guidance on ESG reporting—so many that we established a seminar for investor relations professionals on the topic. We think all market participants can benefit from the implementation of more globally consistent and standardized environmental and social disclosure.

Over the past several years, we believe we have built a world-class ESG program through investment in people and technology. This ESG Annual Report is intended to give you a flavor of the work we have done over the past year to implement our program across integration, engagement, and proxy voting activities.

FOREWORD



ROB SHARPS
Head of Investments and
Group Chief Investment Officer

A handwritten signature in black ink, appearing to read "Robt M. Sharps".

RESPONSIBLE INVESTING

PROGRESS OVERVIEW



MARIA ELENA DREW
Director of Research,
Responsible Investing

Maria Elena Drew

2019 was another exciting year for ESG at T. Rowe Price. The responsible investing team has continued to grow in size, and we now have dedicated ESG staff represented in each of our major regions—Baltimore, London, and Hong Kong. We have continued to focus on building ESG data tools that allow our analysts and portfolio managers to more easily understand their investment universe from an environmental, social, and ethical perspective.

One big advancement made in 2019 was creating an interface to our Responsible Investing Indicator Model (RIIM) on our investment professionals' desktops. This interface allows them to access the RIIM profile for a universe of approximately 14,000 securities and dig into each of the underlying data points, so they can see what is driving a company's score on supply chain, employee treatment, business ethics, or other factors. By being able to easily access the underlying data points feeding our RIIM analysis, our analysts can quickly understand if that company has any ESG-related controversies, ESG-related targets and programs, and/or reports relevant ESG data. In some cases, our analysts can "self-service" from the RIIM tool, while in other cases they may ask the responsible investing team for more analysis.

Another way that we utilize RIIM is for portfolio analysis. In 2019, we were able to automate RIIM portfolio analysis, making the process more efficient to analyze how our equity and credit portfolios compare with their benchmarks.

Another big advancement made in 2019 was the creation of a RIIM tool for sovereign issuers. The sovereign RIIM tool was built by the responsible investing team with consultation from our sovereign analysts and portfolio managers. Analysis of social and governance factors has always been a core part of any analysis of a sovereign issuer, so the RIIM tool gives our investors a new lens to evaluate these "S" and "G" factors. However, the inclusion of the environment pillar is new and is the first time we have systematically embedded environmental factors into our sovereign analysis (environmental factors had been considered qualitatively before, but more on a case-by-case basis).

As I write this letter, I am working from home practicing social distancing, and it is hard to ignore the coronavirus pandemic and the impact it is having on markets. There are many ESG-related investment themes that emanate from the pandemic, but the one dominating many of our discussions with companies is treatment of employees during this turbulent and uncertain time. As our equity and fixed income analysts adjust their financial models, target prices, and investment thesis on individual securities, they do have a significant advantage—thinking about how companies treat their employees is not new to them. Our RIIM analysis has a category devoted to employee treatment. The data points captured in this category will vary by the subindustry of that company, but includes items like employee turnover, training, health and safety certifications, and controversies/incidents.

Looking ahead, we expect to continue to deepen our ESG research capabilities across T. Rowe Price's investment research platform. Using technology to make ESG data more accessible and user-friendly for our investment professionals will remain a priority. Also, we will continue to work to improve ESG transparency for our clients.

T. Rowe Price ESG Integration Journey

2007

Governance
Donna Anderson hired to head governance expertise

2008

Corporate Responsibility
Corporate responsibility policy established

2010

PRI
T. Rowe Price becomes signatory to the Principles for Responsible Investment

2012

CSR Report
First Corporate Social Responsibility Report issued

2013

"E" and "S" Research
Sustainalytics appointed as specialized ESG research provider

As we reflect on our firm's ESG highlights from 2019, global markets are in the midst of extreme uncertainty related to the coronavirus pandemic. It is too early to draw conclusions about the long-term effect this virus will have on companies and economies, but what is clear at this stage is that the culture and values of corporate issuers around the world are being tested like never before. Companies' previous statements about their management of human capital, health and safety, community involvement, and the overall importance of stakeholders to their businesses will be assessed in a whole new context by investors and other stakeholders, and we predict these topics will quickly become central to the engagement that takes place between investors and corporations.

Looking back at 2019, our governance and stewardship function continued to build on a solid foundation established over many years. Our firm continued to invest heavily in our responsible investment and governance teams, adding experienced associates and strengthening our technology resources. These investments enable us to extend, deepen, and systematize our research on ESG issues across the T. Rowe Price investment platform.

With these investments in personnel and technology, we were able to increase the quality and quantity of engagement meetings we conducted with the companies in our clients' portfolios. This report details the nature of those engagements, and how they span across public and private companies. The notes and materials from our ESG-centered conversations with companies are published in our firm's collection of proprietary research, which is shared across our entire investment division and contains fundamental, quantitative, and ESG analysis. Sharing these notes across our research platform has served to enhance our overall understanding of the key risks and attributes of our investments, as we analyze them through multiple lenses.

In 2019 our governance program was also focused on advocacy. In key markets around the world, we are concerned about a weakening of important shareholder rights and investor protections. Through both direct advocacy and participation in governance-oriented investor associations, we have worked to persuade regulators that stronger disclosure requirements and basic investor protections are essential if we are to maintain the fair, liquid, and resilient capital markets upon which investors depend.

As a recovery takes shape following the peak of the coronavirus crisis, we will be focused on the many governance-related ramifications of this period. In our view, these issues are likely to include:

- compensation (for executives and employees),
- the effects of the crisis on stakeholders,
- the effectiveness of "virtual" shareholder meetings,
- government relations and lobbying,
- share buybacks,
- operational resilience, and
- postcrisis regulatory reform.

While the virus-related upheaval adds a new dimension to our governance efforts, we are confident that we have the resources and processes in place to address these issues in 2020.

GOVERNANCE

PROGRESS OVERVIEW



DONNA F. ANDERSON
Head of Corporate Governance

Donna F. Anderson

2014

Sustainalytics
Sustainalytics ESG ratings are embedded in company notes

2015

ESG Sovereigns
Sovereign team embeds World Bank governance indicators in its investment process

2017

Responsible Investing
Maria Elena Drew hired as Director of Research to establish in-house responsible investing expertise (environmental and social)

2018

RIIM Corporates
Proprietary ESG rating system for equity and credit rolled out

2019

RIIM Sovereigns
The firm rolls out proprietary ESG rating system for sovereigns

2020

Launch of Socially Responsible Products
T. Rowe Price launches its first sustainable products in Europe

ESG Reporting
T. Rowe Price plans to implement portfolio level ESG reporting for applicable products in select markets

Investing With ESG Insights

ESG analysis is one of the many building blocks that make up our investment research platform. We have invested heavily in people and systems to develop a comprehensive, systematic, and proactive process for evaluating environmental, social, and ethical factors across corporate investments.

Our ESG philosophy is based on the following principles:

INTEGRATION

Environmental, social, and governance analysis is integrated into our fundamental investment process. ESG factors are considered in tandem with traditional criteria such as financial, valuation, macroeconomic, industry-related, and other factors as part of investment decision-making. Our analysts and portfolio managers have responsibility for integrating ESG factors into investment decisions.

COLLABORATION

Our analysts and portfolio managers are supported by specialist ESG teams that have created proprietary tools to identify ESG factors that may impact an investment case, provide written research on ESG topics (both investment specific and thematic), and provide subject matter expertise on specific issues.

MATERIALITY

Our investment approach focuses on the ESG factors deemed to be more likely to have a material impact on the performance of investments in our clients' portfolios. This approach helps to focus on the ESG issues most relevant to a specific business model.

ESG Specialist Teams

In the past year we have expanded the number of ESG-dedicated investment personnel from seven to eleven. Our in-house ESG resources comprise **responsible investing (RI)**, which covers environmental and social factors, **governance**, and **regulatory research**. Together, these teams help our investors identify, analyze, and integrate the ESG factors most likely to have a material impact on an investment's long-term performance.

Our dedicated RI team conducts analysis on the environmental and social profiles of individual securities and portfolios. The team also assist with company engagement. Our RI resources have been in place since 2017. Prior to developing our own in-house research, our analysts and portfolio managers were able to leverage ESG research from Sustainalytics, which had been embedded in our research management systems since 2014.

T. Rowe Price has had dedicated governance resources since 2007. The team assesses governance issues among existing and potential investments and provides insights for analysts and portfolio managers. It assists with company engagement, facilitates proxy voting, and participates on leading governance initiatives in the asset management industry.

A Three-Stage Process for Proactive, Systematic ESG Integration



Data and insights from integration feed back into identification and analysis stages.

Responsible Investing Indicator Model

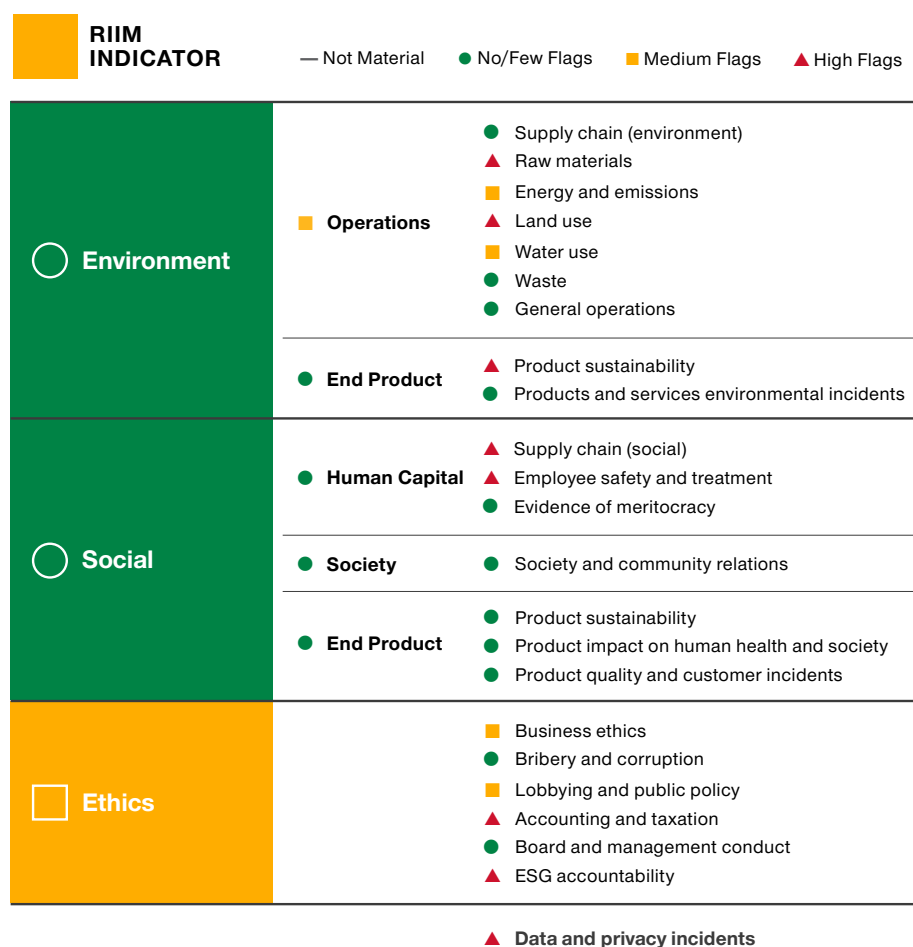
Our proprietary Responsible Investing Indicator Model (RIIM) is one of many components that contribute to our deep, fundamental investment research. It builds an environmental, social, and ethical profile of corporate entities and an environmental, social, and governance profile of sovereign entities largely using non-financial data and incident history—data not traditionally used in mainstream investing.

RIIM systematically and proactively assesses the responsible investing profiles of more than 14,000 corporate and sovereign entities, globally. It processes data from T. Rowe Price systems, company reports, non-governmental organizations (NGOs), and select third-party vendors.

RIIM Analysis—Individual Company Level

RIIM builds a distinct responsible investing (RI) profile of each corporate entity, flagging any elevated RI risks or positive RI characteristics. Analysts and portfolio managers have desktop access to each company's RI profile. As illustrated in the diagram below, a rating of red, orange or green highlights the extent of a security's environmental, social, and ethical risks or positive characteristics.

By measuring companies' RI profiles in this way, they can more easily be used as building blocks for an investment thesis for each security we research—alongside financial, economic, and industry-related insights.



RIIM Analysis–Sovereign Debt Issuer Level

A second RIIM module is designed to build ESG risk profiles of sovereign debt issuers. In addition to a range of environmental and social factors, the model quantitatively assesses governance factors such as political stability, government effectiveness, regulation and corruption.

Portfolio managers integrate this ESG risk analysis into their assessment of the underlying financial qualities of the sovereign debt.

RIIM INDICATOR		— Not Material	● No/Few Flags	■ Medium Flags	▲ High Flags
Environment	● Climate pressure		●		
	▲ Energy and emissions				▲
	● Land use		●		
	● Biodiversity		●		
	▲ Fresh water				▲
	● Oceans		●		
Social	■ Population			■	
	● Health		●		
	● Safety		●		
	■ Education and employment			■	
	● Infrastructure		●		
	■ Equality (Income/Gender)			■	
Governance	■ Voice and accountability			■	
	■ Political stability			■	
	■ Government effectiveness			■	
	▲ Regulatory quality				▲
	■ Rule of law			■	
	▲ Control of corruption				▲

RIIM Analysis–Portfolio Level

RIIM also allows our portfolio managers to understand if there are concentrated environmental, social or ethical factor risks in an overall portfolio. Portfolio-level ESG analysis and scoring is available for both equity and fixed income portfolios. The responsible investing team conducts regular reviews with portfolio managers to discuss areas of concentrated risk, or positive themes identified during the portfolio screening process.

An illustration of the RIIM output at a portfolio level is provided below. RIIM indicators for each holding in the portfolio and across a range of ESG factors help to pinpoint specific themes and potential risks.

		— Not Material ● No/Few Flags ■ Medium Flags ▲ High Flags																							
		Environment								Social								Ethics							
		Supply chain	Raw materials	Energy/Emissions	Land use	Water	General operations	Product sustainability	Environmental incidents	Supply chain	Employee safety	Meritocracy	Community relations	Product sustainability	Product impact on health	Product quality	Business ethics	Corruption	Lobbying/Public policy	Accounting and taxation	Board/Management conduct				
Company A	□	●	●	—	▲	—	—	●	●	●	●	▲	●	●	—	■	■	■	■	■	▲	●	▲		
Company B	○	●	●	●	■	—	●	●	●	●	●	●	■	●	■	●	●	■	■	▲	●	■			
Company C	□	●	■	—	●	—	—	▲	●	●	■	▲	●	—	▲	▲	■	▲	■	▲	●	▲			
Company D	□	■	▲	—	■	▲	▲	▲	●	●	■	●	●	—	■	■	■	■	■	■	■				
Company E	○	●	●	—	■	●	●	●	●	●	●	●	—	■	●	●	●	●	■	●	■				
Company F	▲	●	●	—	●	●	●	●	●	●	■	■	▲	●	▲	●	■	■	■	■	■				
Company G	○	●	●	—	●	—	—	■	●	●	■	▲	●	—	—	●	●	●	●	●	▲				

RIIM portfolio analysis allows for comparison of the portfolio vs benchmark for overall RIIM ratings and at the individual factor level. The analysis highlights both positive themes and areas of concentrated risk.

Aligning to Global ESG Frameworks

United Nations Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) are a blueprint for a more sustainable world. Countries signing up to the SDGs are expected to establish a national framework for achieving each of the 17 goals.

While the SDGs are a tool for countries to implement sustainability regulations, they are commonly adapted as a framework for ESG measurement of corporate entities. The goals are represented across the range of factors we measure within RIIM.

Companies are likely to face greater scrutiny in relation to the sustainability objectives of the UN SDGs over time. This could include greater regulatory burdens, taxation, litigation, and/or consumer dissatisfaction. Conversely, companies that provide solutions are likely to have much more sustainable business models. Consequently, it makes sense to ensure these factors are captured and measured within our RIIM calculations.

United Nations Global Compact (UNGC)

Established in 1999, the UNGC has 10 principles, built around human rights, labor standards, the environment, and anticorruption. In addition to capturing whether companies are signatories to the UNGC, RIIM measures UNGC values at multiple levels:

- **Human Rights and Labor Standards:** Management of human capital is assessed through supply chain analysis for human rights violations, as well as an evaluation of employee treatment that looks at labor-related incidents, accident rates, and other factors.
- **Environment:** This is assessed via energy use and emissions, water and waste outputs and targets, sustainable sourcing of raw materials, and end-product sustainability and impact on the environment.
- **Anticorruption:** Programs in place and the company track records are evaluated within the RIIM ethics analysis.

Reporting Frameworks

A frequent question we receive from our investee companies is how and what they should report when it comes to environmental and social data. We recommend that companies follow a simple principle: Consider which environmental and social factors are material to your business and report them alongside financial data. We also recommend providing comparable historical data. As for specific frameworks, we recommend using the **Sustainability Accounting Standards Board (SASB)** and **Task Force on Climate-Related Financial Disclosure (TCFD)**.



ESG INTEGRATION IN ACTION



JOHNNY ROWLES
Health Care Sector Equity Analyst

“Bayer’s goal is to integrate sustainability into its core business strategy.”

BAYER AG

ESG Engagement Underpinned Investment Thesis

In 2019, an engagement program with Bayer AG (Bayer) helped to provide one of our global health care analysts, Johnny Rowles, with confidence that the company was actively addressing certain key risks, including ESG-related concerns.

Description

Bayer is a German conglomerate composed of four key divisions: Pharmaceuticals, Crop Science, Consumer Health, and Animal Health.

Investment Case

- 💰 Bayer had been generating a healthy free cash flow yield and was allocating capital efficiently.
- 💰 Litigation risk relating to claims its Roundup herbicide causes cancer, prompted blanket selling from worried investors.
- 🌱 Our engagements on ESG topics such as board oversight, product sustainability, lobbying practices, and ESG accountability, helped us gain confidence that the company was working to resolve these issues (many of which had been inherited from the acquisition of Monsanto). In early 2020, Bayer unveiled a new sustainability strategy, which included a clear accountability structure for ESG and a commitment to redevelop its pesticide products to meet more sustainable standards.

ESG in Depth

- Bayer recently announced a comprehensive set of sustainability measures and new commitments from 2020 onward, including expanding global access to consumer health and pharmaceutical products, and achieving carbon neutrality in its operations by 2030.
- Bayer’s CEO was appointed Chief Sustainability Officer, assuming responsibility for sustainability issues in a move that strengthens ESG accountability. The company has also announced plans to hire an independent sustainability council to support target setting and ensure it stays ahead of sustainability trends.
- Bayer announced improved guidelines and oversight of practices it had used to influence public opinion and regulators on its products. The move involved terminating many of the public relations and lobbying activities that had been conducted by Monsanto.

The security identified and described is intended to illustrate the security evaluation process of T. Rowe Price investment professionals and does not necessarily represent securities purchased or sold by T. Rowe Price. No assumptions should be made that the security analyzed, or other securities analyzed, purchased or sold, was or will be profitable. This is not a recommendation to buy or sell any security. The views and opinions above are as of April 2020.

GEORGIA

Improving Business Environment and Quality of Governance Set Georgia Apart From Peers

Peter Botoucharov, sovereign fixed income analyst, explains how Georgia is leading its emerging market (“EM”) peers on governance quality.

Description

Situated at the intersection of Europe and Asia, Georgia gained independence from the Soviet Union in 1991. In 2003, the so-called ‘Rose Revolution’ saw the country undergo a peaceful, pro-Western, change of power. Georgia issued its first Eurobond in 2008, and its foreign currency debt is rated Ba2 by Moody’s Investors Service, as of January 31, 2020.¹

Investment Case

- 💰 Georgia has been supported by robust fundamentals.
- 💰 From a valuation standpoint, Georgia’s U.S. dollar bonds are attractive relative to peers.
- 🔍 Georgia has shown significant improvement in governance standards over the past two decades. Today, the country boasts a strong track record of prudent macroeconomic policies, structural reforms, and an improving business environment.

ESG in Depth

- Among EM peers, Georgia is a leading light in terms of improving rule of law and quality of business environment. The 2003 Rose Revolution was the catalyst for the start of a far-reaching reform agenda. One of the first areas tackled by the new government was corruption, adopting a zero-tolerance approach that continues to this day.
- Nearly two decades later Georgia continues to make progress. In the 2018 Worldwide Governance Indicators from the World Bank, Georgia achieved its highest-ever ranking for regulatory quality, ahead of most of its EM peers and narrowing the gap with developed countries.
- Georgia’s improving rule of law and business environment is similarly reflected in the fact that Georgia is also ranked 7th of 190 countries on the World Bank’s ease of doing business index. Our analysts have monitored Georgia’s progress throughout, conducting numerous research trips to see, first hand, the impact of reforms on the country’s governance and business environment.

This is not to be considered investment advice or a recommendation to buy or sell any security. The views and opinions above are as of April 2020.

¹ © 2020, Moody’s Corporation, Moody’s Investors Service, Inc., Moody’s Analytics, Inc. and/or their licensors and affiliates (collectively, “Moody’s”). All rights reserved. Moody’s ratings and other information (“Moody’s Information”) are proprietary to Moody’s and/or its licensors and are protected by copyright and other intellectual property laws. Moody’s Information is licensed to Client by Moody’s. MOODY’S INFORMATION MAY NOT BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY’S PRIOR WRITTEN CONSENT. Moody’s ® is a registered trademark.



PETER BOTOUCHAROV
Sovereign Fixed Income Analyst

“Among EM peers, Georgia is a leading light in terms of improving rule of law and quality of business environment.”

AIA GROUP

ESG INTEGRATION IN ACTION



ZENON VOYIATZIS
Insurance Sector Equity Analyst

“As a leading company and major investor in the Southeast Asia region, sustainability is integral to AIA’s long-term business strategy.”

A Strong Focus on Responsible Investment Reduces Potential Exposure to Downside Risks

Insurance sector equity analyst, Zenon Voyiatzis, explains how a positive ESG assessment for pan Asian insurance provider, AIA Group (AIA), was a key input into his investment analysis.

Description

AIA is a life insurer operating across Southeast Asia. Spun out of U.S. insurance giant AIG in 2010, AIA is one of the preeminent financial brands in Asia today. AIA derives half of its premiums from Hong Kong, Thailand, and Singapore, and is growing rapidly in China, Malaysia, and Indonesia.

Investment Case

- ① AIA has an un-replicable footprint across Southeast Asia, a structurally growing market. The company benefits from strong management with a track record of successful execution.
- ① Investors continue to underestimate the durability and resilience of AIA’s growth, in our view.
- ① AIA’s strong focus on responsible investing, in the portfolio of businesses in which it invests, provides further support for our investment analysis.

ESG in Depth

- AIA incorporates ESG factors, such as water scarcity, climate change, environmental regulations, and labor issues, across all asset classes in which it invests, thereby reducing exposure to potential downside risks in its portfolio.
- AIA is active in addressing sustainability challenges in many of its markets, often working alongside or supporting community initiatives.
- RI team analysis confirmed AIA’s robust environmental management program, with a particular emphasis on climate change factors.

The security identified and described is intended to illustrate the security evaluation process of T. Rowe Price investment professionals and does not necessarily represent securities purchased or sold by T. Rowe Price. No assumptions should be made that the security analyzed, or other securities analyzed, purchased or sold, was or will be profitable. This is not a recommendation to buy or sell any security. The views and opinions above are as of April 2020.

TAIWAN SEMICONDUCTOR

Industry-Leading Environmental Management Is a Key Factor in Our Investment Analysis

Technology sector equity analyst, Alison Yip, explains how Taiwan Semiconductor Manufacturing Company's ("TSMC") focus on ESG-related issues was a key factor in our investment analysis.

Description

TSMC is one of the world's largest pure-play semiconductor foundries producing custom-built chips for a broad global customer base. TSMC's advanced chip technology is utilized in a range of applications, from smartphones and high-performance PCs, to automotive electronics, medical devices, and fighter jets.

Investment Case

- 💰 TSMC is a global leader in leading-edge chip production, providing good pricing power.
- 💰 The company is well placed to capture growing market share as more companies outsource chip production as a 'non-primary' business function.
- 🌱 TSMC's robust management of ESG issues was a factor in our investment analysis. As a large-scale foundry, TSMC has a distinct environmental footprint; however, this is carefully managed by a structured environmental strategy.

ESG in Depth

- TSMC does not have a history of notable ESG-related incidents. Its "green" environmental management strategy promotes mutual prosperity between its business and the environment by implementing improvement projects that focus on carbon reduction, energy conservation, pollution control, water management, and waste reduction.
- For semiconductor manufacturers, exposure to conflict materials can be a key risk. TSMC only purchases raw materials from smelters certified "conflict-free" by the Responsible Minerals Assurance Process—the highest level of industry compliance.
- TSMC also has a strong track record of employee treatment/safety, with no notable reported employee incidents and good disclosure on company diversity.



ALISON YIP
Technology Sector Equity Analyst

"TSMC is an industry leader in its approach to environmental management, setting clear performance targets and providing regular disclosure."

The security identified and described is intended to illustrate the security evaluation process of T. Rowe Price investment professionals and does not necessarily represent securities purchased or sold by T. Rowe Price. No assumptions should be made that the security analyzed, or other securities analyzed, purchased or sold, was or will be profitable. This is not a recommendation to buy or sell any security. The views and opinions above are as of April 2020.

In Japan, Improved Governance Is Being Driven From the Top

Japan Equities Portfolio Manager, Archibald Ciganer, discusses how improving ESG standards are a key feature of broader changes in Japan's corporate landscape

ESG INTEGRATION IN ACTION



ARCHIBALD CIGANER
Portfolio Manager,
Japan Equities

How do you think of ESG factors within your investment process?

Global investors in Japan predominantly use passive and exchange-traded fund approaches. These investors are compelled to hold all the stocks in the index. As active investors, our capacity to be selective means we can choose companies that score strongly on ESG measures and avoid those that don't. For example, we can actively single out progressive companies with strong or improving ESG standards. ESG factors are therefore a key input into our company analysis, with research from our dedicated responsible investing and governance teams fully integrated into our investment process.

As a market, Japan is also defined by dynamic change and disruption. We believe that successful investing in this market demands an investment process that actively seeks to identify sustainable companies positioned on the right side of change. As an active, locally based manager, this puts us in a strong position to identify potential opportunities.

How important are ESG factors in Japan?

Historically, Japanese companies and investors have paid little attention to ESG considerations. However, governance improvements have been a notable feature of the country's now widely lauded "Abenomics" reforms over the past decade, with Japanese companies required to meet higher regulatory standards and practices.

Improving ESG standards and practices are being advanced by a combination of government directives, as well as demands from large local pension funds, and the expectations of foreign investors. These have driven regulatory advances, including new Corporate Governance and Stewardship Codes.

What are the ESG trends to watch in Japan?

The implementation of new Corporate Governance and Stewardship Codes represents important regulatory advances. One of the areas of focus under the regulations is the promotion of greater diversity at the board level. The so-called "womenomics" policy introduced by Prime Minister Abe in 2013 was designed specifically to encourage more women into the workforce. While disclosure remains an issue, our analysis shows that female board representation, while still relatively low, is improving. Also, the variance between the most, and least, progressive companies is considerable.

This presents opportunities for us to actively discern between companies that understand the long-term value in fostering business diversity, and those that do not. Here, we draw heavily upon the dedicated research of our responsible investing team. This allows us to move our focus beyond whether or not a company has a woman on its board, to also focus on gender diversity at the executive committee, management, and employee levels, as well as any employee controversies the company has experienced. Numerous academic studies indicate that company diversity is correlated to improved business performance.



**“With new corporate governance
and stewardship codes in place,
Japanese companies are rapidly
embracing higher ESG standards.”**

ESG INTEGRATION IN ACTION



MIKE DELLA VEDOVA
Portfolio Manager,
European High Yield Credit

Within High Yield Credit, ESG Standards Can Be a Real Differentiator

European High Yield Portfolio Manager, Mike Della Vedova, explains how ESG factors are incorporated into his research process, serving as an important input into his decision-making.

How do you think of ESG factors within your investment process?

Bottom-up research is at the heart of our approach, so to a certain extent, we have always incorporated ESG factors into our investment process. The area of governance is particularly important to sub-investment-grade companies as they tend to be younger with less of a track record. They often have higher debt ratios and more complex capital structures than investment-grade companies. That's why in-depth, integrated research is so important because it is vital to understand when ESG issues could have a material impact on our investment case.

Our analysts consider a range of ESG factors, including supply chain sourcing, health and safety records, and accounting standards. Additionally, they collaborate closely with our dedicated ESG specialists, to ensure all material factors are considered as part of our decision-making. This dual approach really helps us to identify ESG risks, as well as gauge the potential impact of these on the company in the future. Ultimately, we are looking for long-term, improving stories, so if there is a trend of positive ESG progression, this is usually a good sign.

How important are ESG factors within Europe?

ESG has been growing in importance for some time in Europe, and not just from an investor perspective. Authorities are taking significant steps, particularly with regard to the environment. The European Commission, for example, recently unveiled its "Green Deal for Europe" setting out a range of environmental initiatives and targets aimed at making Europe the first carbon-neutral continent by 2050.

Other significant developments include the new head of the European Central Bank, Christine Lagarde, stating that tackling climate change is a "mission critical" priority for the bank, and will form part of the strategic review into its monetary policy toolkit. There are also government-led efforts across Europe aimed at improving diversity on company boards. All these developments underline how important ESG has become in the region, and they are having a trickle-down effect on companies.

What are the ESG trends to watch in high yield credit?

When it comes to ESG considerations, high yield credit starts from a lower base than other major asset classes. That is because high yield companies are typically younger with shorter track records and less reporting history than investment-grade companies. This usually leaves more space for improvement and active engagement. It is also important to remember that a higher proportion of high yield companies are owned by private-equity firms. These typically have fewer reporting and disclosure requirements than their publicly listed counterparts. Nevertheless, we are seeing a greater awareness of ESG among high yield companies. The trend is certainly on an improving trajectory, even if the pace might be a little slower than other sectors, such as investment grade.

What is an example of ESG factors directly influencing your investment decision?

A good example of this is in relation to a North America-based pharmaceutical company that develops and manufactures a range of pharmaceutical and medical device products. In 2018, with a new management team in place, the company underwent a name change, underlining a shift in its business strategy.

Under the former CEO, the company pursued an aggressive growth strategy, favoring buying established drug firms over investing in its own research and development. In 2015, however, serious concerns were raised about the company's social and governance standards, including its practice of buying established drugs and significantly raising the prices. Close ties with a specialty online pharmacy company, where executives were convicted of large-scale fraud, also damaged the company's reputation with investors, causing its share price to fall sharply.

To address and move on from these controversies, the company made sweeping changes, including bringing in a new CEO and CFO. A number of businesses were sold as the company prioritized reducing its large debt burden, pricing practices were changed, and the company began to focus on its own research and development once more. These changes, and our meetings with the new management team, gave us confidence that governance standards are clearly on an improving trend. A marked improvement in overall transparency seemed to confirm this positive trend, adding to our conviction in the company.



“When it comes to ESG, high yield credit generally starts from a lower base than other major asset classes. This usually leaves more space for improvement and active engagement.”

Climate Change—Rising Risks Not Yet Factored in by Markets

Limited impact on near-term cash flows is masking longer-term vulnerability

In 2019, we saw a dramatic increase in concern over climate change, which was reflected in its prominence as an investment issue. Despite all this attention however, climate change has only had a significant impact on the valuations of select sectors—specifically those facing extremely elevated transition risk, such as fossil fuel producers. We believe valuation dislocations have been limited to a narrow universe of companies because climate change has not been particularly impactful to near-term cash flows for the broader market.

This is not to say that companies are not vulnerable to climate change today, but more that they are not yet directly feeling the impact. In many instances, insurance is covering physical risks. Meanwhile governments have not started to regulate or tax companies for greenhouse gas (GHG) emissions, deforestation, or other catalysts of climate change. We believe that valuations will eventually start to factor in climate change risks, and opportunities, affecting virtually our entire investment universe (albeit to varying degrees).

The Science Behind Climate Change

For the world to have a chance of at least minimizing the impact of climate change, it is necessary to keep global temperatures to within +1.5°C from preindustrial levels. To experience less severe impacts from climate change, global temperatures need to stay within +2.0°C. The United Nation's Intergovernmental Panel on Climate Change (IPCC) Special Report on Climate Change found that keeping the global temperature rise to 1.5°C would require a 45% reduction in net emissions by 2030 and net zero emissions by 2050. Keeping to +2.0°C would require a 25% reduction in emissions by 2030 and net zero by 2070.

Required Reduction in Net Emissions

Global Temperature Rise Target	Reduction Needed in Net Emissions by 2030	Year to Achieve Net Zero Emissions
+1.5°C scenario	45%	2050
+2.0°C scenario	25%	2070

The generally accepted estimate is that human activities created 1,900 GtCO₂ of cumulative GHG emissions since the preindustrial period and caused a +1.0°C rise in global temperature as of 2017². Given that GHGs absorb heat and release it gradually over time (like bricks in a fireplace after the fire goes out), we know that past emissions have yet to be fully reflected in global temperatures. The IPCC estimates that past emissions will likely result in a less than +0.5°C increase in global mean standard temperature (GMST) over the next 20–30 years (i.e. if all GHG emissions had stopped in 2018, we would likely experience less than +1.5°C from preindustrial levels).

Of course, the world did not stop emitting GHGs in 2018 and it is not reasonable to expect net zero carbon emissions in the short term, so the science indicates that keeping the GMST rise to less than +1.5°C will be extremely challenging, if not impossible.

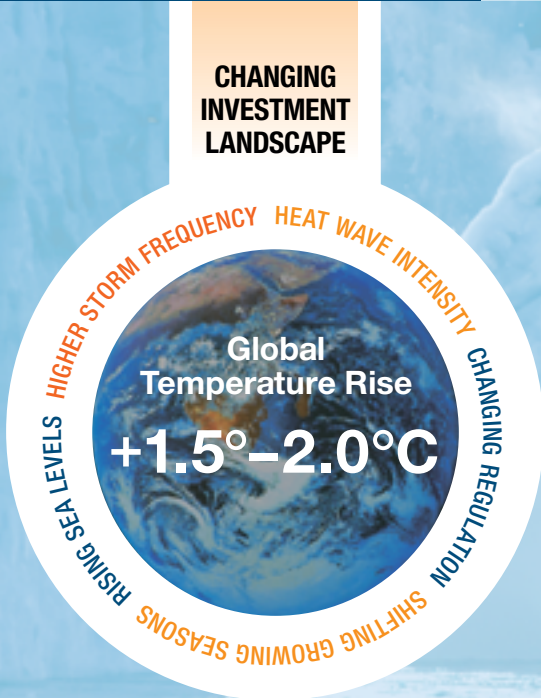
² Global Warming of 1.5°C, Intergovernmental Panel on Climate Change, 2019. The IPCC estimates 1.0°C with a likely range of 0.8°C–1.2°C.

Viewing Our Investments Through a 1.5°C and 2.0°C Lens

In our view, the probability that our investments will need to be capable of adapting to either a +1.5°C or +2.0°C scenario, is high. Even keeping global warming within these parameters means there will be climate change impacts that will affect the investment landscape, such as rising sea levels, increased storm frequency, hotter and more frequent heat waves, and shifts in growing seasons. Potentially even more material to many investment cases is how the regulatory landscape would evolve to meet a +1.5°C or +2.0°C scenario.

In its 2019 Global Warming of 1.5°C report, the IPCC aggregates the various scientific climate models that keep global warming within a +1.5°C pathway. Taking the midpoint of these models implies a massive re-engineering of the world’s energy infrastructure, including significant energy efficiency gains as well as transitioning away from fossil fuels and into renewables between now and 2050. In a 1.5°C pathway, some fossil fuels can remain so long as they can be absorbed by forests, other vegetation and soils or through man-made carbon capture, but the amount of primary energy generated from fossil fuels is still greatly reduced. (If the world was reliant on only the existing stock of natural carbon sinks, carbon emissions would have to fall by more than two-thirds to reach net zero.)

	Examples of Sectors Facing Primary Impact (Revenue)	Examples of Sectors Facing Secondary Impact (Supply Chain, Operational and Capital Expenditure)
ENERGY EFFICIENCY	Industrials, Technology	Apparel and Textiles, Manufacturing and Construction, Transportation, Real Estate, Other Industry and Large Energy Consumers
DECARBONIZATION	Energy, Utilities	
NON-CARBON GHG REDUCTION	Natural Gas and Pipelines, Agriculture, Waste Management	Food and Beverage, Food Retailers
IMPROVED LAND	Food & Beverage, Forestry and Paper Products and Other Packaging, Agricultural Chemicals	Apparel and Textiles, Food Retailers, Packaging



Material Climate Change Factors Across Sectors

Climate Change in Our Investment Analysis

How our investee companies are assessing their exposure to climate change and are building environmental sustainability into their long-term strategic planning are key concerns for our analysts and portfolio managers. We believe that almost the entire investment universe will feel some impacts of climate change—through revenues, sourcing, or their cost structure—and companies that can create economic value with a low or zero carbon footprint will be better positioned than their peers in a world of rising environmental regulation. The graphic on the previous page illustrates some examples of where we believe climate change factors are most material across equity and fixed income credit markets.

When we evaluate climate change factors in our investment thesis, we believe that fundamental analysis coupled with our Responsible Investing Indicator Model (RIIM) analysis is a real strength. RIIM can help our analysts compare how one potential investment stacks up versus another on a range of climate-related issues. In addition, applying RIIM portfolio analysis can help a portfolio manager quantify the amount of risk he or she is taking on climate-related issues across the whole portfolio and compared with its benchmark.

In addition to our RIIM analysis, the responsible investing team works closely with our sector analysts in evaluating climate change factors. Work done by the responsible investing team can range from company-specific analysis, such as assessing environmental ratings on real estate companies, to more thematic work like creating a carbon tool. This tool allows our analysts to input their own gross domestic product (GDP), energy efficiency, de/re-forestation and other forecasts, to understand how certain assumptions compare to a +1.5°C and +2.0°C pathway.

The Gap Between Science, Policy and Corporate Reporting

As pointed out in last year's ESG annual report, there is a profound disparity between science and policy regarding climate change. While climate change increased its societal mind share in 2019, we have seen varying levels of commitment from governments on combating rising temperatures. On the global stage, nations were unable to come to an agreement at the UN Climate Change Conference COP 25 summit held in Madrid, Spain. However, on a regional and national level, there has been action to push policy closer to science. Perhaps the most notable is the proposed EU Green Deal, which contains a series of proposed legislation aimed at moving the European Union to net zero greenhouse gas emissions by 2050.

Various climate change-oriented regulatory measures that have been passed are aimed at financial markets. While we have seen a steady upward trend in clients raising their ESG and climate change due diligence over the past years, this phenomenon has obviously accelerated in countries with passed or pending regulations. While moving policy in the direction of science is a positive, the fact that regulation on financial markets has moved faster than that on corporations creates a problem with the quality of ESG reporting we can provide to our clients. For example, if we take the most widely reported environmental metrics—total GHG emissions and carbon emissions—we find that disclosure levels are low across most benchmarks.

We can compensate to some degree for low disclosure levels by using estimated carbon emissions (provided by third parties), but it still doesn't allow for full coverage of benchmarks and portfolios in many cases. Additionally, we note that estimating carbon emissions for a company is a very difficult task—so accuracy is a concern. We think estimated datasets are very useful as an indicator of a portfolio's carbon footprint, but we caution clients about making decisions based solely on this quantitative dataset. As companies start to report these data more consistently (and in a standardized format), we will likely see notable adjustments.

The image is a collage of four distinct photographs. The top-left photo shows a natural rock arch with a bird perched on its edge. The top-right photo is a close-up of a similar rock arch. The bottom-left photo depicts a massive glacier with a small boat visible in a narrow channel of water. The bottom-right photo shows a low-angle view of a classical stone column against a blue sky with clouds.

“When we evaluate climate change factors in our investment analysis, we believe that fundamental analysis coupled with our Responsible Investing Indicator Model (RIIM) analysis is a real strength.”

FOCUS THEMES



ROY ADKINS
Sovereign Analyst

The Social and Economic Impact of Rising Income Inequality

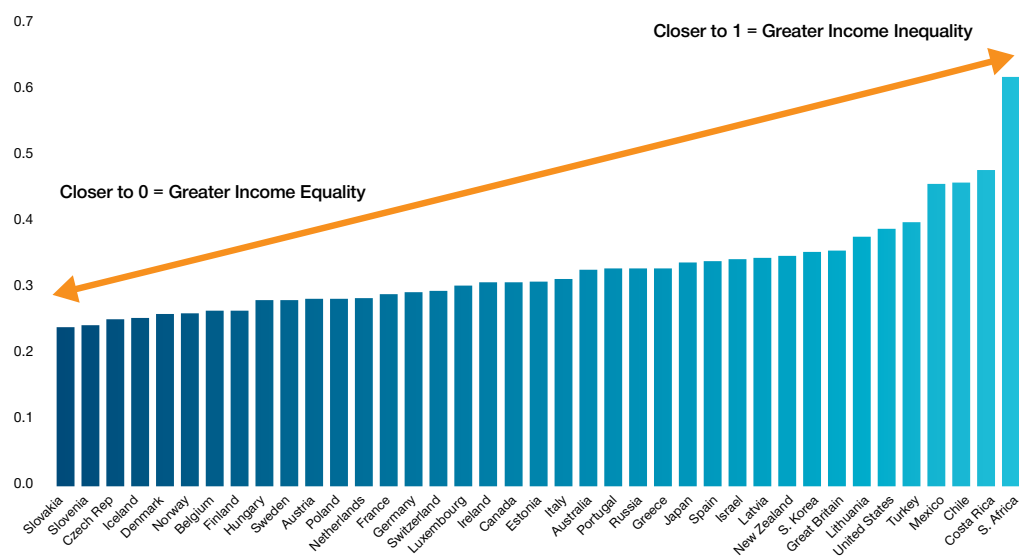
Income inequality is driving changes in global demand for goods and services

Income inequality is one of the defining socioeconomic issues of our time. Although levels of inequality vary considerably across the globe, the Gini coefficient, which measures income distribution and inequality, suggests that, globally, the average person has lived in a country where income disparities are widening. If this continues, it will likely lead to increased indebtedness, steeper yield curves, inflation, higher corporate taxes, and tighter trade restrictions. It will also create sectoral opportunities as consumption patterns change and the demand for cheaper goods and services grows.

There are several drivers of widening income inequality. One is that the redistributive effect of taxes and transfers has decreased as rules for claiming benefits have been tightened and tax rates on the richest 1% have fallen. Another is that many industries are becoming more concentrated, consolidating economic power within a smaller number of firms.

Changes in labor markets, including the automation of low-skilled jobs, and the rise of part-time and short-term work, have also helped to drive income inequality. In advanced economies, this has been further entrenched by the outsourcing of manufacturing to countries where wages are lower.

The Gini Coefficient—Measuring National Income Inequality



Source: OECD Income Inequality Indicator model. As of December 31 2019.

The Gini coefficient is a measure of income inequality that condenses overall income distribution for a country into a single number between 0 and 1: the higher the number, the greater the degree of income inequality. 2019 data used or latest available. South Africa has the highest net Gini score, and the U.S. the highest for an advanced economy.

Wage Disparities Fuel Populism

Income inequality has significant implications for investors. It hurts growth: the International Monetary Fund finds that making the rich richer by one percentage point lowers a country's GDP growth over the next five years by 0.08 percentage points, whereas making the poor and middle class richer by one percentage point can raise GDP growth by 0.38 percentage points. Income inequality also creates inequality of opportunity by denying people on lower incomes the opportunity to invest in their health and education.

Disparities in income give rise to struggles over government resources. This creates political volatility, which, in turn, can fuel the rise of populist causes and deepen social divisions. Support for closed economies has grown among blue collar workers in developed countries who feel—with some justification—that they have not benefited from globalization, while the independence of central banks is under threat as the investment-friendly environment they have sought to create has not benefited everyone.

Political volatility typically leads to higher public spending as both right- and left-wing populists demand greater social mobility and equality. This typically results in greater indebtedness, steeper yield curves, and more accommodative monetary policies, raising inflation expectations. Inequality has led to hostility to trade, with the result that multinational corporations are likely to face increased regulation and more stringent taxation.

Changing Consumption Will Create Sectoral Opportunities

Increasing income inequality is likely to negatively impact luxury goods manufacturers, but will create opportunities in other areas. If the potential for social mobility and employment opportunities becomes more limited, for example, we believe the demand for affordable leisure will increase, leading to innovations in the tourism and leisure industry. At the same time, the high cost of accommodation in growing urban areas will provide opportunities for companies providing solutions.

As learning will be the most likely path to higher earnings for most low-income people, we believe there will be a huge market for companies providing high-quality but affordable education, such as the Curro independent school network in South Africa. Similarly, innovative health care providers will likely find major opportunities arising.

In emerging market countries, increasing numbers of people are seeking access to financial services, creating opportunities for companies that use technology to help low-income customers better manage their finances. Tinkoff Bank in Russia and the Kenyan mobile-based money transfer company M-Pesa are early examples of this.

How Income Inequality Influences Our Investment Decisions

At T. Rowe Price, our in-house ESG specialists support our sovereign investment teams through all stages of the investment process. To achieve this, we have developed a Responsible Investing Indicator Model, through which we identify, analyze and integrate the ESG factors most likely to have a material impact on the long-term performance of a sovereign bond. Income inequality is a key consideration in the "social" component of ESG, and, therefore, has a strong influence on our sovereign debt investment decisions.

Further policy changes will occur as governments continue to respond to demands for wider access to affordable services and better protection for workers. As corporations respond to these changes, sector-based opportunities will continue to arise. We will continue to monitor income inequality around the world and incorporate it into our analysis in striving to maximize investment performance for our clients.

Governance—Public Versus Private Company Engagement

As a significant investor in private companies, we often receive questions from our clients about how our investing approach differs for privately held companies, versus those that are publicly owned. To answer this, it is necessary to understand the evolving life cycle of a private company, and the stewardship responsibilities that we undertake once we have invested.

Why Does T. Rowe Price Invest in Private Companies?

When considering private company investments, our aim is to identify innovative businesses that can compound wealth as they transition from fledgling to durable growth companies. An allocation to early-stage, dynamic, private companies offers the potential for above-average returns compared with public company investors. Investing in private companies also offers other potential benefits, such as providing insights into potential industry disrupters, as well as the opportunity to assess companies before they go public.

However, investing in private companies that may still be years from going public is always challenging. These securities are more illiquid and carry greater risk than investments in more established, public companies with longer track records.

Company Monitoring and Maintenance: A Deeper Dive

When T. Rowe Price invests in a private company, our responsibilities as investors are, in many respects, very similar to any publicly traded investment. Our analysts closely monitor the company's progress against expectations, meet with key personnel, and receive periodic updates from management about how the business is performing and how effectively the strategy is being implemented. In other respects, however, ownership of a private investment involves a different level of responsibility for investors, particularly in relation to corporate governance.

Private Investment Stewardship

Diligent and attentive stewardship of our clients' capital is a pillar of our investment philosophy and process. This applies to all asset classes and to both public and private investments. There are some unique aspects of private company investments, however, that require a slightly different approach with regard to our stewardship activity and oversight.

The composition of a private company's board is a good example of a governance issue that evolves as the company moves from the private capital markets toward a public listing. During the company's early stages, its board tends to be made up of a small number of its own executives, venture capital investors, and other key business partners. This is an appropriate composition while the company is still primarily focused on operational matters: building scale, growing market share, research, and development.

However, as the company moves closer to a public listing, and its investor base expands, the board has a fiduciary duty to a much larger group of stakeholders and so must dedicate the necessary level of attention and oversight. This shift requires independent director representation on the board, free of any transactional or familial ties to the company, and ideally with previous experience leading companies through similar early growth phases.

For public companies, we believe it is important to have a majority of independent directors on the board. However, for newly public companies, we think it is reasonable to achieve this independence standard within two years after the initial public offering (IPO).

FOCUS THEMES

DONNA ANDERSON
Head of Corporate Governance

“T. Rowe Price does not apply different standards to private and public companies. We do not consent to any practices at private companies that we would not approve at public companies.”

Proxy Voting for Private Companies

Private companies do not hold annual general meetings of shareholders, nor do they offer proxy voting. Instead, these companies use a mechanism called written consent to seek shareholder approval of corporate matters, such as director elections and equity compensation plans.

Under written consent, the company selectively notifies investors, asking them to approve the item or items in question. These items do not have to be shared with all stockholders, nor is any advance notification required. Companies can simply ask for the consent of certain investors, one by one, until they achieve the 50% needed for approval. The remaining stockholders are then informed of the event after the fact.

This process is very different from a public company shareholder meeting, which requires advance notice be provided to all stockholders, publicly, and weeks ahead of the meeting date. All stockholders are informed at the same time of the items up for vote, and all have the chance to express their view.

Written consent clearly reduces the complexity and costs of holding a shareholder meeting, which is important for private companies that need to receive stockholder approval in a quick and efficient manner. However, this also reduces transparency for those investors whose consent is not sought by the company.

Often, our clients observe that private companies owned in T. Rowe Price portfolios proceed to IPO with unusual or onerous corporate governance provisions. These might include dual-class stock structures with superior voting rights for founders, allowing them to maintain control of the company. Or it might relate to unusual compensation packages where large IPO bonuses are embedded within. Understandably, our clients question us about why we support such provisions for private companies but vote against them for public companies.

It is important to make clear that T. Rowe Price does not apply different standards to private and public companies. We do not consent to any practices at private companies that we would not approve at public companies.

Unfortunately, our ability to effect change at private companies is limited by the written consent mechanism, given that they can easily obtain the consent needed from other investors or company insiders.

Evolution of Governance

For certain governance structures we see as problematic, we feel it is important to register our concerns with management of private companies in our portfolios and their outside advisers. We do this by declining to consent to such structures and discussing our concerns directly with company management.

However, a far more common scenario is that T. Rowe Price serves as an informal advisor to private companies on matters of corporate governance, capital allocation, investor relations, and business strategy. For example, we might provide guidance on the need for a company's governance to evolve over time. The governance provisions, takeover defenses, and board structures of a company in its first year after its IPO are likely to be very different from its needs after 5 or 10 years.

A Potential Turning Point

Looking ahead, 2020 could prove to be a meaningful turning point in the private company ecosystem. During a prolonged period of plentiful capital flowing into private, emerging-growth, companies from both venture capital funds and traditional public investors like T. Rowe Price, the founders of these companies have had their pick of potential funding sources. The enormous demand for promising growth investments caused power to shift away from the providers of capital and toward company founders. Accordingly, it has been difficult for investors to negotiate protective provisions or shareholder rights that safeguard their interests because company founders had a long line of other capital providers to choose from.

However, there are signs that this power imbalance has started to shift. In just the past few quarters, there have been some important developments involving major investors and capital providers demanding more stringent requirements from companies seeking capital funding. Heightened market volatility, more recently, has only accelerated this trend, as companies scramble to secure funding.

If our prediction is correct, we should see a healthier and more balanced dynamic emerge in the market for private, growth-oriented, companies.

ENGAGEMENT

Engagement Program Overview

At T. Rowe Price, we are fortunate to manage US\$1.2 trillion³ of assets for our clients, in predominantly actively managed portfolios. We believe the scale and scope of our business puts us in a powerful position compared with many of our peers when we carry out our ESG engagements with companies.

The sheer size of our assets under management has clout. Simply put, it gives us better access to company management.

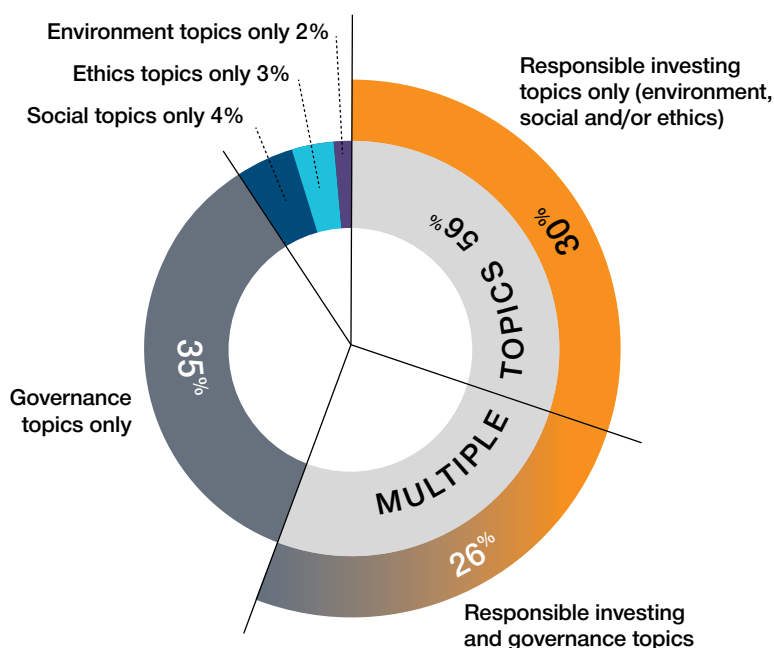
Our principal focus on actively managed portfolios also affords us real influence. In most cases, if we see an impediment to reaching our investment goals, such as a company's poor business practices or disclosure, we have the option not to invest. This contrasts with managers of passive portfolios, who typically have no choice but to hold an investment despite any evidence of business practice or disclosure concerns.

Our investment-driven engagement program frequently identifies targets through our proprietary RIIM analysis, governance screening, and analysts' fundamental research. ESG engagement meetings are carried out by portfolio managers and analysts from our equity and fixed income teams as well as by our ESG specialists.

While we engage with companies in a variety of investment contexts, ESG engagement focuses on learning about, influencing, or exchanging perspectives on the environmental practices, corporate governance, or social issues affecting their businesses.

Through the course of 2019, we held over 11,000 meetings with the managements of existing and prospective investments. Of those 11,000+ meetings, we classify 656 as ESG engagements as they contained a notable discussion on ESG issues.

2019 Engagements by Category



³ As of December 31, 2019.

Top 5 Engagement Topics

ENVIRONMENT

1. Environmental disclosure
2. Product sustainability
3. Greenhouse gas emissions
4. Responsible investing
5. Environmental management

SOCIAL

1. Social disclosure
2. Employee safety and treatment
3. Proxy voting social
4. Diversity
5. Society and community relations

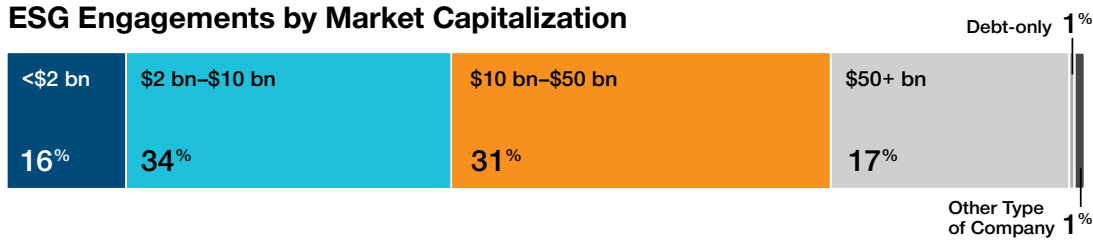
ETHICS

1. Bribery and corruption
2. Lobbying activities
3. Proxy voting ethics
4. Regulatory changes
5. Compliance programs

GOVERNANCE

1. Executive compensation
2. Board composition
3. Governance structure
4. Shareholder rights
5. Succession

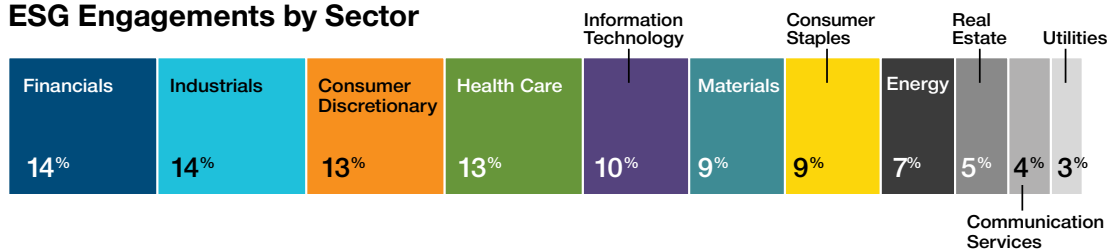
ESG Engagements by Market Capitalization



ESG Engagements by Region



ESG Engagements by Sector



Improving Disclosure on Environmental Issues

Climate change-related disclosure has recently been in the spotlight. Many clients are seeking greater transparency about the climate impact of companies in their investment portfolio. Understanding how their asset manager seeks and influences disclosures on these matters is increasingly important.

We believe that climate change is a critical investment issue—it is a global challenge that will touch virtually our entire investment universe. The potential impact on company performance and financial markets is still only in its very early stages. Regulations to mitigate climate change remain limited, but we expect they will broaden and intensify in the coming years. These new regulations have the potential to impact corporate performance and profits, spanning sectors and geographies. As a result, we see corporate disclosure of environmental data as an essential factor in our ability to measure how a company is placed to respond to changing regulations and, as such, how attractive it will be as an investment.

Over the past several years, disclosure of environmental data has been rising. However, in most cases, comprehensive environmental disclosure is not available. At T. Rowe Price, we've been active in using our scale and influence to drive change. In fact, ESG disclosure was our #1 engagement topic of 2019, with environmental disclosure a feature of 38% of our ESG engagements.

Our engagement activities have sought to nurture steady improvements in ESG disclosure. Our aim in these engagements is to help companies understand how they should report environmental data (as there is no uniformly adopted standard), how we use ESG data in our investment analysis and decision-making, and how our clients use ESG data to evaluate their aggregated portfolios.

Given the extent of our disclosure-related ESG engagements, in 2019 we also established a dedicated ESG education seminar for investor relations professionals. We held our first of these seminars in December and plan to hold several more through 2020.

Proxy Voting Program Overview

Proxy voting is a crucial link in the chain of stewardship responsibilities we execute on behalf of our clients. Each vote represents both the privileges and the responsibilities that come with owning a company's equity instruments.

We take our responsibility to vote our clients' shares very seriously—taking into account both high-level principles of corporate governance and company-specific circumstances. Our overarching objective is to cast votes to foster long-term, sustainable success for the company and its investors.

T. Rowe Price portfolio managers are ultimately responsible for the voting decisions within the strategies they manage. They receive recommendations and support from a range of internal and external resources:

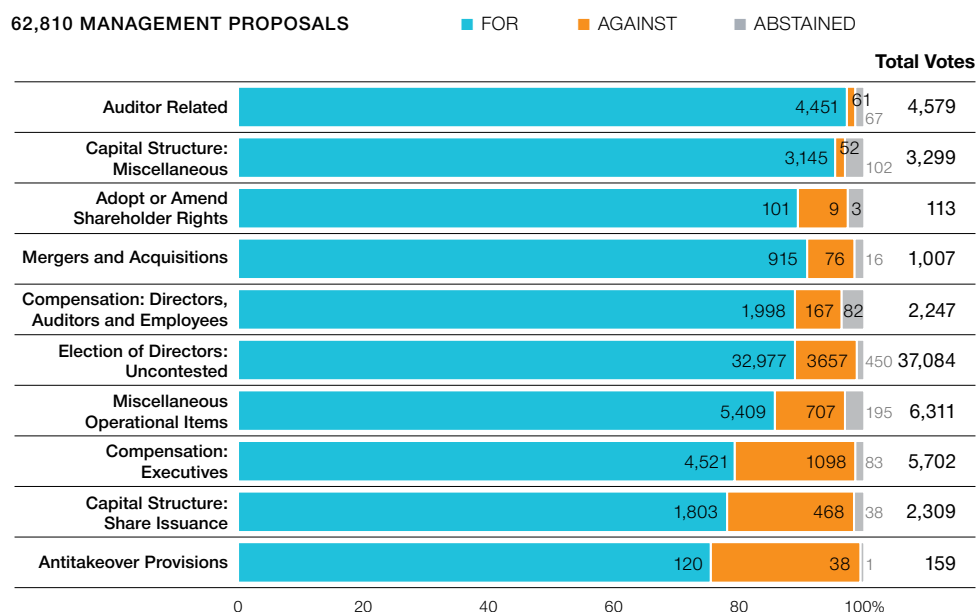
- The T. Rowe Price ESG Committee
- Our global industry analysts
- Our specialists in corporate governance and responsible investment
- ISS, our external proxy advisory firm

Our proxy voting program serves as one element of our overall relationship with corporate issuers. We use our voting power in a way that complements the other aspects of our relationship with these companies, including engagement, investment diligence, and investment decision-making.

2019 Highlights

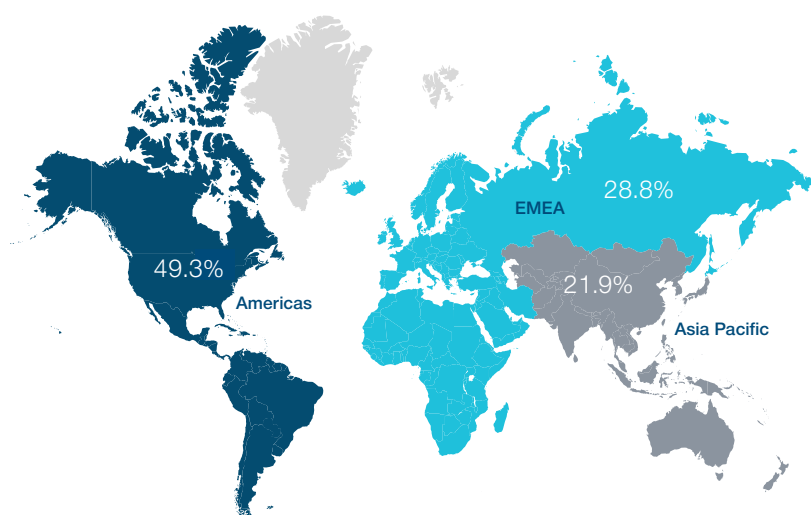
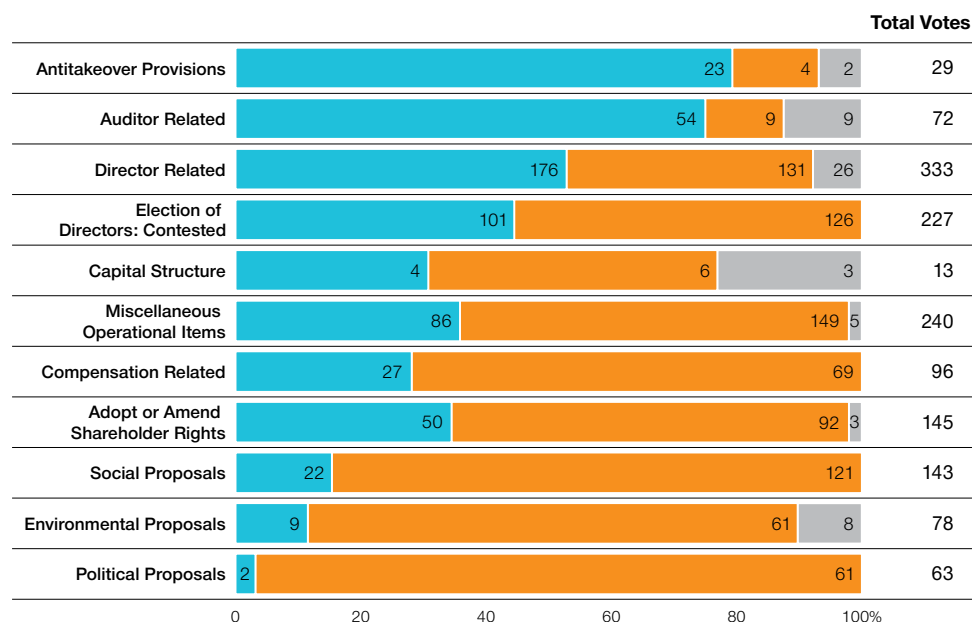
The following charts illustrate T. Rowe Price's global proxy voting activity for 2019. We voted on 64,249 proposals globally at 6,350 meetings, representing 99.2% of all meetings held.

Some categories, such as the election of directors, are universal across the markets where we invest. Other voting issues are unique to select regions. For management-sponsored proposals, a vote "FOR" is a vote aligned with the board's recommendation. For shareholder-sponsored proposals, a vote "FOR" is generally a vote contrary to the board's recommendation.



1,439 SHAREHOLDER PROPOSALS

■ FOR ■ AGAINST ■ ABSTAINED



Proxy Voting Geographies
82 Countries Across 3 Regions

Percentage Voted FOR—Regional Breakdown

	Americas	EMEA	Asia Pacific
Management Proposals			
Election of Directors: Uncontested	88%	86%	93%
Miscellaneous Operational Items	66%	87%	94%
Compensation: Executives	81%	74%	85%
Auditor Related	99%	92%	97%
Capital Structure: Share Issuance	49%	88%	69%
Compensation: Directors, Auditors, and Employees	90%	87%	91%
Shareholder Proposals			
Director Related	51%	44%	63%
Adopt or Amend Shareholder Rights	34%	50%	N/A
Miscellaneous Operational Items	32%	8%	65%
Social Proposals	23%	20%	0%
Environmental Proposals	12%	14%	7%
Political Proposals	3%	0%	N/A

As of December 31, 2019

Shareholder Proposals in the Spotlight

In just a few markets around the world, shareholders of a corporation are afforded the right to present items to be voted upon at the annual general meeting. These resolutions are subject to varying degrees of regulation and qualification. In some markets such as Japan, North America, and the Nordic region, filing requirements are minimal. As a result, it is common to see many resolutions submitted by individual investors in these markets. In other markets, where sponsors are required to have large, long-term holdings to be eligible to submit proposals, shareholder resolutions are relatively uncommon.

In 2019, there were 1,439 shareholder proposals relating to companies within our portfolios. Excluding shareholder-nominated directors and auditors, there were 738 shareholder resolutions seeking a vote on ESG matters: 375 addressed governance issues, 330 addressed environmental and social concerns, and 33 were withdrawn right before the meeting.



Although the 330 environmental and social items represented just one-half of 1% of all proposals we voted on, understandably, we see keen interest in our approach to voting on such resolutions, given mounting investor concern in this area.

T. Rowe Price does not have a standing voting policy on any matters of a social or environmental nature; each voting decision is reviewed by our portfolio managers on a case-by-case basis. Shareholder proposals are nonbinding votes that are nearly always opposed by the company's management and typically find little support. As a result, on issues like disclosure-focused shareholder resolutions, which represented the majority of the 330 environmental and social proposals we voted in 2019, we consider whether alternative or more practical opportunities may be available to yield the disclosures desired. For example:

Recognized Lack of Disclosure: There are instances when we find a company has not disclosed the information necessary to assess its environmental impact, emissions, or practices. However, many companies in this situation also accept their responsibility to be more transparent. When a company has given us assurances that it will publish ESG data within a short time frame, we are unlikely to support shareholder proposals asking for disclosure.

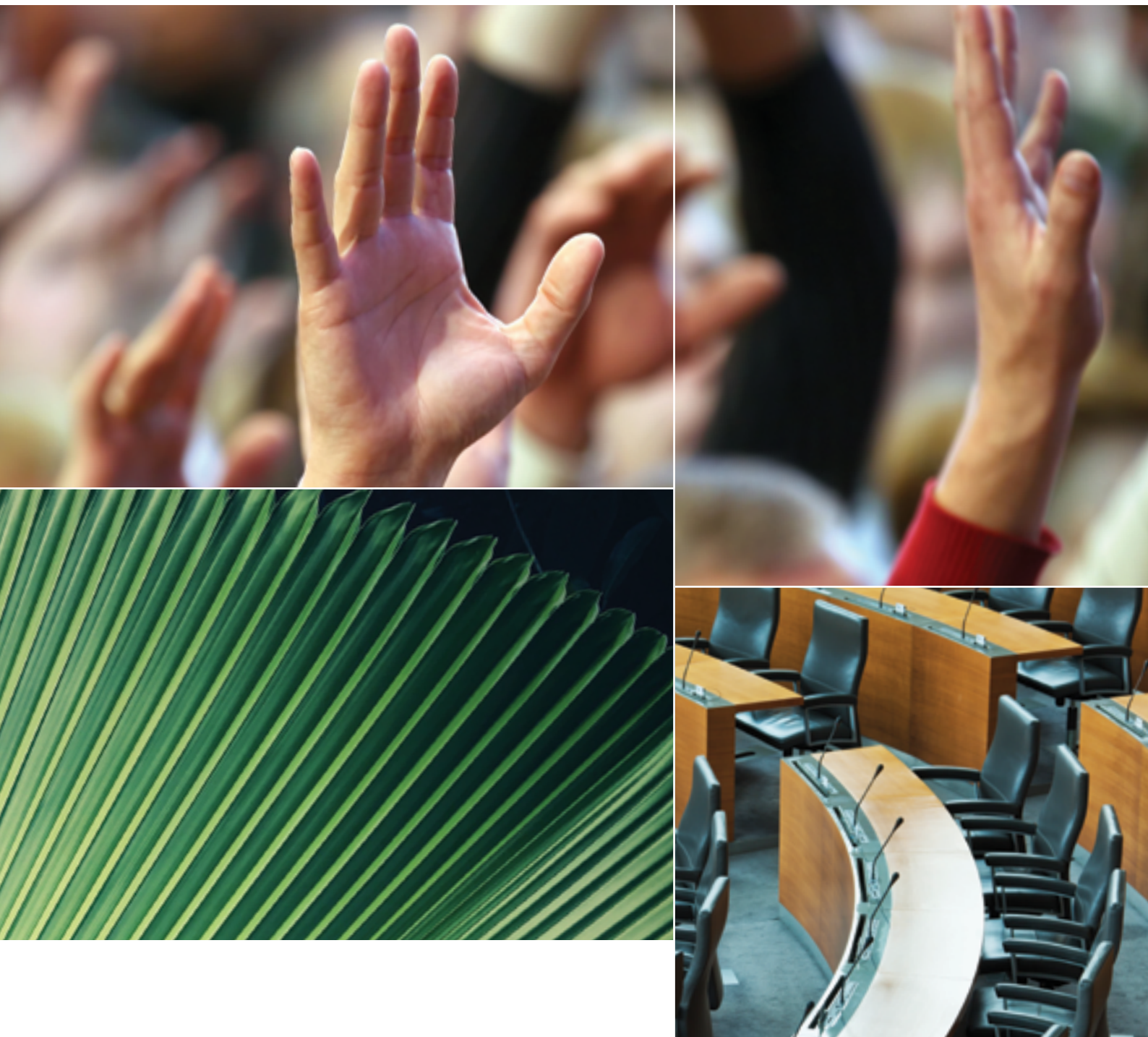
Poorly Targeted Disclosure Requests: We may disagree with the proponent of a shareholder proposal that additional disclosure is needed. For example, when a small or mid-size company receives a request to produce a comprehensive sustainability report, we assess whether this would be the best use of the company's limited resources. We may instead recommend that it disclose the data that are most material to its business model. Additionally, we advocate making ESG disclosure that is aligned with the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD) as best practice, so we are unlikely to support shareholder proposals that ask for other types of disclosure.

Overly Prescriptive Requests: A minority of environmental and social shareholder proposals asked the company to take a specific action. These included requests to adhere to a certain employment policy, to curtail a particular line of business, to establish a board committee, to change the executive compensation program, and so on. T. Rowe Price rarely supports

prescriptive shareholder resolutions such as these. In our view, the board is better positioned than shareholders to make decisions about the operations of the company. Our recourse, if we disagree with the board's decisions, is to oppose the election of directors, engage with the company, or use our prerogative as an active owner to sell or underweight the position.

Redundant Disclosure Requests: In some instances, shareholder proposals seek ESG disclosure despite the company already demonstrating a high level of transparency. For example, if a company already makes SASB and TCFD disclosure and/or participates in the Carbon Disclosure Project's (CDP) intensive survey focused on a climate-readiness assessment, we are unlikely to support proposals asking for additional climate reports.

Our experience after many years of assessing ESG issues as part of our investment process is that direct, one-on-one engagement with companies produces better outcomes than shareholder resolutions. It is important that this small subset of voting is viewed in the context of our broader voting activity that includes management resolutions and our wider engagement program.

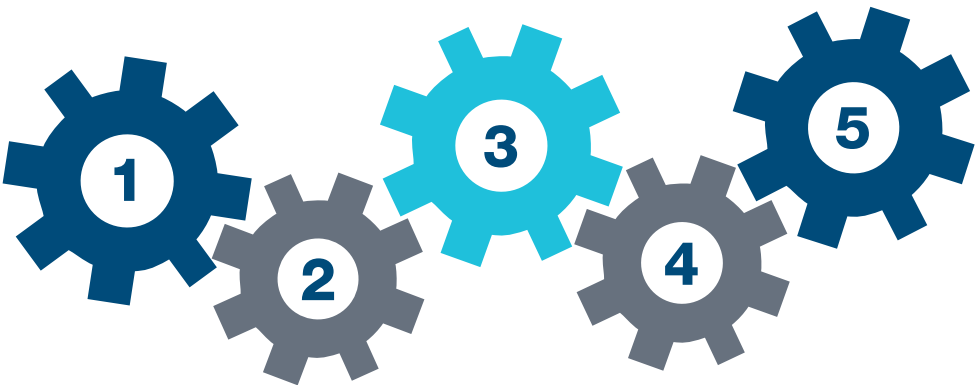


Collaborative Engagement and Industry Leadership

Our participation in collaborative industry initiatives is undertaken on a selective and strategic basis. These initiatives support our core engagement program, they do not drive it. We seek to understand where collaboration can provide the most viable and impactful supplement to our powerful internal capabilities.

Five key considerations for collaborative engagement

When considering participation in a collaborative engagement initiative, we weigh the following factors:



ALIGNMENT

How closely aligned is this engagement opportunity with our investment holdings? Does it include companies where we are significant shareholders?

IMPACT POTENTIAL

Would our participation help the engagement initiative? Does it need a large asset manager merely to gain attention, or does it already have broad support?

RESOURCE FOCUS

Does the engagement make the most efficient use of our internally dedicated engagement resources?

PRACTICALITY

Have we already undertaken the same engagement or very similar engagements unilaterally with success?

TANGIBILITY

Is the scope of the collaborative engagement clear and are we confident that it will not change over time?

Often, our collaborative initiatives target improved disclosure or business practices on a market-wide level. For example, in 2017 T. Rowe Price joined a coalition of 16 large investors to become a founding member of the Investor Stewardship Group (ISG). ISG was formed to bring investors together to address fundamental issues of corporate governance and investment stewardship in the United States, where there was no market-wide governance code.

T. Rowe Price has also joined or led the following initiatives to bring investors together for purposes of advocacy and engagement:

Organization	Description	Status	Joined
Council of Institutional Investors (CII)	U.S. association of institutional investors, corporate issuers, and asset managers	Associate Member	1989
Principles for Responsible Investment (PRI)	Global initiative for responsible investment	Signatory	2010
UK Stewardship Code	Public commitment to uphold stewardship principles for UK investors	Signatory	2010
Japan Stewardship Code	Public commitment to uphold stewardship principles for Japanese investors	Signatory	2014
Associação de Investidores no Mercado de Capitais (AMEC)	Association of minority investors of Brazil	Member	2015
Asia Corporate Governance Association (ACGA)	Pan-Asian association for institutional investors	Member	2016
UK Investor Forum	Collaborative engagement association for investors in UK companies	Founding Member	2016
Investor Stewardship Group (ISG)	Investors advocating for core governance principles for U.S. market participants	Founding Member	2017
Japan Stewardship Initiative	Investor forum for stewardship solutions and sharing of best practices	Founding Member	2019
Investment Association Climate Change Working Group	Group to direct the work of the UK investment management industry trade body in relation to climate change	Member	2020
Investor CDP (formerly the Carbon Disclosure Project)	Advocacy group for better disclosure of carbon emissions	Signatory	>5 years

As of February 2020

Leading Change in Corporate Governance—The Japan Stewardship Initiative

The Japan Stewardship Initiative (JSI) was launched in November 2019 to encourage free and wide-ranging discussions among asset owners, asset managers, and other interested parties on issues related to stewardship and to create a place where the outcomes of those discussions will benefit everyone in the industry. T. Rowe Price was one of 40 organizations and individuals to sign on as original members.

With an ever-increasing focus on ESG factors—and many investors wanting to understand more about the companies they own—the Japanese market has experienced considerable structural change in recent years.

This change is resulting in participants across the country's entire investment industry—asset owners, asset managers, and investee companies—enhancing their stewardship activities. This move to more thorough oversight has been encouraged by recommendations from new stewardship codes, including the Japan Stewardship Code introduced in 2014 and the Corporate Governance Code introduced in 2015.

The Japan Stewardship Code has become an important part of the Japanese asset management business. As T. Rowe Price's local presence has grown extensively in the last few years—with notable recognition as the largest local-domiciled project launch of the year in 2019—it is important for us to demonstrate our corporate citizenship in the industry. We are proud to be a founding member of the JSI and look forward to collaborating with peers and asset owners to press for stewardship practices in Japan.

From our perspective as an investor, it is encouraging that the importance of ESG has been embraced so quickly in the Japanese market. However, the path to gaining meaningful insights from ESG data can be chaotic because companies, asset owners, and asset managers have different ideas about what should be reported. The JSI is an innovative solution to that problem, and T. Rowe Price is delighted to now be part of that solution.

Principles for Responsible Investment

T. Rowe Price has been a signatory of the PRI since 2010, and we report to the PRI annually. We support the PRI framework as an effective means of encouraging better dialogue among investors and better disclosure from companies globally about these important issues.

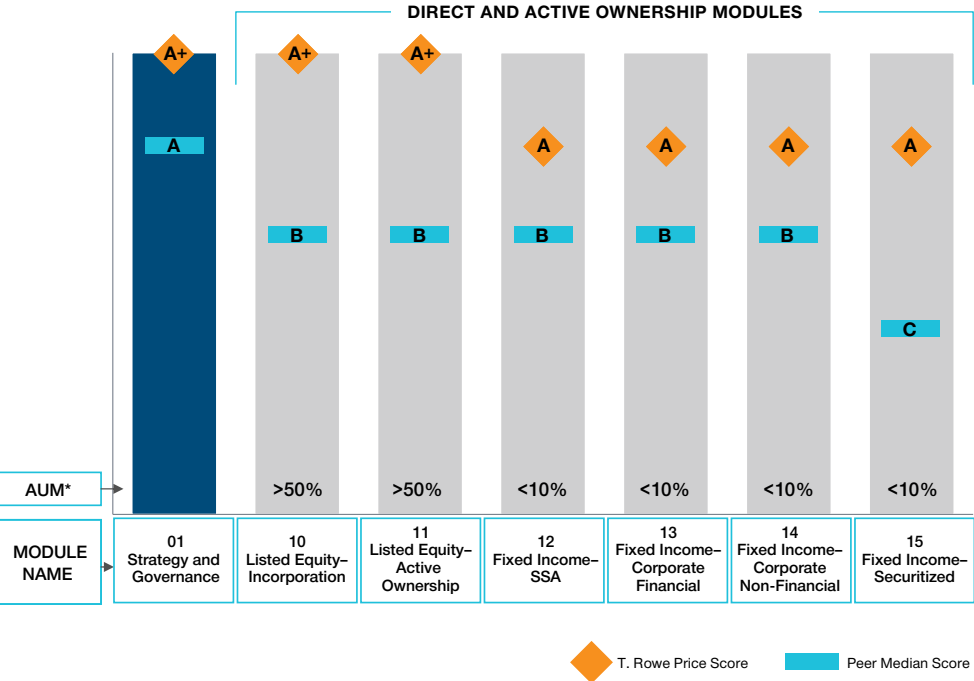
Under the PRI's transparency requirements, all signatories complete an annual self-assessment. T. Rowe Price's most recent Transparency Report is available via the PRI data portal at dataportal.unpri.org.

The PRI Summary Scorecard below provides an overview of our aggregate score for each module assessed and the median score. These bands range from A+ (top band) to E (lowest band). The PRI Assessment scoring methodology is available at unpri.org.

T. Rowe Price PRI Scorecard 2019

As of July 2019

T. Rowe Price has been a signatory of the PRI since 2010.



* Asset classes were aggregated to four ranges: 0%, <10%, 10%–50%, and >50%. T. Rowe Price AUM, as of December 31, 2018.

Under the PRI's transparency requirements, all signatories complete an annual self-assessment. A significant portion of this report must be publicly disclosed on the PRI's website. T. Rowe Price's most recent Transparency Report is available via the PRI data portal dataportal.unpri.org.

The PRI Summary Scorecard provides an overview of our aggregate score for each module assessed and the median score. These bands range from "A+" (top band) to "E" (lowest band). The PRI Assessment scoring methodology is available at unpri.org.

Source: PRI Assessment report 2019, showing the applicable T. Rowe Price scores.

ESG Accountability

The Nominating and Governance Committee of the Board of Directors of T. Rowe Price oversees the firm's ESG activity and receives annual updates.

The ESG Committee, made up of senior leaders, oversees ESG integration. It is cochaired by the Head of Corporate Governance and the Director of Research, Responsible Investing. The committee's primary purpose is to assist the Equity Steering Committee, International Steering Committee, Multi-Asset Steering Committee, and Fixed Income Steering Committee of T. Rowe Price Group in establishing the firm's investment advisors' frameworks for:

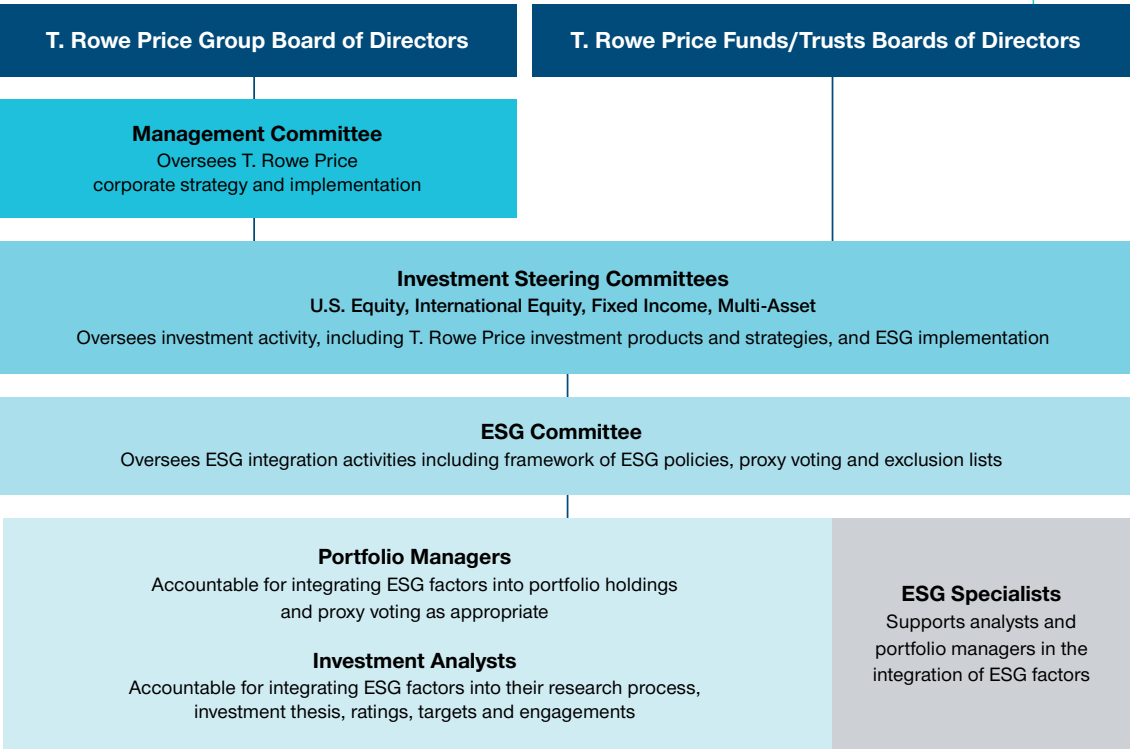
- assessing environmental, social, and corporate governance issues,
- maintaining an appropriate set of proxy voting guidelines, and
- overseeing and approving exclusion lists for use in various investment capacities.

The committee submits an annual report to the applicable T. Rowe Price Funds' Board of Directors summarizing voting results, policies, procedures, and other noteworthy items.

Our dedicated, in-house ESG resources report directly to senior management level. The Director of Research, Responsible Investing (Maria Elena Drew) reports to the Head of Investments and Group Chief Investment Officer (Rob Sharps). The Head of Corporate Governance (Donna Anderson) reports to the co-head of Global Equity (Eric Veiel).

Our analysts are responsible for incorporating ESG factors into their investment recommendations, as such it is incorporated in their annual performance review. The Directors of Research (DOR) for equity and fixed income oversee the investment analysts and how they implement ESG factors in their investment process, receiving input from the Director of Research, Responsible Investing, and the Head of Corporate Governance. Our portfolio managers are responsible for incorporating ESG factors into their investment decisions, as such it is incorporated in their annual performance review as appropriate to their fund's mandate.

RESOURCES



ESG Team

RESPONSIBLE INVESTING



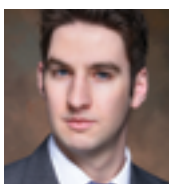
Maria Elena Drew
Director of Research,
Responsible Investing (London)



Suha Read
Business Manager,
Responsible Investing (London)



Iona Richardson
Associate Analyst (Hong Kong)



Scott Petrie
Associate Analyst (London)



Gabrielle Frederick
Associate Analyst (Baltimore)



Joe Baldwin
Associate Analyst (London)



Duncan Scott
Associate Analyst (London)

GOVERNANCE



Donna F. Anderson
Head of Corporate Governance
(Baltimore)



Jocelyn Brown
Head of Governance,
EMEA & APAC (London)



Kara McCoy
Governance Analyst (Baltimore)

PROXY VOTING



Amanda Falasco
Lead Manager (Baltimore)

REGULATORY RESEARCH



Katie Deal
Washington and Regulatory
Research (Baltimore)

ESG Committee

Donna F. Anderson
Co-Chair, Head of
Corporate Governance

Maria Elena Drew
Co-Chair, Director of Research,
Responsible Investing

Kamran Baig
Director of Equity Research,
EMEA and Latin America

LQ Huang
General Manager,
U.S. Equity

Preeta Ragavan
Equity Investment Analyst

Hari Balkrishna
Associate Portfolio Manager,
Global Growth Equity

Michael Lambe
Credit Investment Analyst

Jeff Rottinghaus
Portfolio Manager,
U.S. Large-Cap Core Equity

R. Scott Berg
Portfolio Manager,
Global Growth Equity

Matt Lawton
Associate Portfolio Manager,
U.S. Fixed Income

John C.A. Sherman
Equity Investment Analyst

Brian W. Berghuis
Portfolio Manager,
U.S. Mid-Cap Growth Equity

Matthew Leef
Head of U.S. Investment,
Middle Office

Justin Thomson
Chief Investment Officer,
Portfolio Manager,
International Equities

Archibald Ciganer
Portfolio Manager,
Japan Equity

Ryan Nolan
Senior Legal Counsel,
Legal

Mitchell Todd
Associate Head,
EMEA Equity

Anna M. Dopkin
Strategic Project Manager

Gonzalo Pangaro
Portfolio Manager,
Emerging Markets Equity

Eric Veiel
Co-head, Global Equity

Ryan Hedrick
Associate Portfolio Manager,
U.S. Large Cap Equity

Sally Patterson
General Manager,
International Equity

Ernest Yeung
Portfolio Manager,
Emerging Markets
Discovery Equity

Amanda Falasco
Lead Manager,
Proxy Services

Important Information

This material is being furnished for general informational and/or marketing purposes only. The material does not constitute or undertake to give advice of any nature, including fiduciary investment advice, nor is it intended to serve as the primary basis for an investment decision. Prospective investors are recommended to seek independent legal, financial and tax advice before making any investment decision. T. Rowe Price group of companies including T. Rowe Price Associates, Inc. and/or its affiliates receive revenue from T. Rowe Price investment products and services. **Past performance is not a reliable indicator of future performance.** The value of an investment and any income from it can go down as well as up. Investors may get back less than the amount invested.

The material does not constitute a distribution, an offer, an invitation, a personal or general recommendation or solicitation to sell or buy any securities in any jurisdiction or to conduct any particular investment activity. The material has not been reviewed by any regulatory authority in any jurisdiction.

Information and opinions presented have been obtained or derived from sources believed to be reliable and current; however, we cannot guarantee the sources' accuracy or completeness. There is no guarantee that any forecasts made will come to pass. The views contained herein are as of the date written and are subject to change without notice; these views may differ from those of other T. Rowe Price group companies and/or associates. Under no circumstances should the material, in whole or in part, be copied or redistributed without consent from T. Rowe Price.

The material is not intended for use by persons in jurisdictions which prohibit or restrict the distribution of the material and in certain countries the material is provided upon specific request. It is not intended for distribution to retail investors in any jurisdiction.

Australia—Issued in Australia by T. Rowe Price Australia Limited (ABN: 13 620 668 895 and AFSL: 503741), Level 50, Governor Phillip Tower, 1 Farrer Place, Suite 50B, Sydney, NSW 2000, Australia. For Wholesale Clients only.

Canada—Issued in Canada by T. Rowe Price (Canada), Inc. T. Rowe Price (Canada), Inc.'s investment management services are only available to Accredited Investors as defined under National Instrument 45-106. T. Rowe Price (Canada), Inc. enters into written delegation agreements with affiliates to provide investment management services.

DIFC—Issued in the Dubai International Financial Centre by T. Rowe Price International Ltd. This material is communicated on behalf of T. Rowe Price International Ltd by its representative office which is regulated by the Dubai Financial Services Authority. For Professional Clients only.

EEA ex-UK—Unless indicated otherwise, this material is issued and approved by T. Rowe Price (Luxembourg), Management S. à r. l, 35 Boulevard du Prince Henri, L-1724 Luxembourg which is authorized and regulated by the Luxembourg Commission de Surveillance du Secteur Financier. For Professional Clients only.

Hong Kong—Issued in Hong Kong by T. Rowe Price Hong Kong Limited, 6/F, Chater House, 8 Connaught Road Central, Hong Kong. T. Rowe Price Hong Kong Limited is licensed and regulated by the Securities & Futures Commission. For Professional Investors only.

Korea—This material is intended only to Qualified Professional Investors upon specific and unsolicited request and may not be reproduced in whole or in part, nor can it be transmitted to any other person in the Republic of Korea.

New Zealand—Issued in New Zealand by T. Rowe Price Australia Limited (ABN: 13 620 668 895 and AFSL: 503741), Level 50, Governor Phillip Tower, 1 Farrer Place, Suite 50B, Sydney, NSW 2000, Australia. No Interests are offered to the public. Accordingly, the Interests may not, directly or indirectly, be offered, sold, or delivered in New Zealand, nor may any offering document or advertisement in relation to any offer of the Interests be distributed in New Zealand, other than in circumstances where there is no contravention of the Financial Markets Conduct Act 2013.

Singapore—Issued in Singapore by T. Rowe Price Singapore Private Ltd., No. 501 Orchard Rd, #10-02 Wheelock Place, Singapore 238880. T. Rowe Price Singapore Private Ltd. is licensed and regulated by the Monetary Authority of Singapore. For Institutional and Accredited Investors only.

Switzerland—Issued in Switzerland by T. Rowe Price (Switzerland) GmbH, Talstrasse 65, 6th Floor, 8001 Zurich, Switzerland. For Qualified Investors only.

UK—This material is issued and approved by T. Rowe Price International Ltd, 60 Queen Victoria Street, London, EC4N 4TZ, which is authorized and regulated by the UK Financial Conduct Authority. For Professional Clients only.

USA—Issued in the USA by T. Rowe Price Associates, Inc., 100 East Pratt Street, Baltimore, MD, 21202, which is regulated by the U.S. Securities and Exchange Commission. For Institutional Investors only.

© 2020 T. Rowe Price. All rights reserved. T. ROWE PRICE, INVEST WITH CONFIDENCE, and the bighorn sheep design are, collectively and/or apart, trademarks of T. Rowe Price Group, Inc.

INVEST WITH CONFIDENCE®

T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.