

FUTURE OF SUSTAINABILITY IN INVESTMENT MANAGEMENT: FROM IDEAS TO REALITY



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EXECUTIVE SUMMARY

The future of sustainable investing is in the balance. It involves balancing financial and extra-financial considerations, balancing short-term and long-term goals, and balancing interests among stakeholders and over time, while seeking fair outcomes for all.

None of this is easy. But sustainable investing is critical to the sustainability of investing. The incorporation of sustainability in investment management is an important element in the industry's mission to serve society by improving long-term outcomes. Although the future of sustainable investing includes many unknowns, we advance three important tenets where sustainable investing goes further than its forerunners:

- It is additive to investment theory and does not mean a rejection of foundational concepts.
- It develops deeper insights about how value will be created going forward using environmental, social, and governance (ESG) considerations.
- It considers many stakeholders.

In many ways, we are moving from sustainable investing as a good idea to a reality that has implications for all investment portfolios. There is a growing recognition that some ESG factors are economically material, especially in the long term, and it is, therefore, important to integrate material ESG factors in investment decisions.

As we consider a 5- to 10-year time horizon, our report's structure follows the acronym **"IDEA"**:

INFLUENCES: The accelerating demand for sustainable investing and scenarios for the future

DRIVERS: How investment organizations are adapting and expanding their business models and investment models to meet investor expectations for sustainable investing

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ENABLERS: How the operating models and people models of investment organizations will facilitate growth in sustainable investing

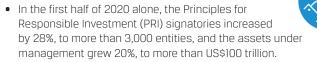
ACTIONS: A rubric for investment organizations, investment professionals, and the industry to support the pathway of sustainable investing

We suggest that the next stage of development will depend very heavily on industry leadership and innovation in investment thinking and practice, as well as data management. Investors and the investment industry have a considerable role to play in shaping the future.

EXECUTIVE SUMMARY

Influences:

The accelerating growth of sustainable investing



- 85% of CFA Institute members* now take E, S, and/or G factors into consideration in their investing, up from 73% in 2017.
- Client demand as a motivation for investment organizations to consider ESG factors increased significantly in the last three years. Demand as a motivator was highest in the Americas region (65%), an increase of 20 percentage points since 2017.
- According to Google Trends, the topic "environmental, social, and corporate governance" has never been as popular as it is today.
- The COVID-19 pandemic has focused investors on the vulnerability and resilience of the financial system and intensified the discussions around sustainability.
- Sustainable investing carries implications for the CFA Institute future state scenarios of Fintech Disruption, Parallel Worlds, Lower for Longer, and especially Purposeful Capitalism, which takes on a new tenor and urgency. The new scenario applications – climate energy and social status, as below – extend our scenario framework.

New Scenario Applications



Climate Energy: Carbon pricing regimes emerge, supported by national regulatory frameworks to deliver transparency, liquidity, and ease of access. Investment organizations account for carbon prices, and the quality of

climate risk management becomes a differentiator. Climate views are increasingly incorporated into wealth management, retail, and defined contribution contexts, following the lead of institutional investors. Investment professionals deepen their understanding of climate risk resilience and mitigation.



Social Status: Innovations occur in transparency and reporting as social factors become better defined and measured. There is a greater ability to compare organizations on previously hidden areas of operation.

Social media is increasingly influential in highlighting good and bad examples of company behaviors. Alternative data sources add further information to enable assessments to be made on the softer aspects of corporate conduct.



Drivers:

Business model: The core attributes on value and competitive differentiation of investment organizations



Commitment: The business model for investment

organizations pursuing sustainable investing must make commitments on the full range of resources, processes, and incentives that are necessary to drive an innovation of this magnitude.

Investor interest: Although only 19% of institutional investors and 10% of retail investors currently invest in products that incorporate ESG factors, 76% of institutional investors and 69% of retail investors have interest in ESG investing.

Objectives: Among those with a values objective (or a dual objective combining financial outcomes with values), 73% of institutional investors and 67% of retail investors would be willing to give up some return in exchange for meeting their values objective.

Investment model: The component parts of the organization's investment philosophy, beliefs, and capabilities



Implementation: The most used features are best-in-class/ positive screening (used by 56% of survey respondents) and ESG integration (53%), followed by ESG-related exclusions (48%). Voting, engagement, and stewardship are used by 40%, and thematic is used by 35%.

Expected growth areas: Industry professionals expect to see more ESG index tracking and quant funds, ESG thematic products, ESG multiasset products, climate transition strategies, long-term engagement, and better benchmarks.

*In the mainland of China, CFA Institute accepts CFA® charterholders only.

EXECUTIVE SUMMARY CONTINUED

Enablers:

Operating model: How the organization manages its products and services, with special consideration of data, technology, systems, and tools



ESG ratings: Company ratings are widely used, with 63% of investment professional respondents using them as a part of their data analysis. In addition, 73% expect the influence of ESG ratings on firms' cost of capital to be greater in the next five years.

Climate risk: 40% of investment professionals surveyed incorporate climate risk into their analysis, and the most common types of risk considered are physical and transition risks.

Greenwashing: 78% of practitioners surveyed believe there is a need for improved standards around ESG products to mitigate "greenwashing." The ESG disclosure standard under development by CFA Institute aims to increase the transparency and comparability of investment products with ESG-related features.

Alternative data: A majority (71%) of industry roundtable participants agreed that alternative data have the potential to improve the robustness of sustainability analysis, and 43% expect sustainability to benefit from the application of artificial intelligence.

People model: The staffing model and the attract-andretain methods used



Research commitment: 90% of investment professionals expect their firm's commitment to ESG research will increase, up from 72% just two years ago.

Current structure and roles: About one-third of investment organizations have dedicated ESG specialists, and a third have portfolio managers conduct ESG analysis.

Demand for ESG expertise: A review of 10,000+ LinkedIn investment professional job posts found that approximately 6% mentioned sustainability-related skills. Demand for sustainability talent is rated as "very high."

Supply of ESG expertise: An analysis of 1 million investment professionals on LinkedIn found that <1% had disclosed sustainability-related skills in their profile, despite 26% growth in sustainability expertise in the last year. Women represent 42% of ESG analysts, which is much higher than the 26% of women overall in the sample.

Training: Training in ESG has increased, but still fewer than half of respondents say their firm provides ESG training. Only 11% of respondents consider themselves proficient in the area, but an equal number are currently being trained, and more than 70% have interest in training — half of these within the next year.



Actions needed:

We suggest that the industry must make a transition toward increased adoption of sustainable investing and increased effectiveness and impact of sustainable investing. A **rubric for progress** provides a framework to produce a combination of a grade for performance



to produce a combination of a grade for performance and a guide to improve performance. The guide we suggest for improving performance includes the following elements for the industry, organizations, and investment professionals.

1. ESG education

Industry: ESG knowledge and skills are developed to a critical threshold across the industry so that ESG thinking is embedded in all investment settings.

Organizations: Provide training to build ESG expertise, and hire new resources as needed.

Investment professionals: Core knowledge on ESG considerations is acquired by all industry professionals. T-shaped skills help professionals make better connections and draw on multiple disciplines.

2. System-level thinking

Industry: Theory and practice integrate system-level thinking on top of

traditional investment thinking, in an additive and complementary way.

Organizations: Organizations do much more to integrate ESG and sustainability into their investment models.

Investment professionals: Investment professionals understand the main features of systems theory and use this thinking when considering sustainability topics.

3. Collaboration synergy

Industry: Strengthened collaborations within and across organizations drive engagement and combinatorial power.

Organizations: Stewardship commands considerably more focus, and there is much more resourcing committed to ownership duties and opportunities.

Investment professionals: Strengthened collaborations within organizations and across groups and functions provide a more joined-up, holistic, and teamwork-oriented approach to sustainability.

4. ESG data

Industry: ESG data practices are developed to support more substantial decision-useful application, and data go from being part of the sustainability problem to part of the solution.

EXECUTIVE SUMMARY CONTINUED

Organizations: Investment organizations reduce the cultural impediments and structural limitations that have prevented the efficient handling of the large and growing datasets involved.

Investment professionals: They understand the issues of materiality and validity of ESG data and are adept at evaluating all forms of data: hard data, soft data, and alternative data.

5. Sustainability innovation

Industry: Organizational commitment to sustainability innovation incorporates better incentives, agility, and iteration and comes from all parties.

Organizations: Demonstrated commitment to sustainability innovation through organizational agility in people and processes and iterative improvements.

Investment professionals: Demonstrate a willingness to explore new approaches to sustainability investment approaches, measurement, and impact.

6. Purposeful culture

Industry: Positive ethics and values are martialed into organizations that have purposeful culture and a mission-driven ethos.

Organizations: Organizational transformations produce purposedriven organizations with a strong fiduciary culture, recognizing the need for more balance.

Investment professionals: Individuals with strong values make up a more committed and happier workforce, and individual accountability contributes to purposeful cultures.

Role of CFA Institute

As the largest global association of investment professionals, CFA Institute has committed to the development of sustainable investing in the following ways:

- **Supporting company reporting efforts** by providing the investor view on advisory committees and working with accounting standard setters to look for harmonization opportunities.
- Educating investment professionals via a specialist certificate, professional development, practitioner-focused research, and the CFA Program curriculum. In the next edition of the curriculum, ESG content will increase by 130%, with 23 readings in seven topic areas. This is equivalent to ESG coverage in 16% of readings, and ESG coverage will likely reach 20% or more as ESG standards develop and practice advances.
- Creating standards to improve product transparency and comparability in investor reporting, with the CFA Institute ESG Disclosure Standards for Investment Products expected in late 2021.

Conclusion

Within sustainable investing lie the fundamental elements of the sustainability of investing. Investors and the investment industry have a considerable role to play in determining the pathway and shaping a future worth investing in.

Methodology:

The report is informed by the views of more than 7,000 industry participants, including 3,500+ retail investors, 920+ asset owners,

and 3,050+ investment practitioners. Research was conducted via surveys and virtual roundtables across 31 markets globally.



INTRODUCTION

The investment industry has grown significantly over time, supported by evolving theories and practices that have helped bring complex subjects into mainstream application and created new sources of wealth. It is rare for a single topic to challenge such long-held theories and investing paradigms all at once, yet this is the challenge of sustainable investing, and it goes to the heart of the sustainability *of* investing.

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INTRODUCTION

Traditional investing delivers value by translating investor capital into investment opportunities that carry risks commensurate with expected returns. Sustainable investing delivers value by balancing traditional investing with environmental, social, and governance-related (ESG) insights to improve long-term outcomes.

Balance is an important and often underappreciated concept in sustainable investing that applies in several dimensions. It includes balancing financial and extra-financial considerations. It means balancing short-term goals and long-term goals. It involves balancing stakeholder interests in the cross section dimension (across stakeholder groups) and in the temporal dimension (considering intergenerational equity). Sustainability involves seeking fair outcomes for all, recognizing that corporate activity and investment decisions have spillovers in an ecosystem. The future of sustainable investing is in the balance.

None of this is easy. But the pressure is on for investment organizations to move toward the sustainable investing model. And the alternative of staying put leaves the investment industry vulnerable to decline. We believe that sustainable investing is critical to the sustainability of investing.

In many ways, sustainable investing can be seen as part of the evolution of investing. There is a growing recognition among industry participants that some ESG factors are economic factors, especially in the long term, and it is, therefore, important to incorporate material ESG factors.

One of the challenges of sustainable investing is that since there is not an established sustainability taxonomy, people tend to conflate the landscape of ESG products and processes. These products and processes come with specific beliefs about the purpose and outcomes of ESG, which can also vary. And we have greenwashing and overclaiming to contend with too. This has sparked frustration and confusion across the industry and among investors, firms, and policymakers. But interest in the area continues to grow, and there is a preparedness to tackle these issues, which are understandable flaws in a developing subject. In an era where the investment industry is challenged by rising end-client expectations and challenging economics, sustainable investing is a potential bright spot.

Although the future of sustainable investing includes many unknowns, we advance three important tenets where sustainable investing goes further than its forerunners:

- It is additive to investment theory and does not mean a rejection of foundational concepts.
- It develops deeper insights about how value will be created going forward using ESG considerations.
- It considers many stakeholders.

Our work develops a narrative about the history and present state of sustainable investing and how the sustainability trend of the next 5–10 years will develop.

The pathway to this will require changes, however, for the investment industry overall, investment organizations, and investment professionals. Our work sets out plausible scenarios for this change, including what we consider as preferable outcomes.

We write at a time when sustainable investing uptake has been quickly increasing and has reached an early stage of maturity following more than 30 years of development. In many ways, we are moving from

sustainable investing as a good idea to a reality that has implications for all investment portfolios. Our report structure follows the acronym "IDEA":

- **Influences**: The accelerating demand for sustainable investing and scenarios for the future.
- **Drivers**: How investment organizations are adapting and expanding their business models and investment models to meet investor expectations for sustainable investing.
- **Enablers**: How the operating models and people models of investment organizations will facilitate growth in sustainable investing.
- Actions: A rubric for investment organizations, investment professionals, and the industry to support the pathway of sustainable investing.

We suggest that the next stage of development will depend very heavily on industry leadership and innovation in investment thinking and practice, as well as data management. If these are present, the future is exceptionally bright.

A word about terminology: We refer to "sustainable investing" as a broad classification, but the familiar name is "ESG" and we will frequently use the term "ESG investing" in our narrative because it is often more explicit. There are some differences in these concepts. Sustainable investing has broader connotations and is more like an investment philosophy, whereas ESG investing works at a practical level to describe investment mechanics. In some places, they are interchangeable, and we found this to be the case in practice throughout our series of industry roundtables. Indeed, an area of consensus is that the terminology remains unsettled.

Methodology

The report is informed by views of more than 7,000 industry participants. Inputs to the report include the following:

 4,400+ investment clients: 3,525 retail investors (minimum assets of US\$100,000) and 921 institutional investors (pension funds, endowments, foundations, insurance companies, and sovereign funds of US\$50 million assets under management or greater) across 15 markets, surveyed in October/November 2019 by Greenwich

 2,800+ investment practitioners: CFA Institute members globally, including 325 from the C-suite and 373 ESG specialists, surveyed in March 2020. We will refer to this as the practitioner dataset/survey.

Associates. We will refer to this as the investor dataset/survey.

- 250+ participants in 23 virtual roundtables and interviews, including investment professionals, ESG service providers, policymakers, and academics from 31 markets.¹
- Insights from desk research and other CFA Institute publications notably, "Future State of the Investment Profession" (CFA Institute 2017), "Investment Firm of the Future" (CFA Institute 2018), "Investment Professional of the Future" (CFA Institute 2019a), ESG and Responsible Institutional Investing around the World: A Critical Review (Matos 2020), "Climate Change Analysis in the Investment Process" (CFA Institute 2020a), and "Consultation Paper on the Development of the CFA Institute ESG Disclosure Standards for Investment Products" (CFA Institute 2020b).

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INFLUENCES

To understand the future of sustainable investing, it is helpful to understand how we got here. Both internal efforts of the investment community and external forces are driving change in this space.

INFLUENCES



A. The Accelerating Growth of Sustainable Investing

In this section, we examine the growth of sustainable investing, the historical phases of its rise, and the catalysts today for the future.

The last few years have seen accelerating growth in interest in sustainable investing. This interest has been evident in end investor and asset owner demand, asset manager product supply, intermediary and service provider offerings, and investment professionals eager to learn more about the subject.

Furthermore, disruption can be a powerful catalyst for innovation, and the COVID-19 pandemic has given everyone good reason to reassess the wider context of sustainability. With sudden changes to our typical daily activities, from where we go to how we interact with others, come opportunities to reimagine what is possible. In 2019, who would have imagined a near-term scenario where carbon emissions not only slow but decline substantially? We now see this highly unlikely scenario as a reality and can better understand what a new pathway might look like and the experiences along the way.

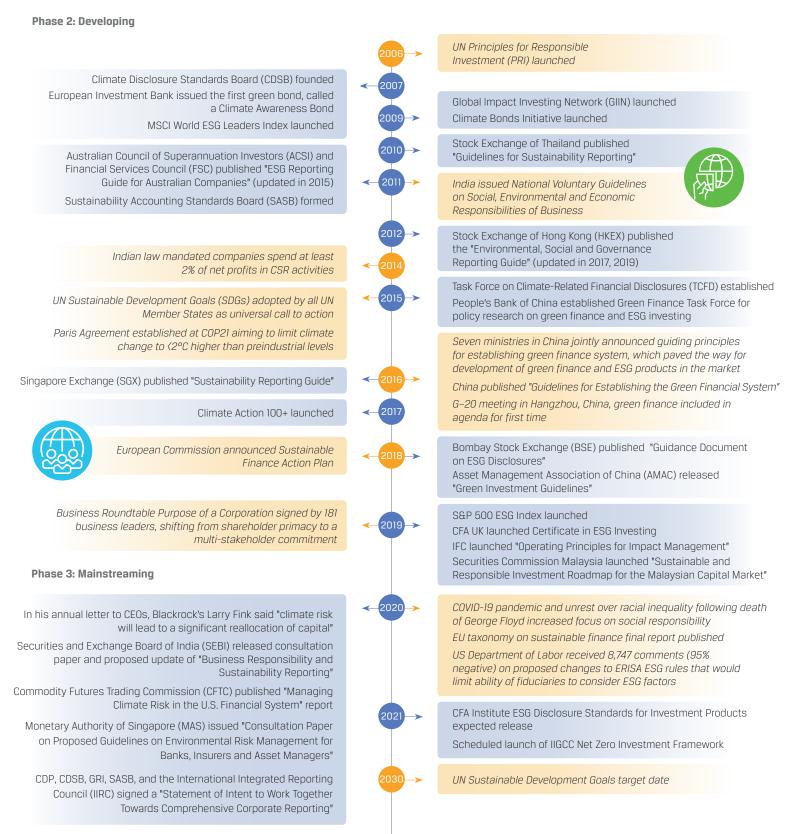
We have been developing more rigorous thinking around issues of redundancy and resiliency, and it has prompted investment organizations to ask, "What kind of investor do I want to be?" Finding new areas for investment while having positive real-world impact is inspiring for many with a career in investment management. When we polled investment leaders in 2017, just 11% described the current impact of the investment industry as very positive for society, but 51% expected that the impact of the investment industry could be very positive for society contingent on stronger principles being applied.ⁱⁱ

To understand the future of sustainable investing, it is helpful to understand how we got here. Both internal efforts of the investment community and external forces are driving change in this space, and as the timeline in **Exhibit 1** shows, the industry has been working on the enablers of sustainable investing for many years. Combined with the compounding effect of external catalysts, these efforts are paying off, and the momentum for sustainable investing is strong.

In Phase 1, the investment world was particularly concerned about governance, and the term "ESG" had not yet come into common usage. In Phase 2, with the launch of the UN PRI, the investment world adjusted its focus to also consider environmental and social issues, which, along with governance, were put together in a convenient and practical package. Since that time, ESG investing, responsible investing, and sustainable investing have been overlapping concepts but with wide differences in interpretation. In Phase 3, an acceleration of regulation, combined with the longerlasting impacts of the pandemic, positions the industry to come together with a convergence in standards and best practices.

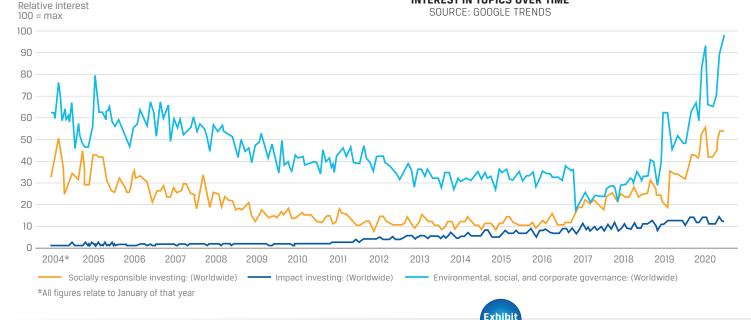


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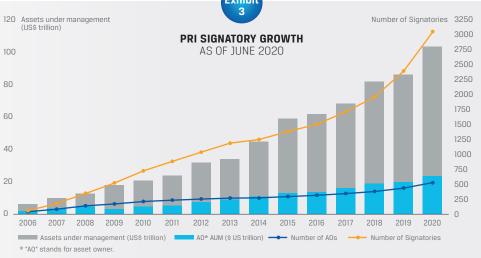


According to Google Trends, as shown in **Exhibit 2**, the topic "environmental, social, and corporate governance" has never been as popular as it is today, since the organization began collecting such data more than 15 years ago.





The Principles for Responsible Investment signatory growth chart, shown in **Exhibit 3**, indicates that investment organizations have increasingly been committing to integrate ESG considerations in their processes, at a 16% 10-year compound annual growth rate through 2019. In the first half of 2020 alone, the number increased by 28% to more than 3,000 entities, and the assets under management (AUM) of these entities grew 20%, to more than US\$100 trillion, boosted by demand as well as strong relative performance. This figure does combine the assets of both asset owners and asset managers and so does incorporate some double counting.



WHICH, IF ANY, OF THE FOLLOWING ESG AREAS DO YOU AND/OR YOUR ORGANIZATION TAKE INTO ACCOUNT IN YOUR INVESTMENT ANALYSIS OR DECISIONS? (SELECT ALL THAT APPLY)



 70%
 67%
 67%

 54%
 54%
 67%

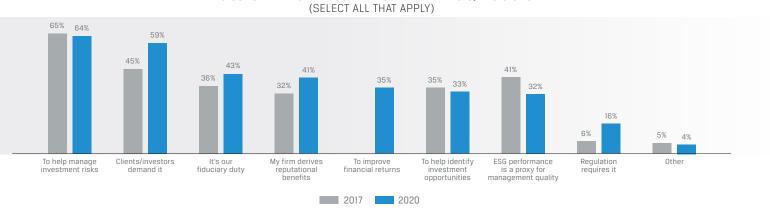
 54%
 54%
 15%

 Environmental
 Social
 Governance

 2017
 2020

In the practitioner survey of 2,800 CFA Institute members in March 2020, a total of 85% said they take E, S, and/or G factors into consideration in their investing, up from 73% just three years ago, as shown in **Exhibit 4**. The largest increase was consideration of environmental factors.

The top two motivations for considering ESG factors are to manage investment risks and respond to client demand, as shown in Exhibit 5. INTO CONSIDERATION IN YOUR INVESTMENT ANALYSIS/DECISIONS?



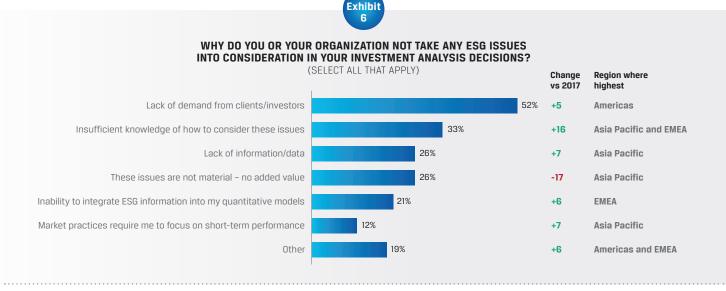
Exhibit

5

WHY DO YOU OR YOUR ORGANIZATION TAKE ESG ISSUES

Client demand was cited more by investment professionals in the Americas region (65%) than by those from other regions, and this was an increase of 20 percentage points since 2017. Europe, Middle East, and Africa (EMEA) respondents were more likely than those from other regions to cite a fiduciary duty to consider ESG issues, a positive reputational benefit for their firm, and regulatory requirements. ESG performance is less likely to be viewed as a proxy for management quality than it was in 2017, perhaps indicating a shift toward E and S, beyond governance.

As shown in Exhibit 6, lack of client demand remains the top reason that firms do not consider ESG issues. Three years ago, the second most common answer among this group was that ESG issues are not material, but this response dropped significantly in 2020 and appears to be less of a barrier. The rise of ESG integration and the focus on risk mitigation are likely to have helped cause this change. There was a significant increase, however, in the number of respondents who said they have insufficient knowledge to consider these issues. There is always more to learn.

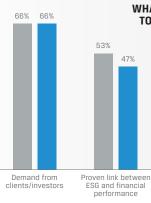


ODEA

Only 5% of these investment professionals (and less than 1% of survey respondents overall) say there is nothing that would convince them to start considering ESG issues. We interpret that as further evidence of the convergence of sustainable investing and traditional investing. As shown in **Exhibit 7**, nearly half of those who don't consider ESG issues are focused on the need for a proven link between ESG and financial performance, although this number is lower than in the past. Investment professionals in APAC are most likely to cite this reason

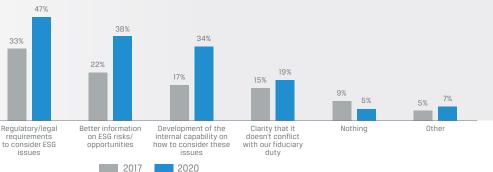
(55%), and EMEA professionals are least likely to (36%). Other reasons that would prompt these firms to consider ESG issues are client demand, regulatory requirements, better ESG information, better ESG skills and training, and—particularly in the United States and Canada— clarity about fiduciary duty as it relates to ESG issues.

Regarding getting better ESG information, there is still much work to be done. But, encouragingly, the G&A Institute disclosed that 90% of S&P 500 Index companies published sustainability reports in 2019.^{iv}



WHAT, IF ANYTHING, WOULD CAUSE YOU OR YOUR ORGANIZATION TO BEGIN TO CONSIDER ESG ISSUES IN YOUR INVESTMENT ANALYSIS/DECISIONS? (SELECT ALL THAT APPLY)

Exhibit



Lack of client demand remains the top reason that firms do not consider ESG issues. Three years ago, the second most common answer among this group was that ESG issues are not material, but this response dropped significantly in 2020 and appears to be less of a barrier.



Thomas Kuh of Truvalue Labs says there have been three phases of ESG investing, characterized by the availability of data. Beginning in the 1970s, some products in the space existed, but data were scarce. This era was characterized by negative screening strategies to avoid portfolio exposures that were misaligned with investor values. The 2000s ushered in the age of data abundance, and the start of the PRI in 2006 put the focus on ESG integration as a strategy, focused on improving risk-adjusted returns by incorporating a larger set of risks. Now, Kuh believes we are in an era of data superabundance, where investment professionals need to determine the most useful data and can have a nearly real-time ESG information feed, versus waiting for an annual corporate filing.

ESG analysis is complex because it is not easily compartmentalized. A systems-level view is necessary (see **Exhibit 8**) and is described this way in "Future State of the Investment Profession":vⁱ

The fundamental purpose of finance is to contribute to society through increases in societal wealth and well-being. Looking at finance as an ecosystem reveals important interconnections and points of friction in how finance currently works in relation to this purpose.

The financial ecosystem is:

- **Connected:** It reflects the multiple diverse participants, people, and organizations and their connections with each other and with the wider landscape. Although the system is served by many specialists, there is a need to understand the bigger picture.
- Reflexive: It incorporates the two-way nature of those connections and dependencies. Specifically, it allows for reflexivity, where landscape changes affect and are affected by participants' beliefs and actions.
- **Non-linear:** It allows for the jumps, or tipping points, that characterize some of the properties of the system and are difficult to explain with traditional theory. Simply put, crises happen.



The wider lens of complex systems is a helpful additional framework providing support to portfolio construction in considering risk, time horizons, and multiple stakeholders on more integrated terms.

- The application of systems theory also provides support to the practice of sustainability in investing by considering a number of important system "impacts":
- The social and environmental **impacts** in the real world (in contrast to the "financial world")
- The externalities caused by companies with spillover impacts on other parts of the system
- The **resilience** of the system as affected by the sustainability of capital markets

We use this lens later in this report when we return to consider impact in more detail.

B. The Pandemic as a Sustainability Catalyst

A speeding up of sustainability, with restart risks

In addition to focusing the public's attention on the vulnerability of populations to viral infection, the COVID-19 pandemic has focused investors on the vulnerability and resilience of the financial system and intensified the discussions around sustainability. For many years, sustainable investing could be characterized as "a slow-moving but unstoppable train" that had started to pick up pace. It appears that COVID-19 has accelerated it further, but the challenge of balancing short-term and long-term needs has never been more stark.

With the pandemic comes a variety of business and financial system issues; there have already been dire real-world economic consequences from COVID-19, and more should be expected. Although past financial crises, most notably in 2008, were caused by ineffective corporate governance and other issues from within the finance industry, the COVID-19 crisis began outside the financial system. Participants in our virtual sustainability roundtables noted, however, that the economic and market effects of COVID-19 could easily turn into a financial crisis.

The importance of systemic risk

There is a concern that as the pandemic subsides and the world begins its economic recovery, attempts to return to higher growth levels could have negative consequences for the climate. For businesses that have suffered financial losses, more sustainable approaches may be considered an unnecessary luxury.

Others argue that the pandemic has revealed the need for systemic thinking and shown the personal consequences of our interconnectedness: Our lives rely on economic, environmental, and social systems more than we may have realized previously. Several factors connect the current crisis to sustainability. In our discussions with ESG-aware investment professionals, a large majority said that a legacy of the COVID-19 pandemic will be the acceleration of the positive growth trends in sustainability.



The COVID-19 pandemic has let us see what life might be like if we didn't emit so much carbon into the environment. Although the idea that achieving carbon targets would require severely constraining our activities to a level like we have experienced in 2020 is not any more palatable, the COVID-19 pandemic has given us a greater sense of the risk of systemic issues and of the fact that not doing anything is also a choice with severe consequences.

The pandemic has also provided greater transparency into the fragility of supply chains, labor markets, credit quality, and liquidity.

Some see poor sustainability practices as contributing to the pandemic. Ecological modeler Kate Jones has for decades studied the connection between loss of biodiversity and greater likelihood of zoonotic diseases, as deforestation and other habitat loss bring species that carry these diseases closer to humans, but only now is this work getting visibility.^{vii}

The crisis has highlighted social issues, such as the income gap between certain demographics and unequal access to health care and credit. Inequalities are made more evident in times of crisis, and many roundtable participants noted it is not a coincidence that the Black Lives Matter movement emerged strongly during a pandemic. In summary, our roundtable participants were in strong agreement that the current global pandemic will lead investors to think more about systemic risk as part of sustainable investing.

The COVID-19 pandemic has also encouraged a more holistic view of ESG versus the individual elements of E, S, and G. Historically, investment professionals have focused most on governance, but the gap has narrowed significantly in the last few years, especially as environmental issues became more prominent (see **Exhibit 5**). The challenges and unexpected benefits that the current situation is uncovering are changing the way that both investors and investment professionals view sustainable investing.

The early performance experience from the pandemic was that well-rated ESG companies performed better and were more resilient, indicating that the higher quality embedded in many highly rated companies had paid off. For example, the outperformance of four MSCI ESG indexes in global markets during the crisis was attributable mainly to equity style tilts of which ESG factors were the strongest contributor, followed by tilts toward lower beta, lower volatility, and better quality. Although attention has been focused on the quarter's performance, it is important to consider the results over a longer period, as shown in **Exhibit 9**.^{viii}

Other studies, however, have challenged the downside protection of ESG factors. Sector weightings, such as an underweighting of oil and overweighting in technology, were significant contributors in many portfolios during this time.

Although it is a very short time period for consideration, the crisis demonstrated that awareness, management, and preparation of sustainability risks should be at the center of sensible risk management and a company's business planning. Stakeholder and employee relations have been tested during this crisis too, and companies that have managed these well alongside good governance policies were better prepared to deal with the implications of the pandemic.

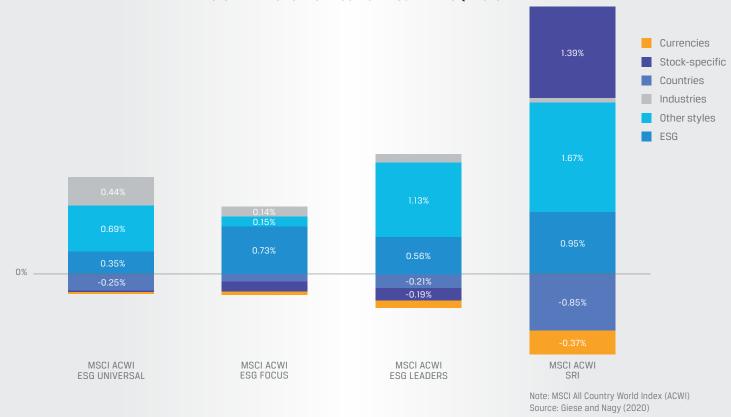


Increased focus on S

Although there is a greater recognition of the interconnectedness of E, S, and G, from an analytical perspective, it is helpful to have these distinctions to provide focus. The crisis is making people realize the financial importance and materiality of social factors, consistent with a stakeholder mindset. Because of relatively less focus historically, social factors tend to be the least defined, so this is an area for innovation. Labor practices, employees' health and safety, engagement, and inclusion are the social factors outlined in the Sustainability Accounting Standards Board (SASB) materiality framework for company reporting, a tool that is reducing ambiguity about ESG analysis. In the CFA Institute Experimental Partners Program, more than 40 firms have been implementing inclusion and diversity (I&D) practices during 2019 and 2020 to see what works best in the investment industry context. Although some budget-heavy special projects have been deferred during the pandemic, organizations generally seem to be resolute in their commitment to I&D. In addition, many organizations have now seen the benefit of these initiatives to support cultural shifts, such as the work-from-home transition and widespread concerns about racial inequities. Organizations that had begun this work earlier proved more resilient in managing these responses.^{xi}



FACTOR ATTRIBUTION FOR MSCI ACWI ESG INDEXES Q1 2020



The increased interest in social challenges can also be seen through the greater issuance of social bonds. According to an International Capital Market Association analysis of the Environmental Finance database, 2020 social bond issuance was more than \$11.5 billion through 15 May, an 86% increase from the same period in 2019.^{xii} Social bonds can be any type of bond instrument that raises funds for new and existing projects with positive social outcomes, which in some countries have been designed to address homelessness, social inequality, and poverty. According to S&P Global, issuance of green bonds for the funding of environmental initiatives and more broadly focused "sustainable" bonds has slowed this year while social bonds have been growing. Although social bond issuances are still smaller than those of green bonds, significant growth in demand and supply are expected going forward.

Purposeful capitalism's inflection point?

The purposeful capitalism scenario, first referenced in "Future State of the Investment Profession," envisions an investment industry with a greater focus on ethics, professionalism, and serving the interests of clients and society.^{xiii} In this narrative, if greater benefits accrue to society through this mindset change, it will strengthen the investment management industry's license to operate granted by investors and society at large. Stronger application of ESG principles is central to this narrative.

This requires the industry to give greater attention to long-term systemic challenges, as well as balancing multiple stakeholder interests. When we look only at near-term impacts, we reduce our options for positive long-term outcomes.

Many policymakers are turning their attention to these matters and now recognize the "tragedy of the horizon," a term Mark Carney, former governor of the Bank of England, coined in 2015 to describe the fact that the impact of climate change would be felt beyond the timeframe of the business cycle, political cycle, or monetary policy horizons. With this came a warning that "once climate change becomes a defining issue for financial stability, it may already be too late."^{xiv}

The likelihood that investors will increasingly be affected by regulations on climate change has been described by the PRI in the form of a scenario titled "The Inevitable Policy Response."vv

The regulation landscape, however, is likely to continue to be uneven globally. As fund flows increase, there will naturally be more scrutiny of the area by regulators, and given the political nature of many sustainability issues, a multi-speed global landscape will likely persist. In the United States, the politicization of sustainability has been a significant impediment to sustainable investing. The US Department of Labor proposed a new investment duties rule in June 2020 to limit ESG investments in retirement accounts governed by ERISA that was met with significant industry opposition. As Jim Allen of CFA Institute commented, "This may limit the use of funds labeled ESG or Sustainable in ERISA plans. In cases in which fiduciaries can show that integration of material ESG information is part of a fundamental investment process, which is increasingly the case, there should be no problem."^{xvi}

In many other countries, however, particularly in Europe, there is typically support for sustainable investing across the political spectrum. The European Union's Sustainable Finance Disclosure Regulation (SFDR), which comes into effect in March 2021, will require new transparency obligations and reporting requirements on investment management firms concerning ESG products. At the same time, the EU taxonomy on sustainable activities creates criteria to determine whether an economic activity is to be considered sustainable and is aimed at contributing to the transition to an economy with a lower carbon footprint.

In another notable development, in June 2019, Canada's Expert Panel on Sustainable Finance delivered its final report to the Canadian Government, which included 15 recommendations to help the country transition to a low-carbon economy. COVID-19 has slowed the implementation of these recommendations by the government.

Investors and the investment industry will have to respond to regulation, but they also have considerable agency in shaping the future. The following sections will describe the frameworks and enablers needed to achieve a more sustainable path going forward. This will reveal more about the possible trajectories toward a purposeful capitalism state.

Many policymakers are turning their attention to these matters and now recognize the "tragedy of the horizon," a term Mark Carney, former governor of the Bank of England, coined in 2015 to describe the fact that the impact of climate change would be felt beyond the timeframe of the business cycle, political cycle, or monetary policy horizons.

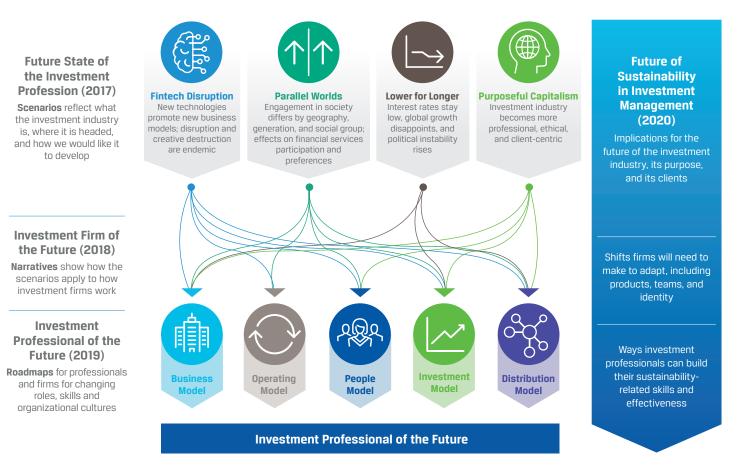


C. Scenarios for the Future

Purposeful Capitalism was one scenario first introduced in "Future State of the Investment Profession," the first in a series of CFA Institute research studies that examined the potential future states of the investment industry, the investment firm, and the investment professional within the next 5–10 years. Scenarios provide plausible stories of the future to inform our present plans and actions. As shown in **Exhibit 10**, the current report will represent the fourth report in the series, yet we place it above the others in the diagram because it has interactions with all that has come before it. To understand the potential evolution of sustainable investing and what will define it going forward, it is important to understand how current trends are shaping interest in ESG issues and how investment organizations and professionals must adapt to the sustainability paradigm.



OVERVIEW OF THE FUTURE OF SUSTAINABILITY IN INVESTMENT MANAGEMENT



"Future of Sustainability in Investment Management" discusses the sources and implications of increased interest in ESG factors and increased usage of sustainable investing strategies. These points shape the narratives that will define this emerging area and suggest the shifts that organizations and professionals will need to make to adapt to the new circumstances. Like the other reports in the series, our time frame is 5–10 years, which is long enough to assess the probable impacts of the scenarios and narratives on the development of sustainable investing and also consider the influence of such factors as changing investor preferences and prospective product innovations.

How sustainable investing interacts with existing scenarios

The scenarios, developed originally in 2017, carry implications for sustainable investing, and we focus especially on an updated version of Purposeful Capitalism.



Fintech Disruption looks at near-term efficiencies from technology and longer-term tech implications for data and investment analysis. Innovations in data retrieval, data management, and data mining will have a significant influence on the industry.

In particular, fintech can create particular value for sustainable investing, especially through the retrieval and evaluation of alternative and soft data.^{xvii} Greater data availability will allow investors to create more customized sustainability objectives, to uncover new investment opportunities in this area, and to better measure impact. Systematic investment processes and retail allocation platforms will need to disclose ESG product features. The need for greater data analysis plus a need for trust and human judgment when investing with a values orientation will necessitate an AI + HI (artificial intelligence plus human intelligence) approach.



Parallel Worlds focuses on changes in demographics and how people from different regions, generations, and social groups engage differently with each other, with specific application in financial services and the capital markets. Although the internet, digital communications,

and social media have allowed us to view the lives and predilections of other social, cultural, and generational groups, instead of increasing understanding, it has led to wider differences in values, cultural norms, and preferences.

The growing inclination of a large segment of the population to try to express their preferences in all their purchases makes it only natural that defined contribution plans and other retail investment vehicles would seek products where investment providers use ESG divestments and tilts and carry out more engagement with companies. This will be characterized by personalization related to sustainability and responsibility. We also see more populist movements that try to mobilize change in environmental and social areas by exercising influence on finance and business.



Lower for Longer looks at expectations for low global growth rates, interest rates, and target investment returns continuing in the future and their impact on investment strategies and the development of the investment industry. The key aspect is that investment

returns going forward seem likely to be less than adequate to meet solvency demands and end-investor expectations, particularly in pension funds.

This is a challenge for underfunded pension plans that may be less likely to increase their commitment to ESG investing if there is an expectation or even a perception that there is a return trade-off. However, the continuing appetite for alpha, combined with reduced return expectations for more traditional investment opportunities, may lead more investors to products or strategies with greater return potential from sustainability themes, such as private assets with impact objectives in renewable energy, energy efficiency, and resource scarcity.



Scenarios

Differentiated stories about possible future pathways and states in the investment industry and the wider world. They are not point estimates or forecasts; as relevant stories, they help firms prepare for the future.

Narratives

Descriptions of the current and future state of industry-specific issues. They help firms with understanding the key details of the evolving landscape in the next 5-10 years. They follow from the scenarios.



Purposeful Capitalism has been updated from the original 2017 version and takes on a new tenor and urgency. It envisions an industry with a greater focus on ethics, professionalism, and serving the interests of clients and society. Sustainable investing is deeply

embedded in this scenario. Unlike the other scenarios, purposeful capitalism requires a mindset change that aligns the purpose and objective of the investment industry with the expectations of investors. The benefits of its activities ultimately accrue to society as a whole and strengthen the industry's social license to operate. Keeping that license "clean" means financial organizations must manage reputational issues and combine their financial views with some exposure to wider stakeholders, including consideration of prosocial issues.

Purposeful capitalism also calls on investment organizations to be proactive, rather than reactive, in helping solve the world's problems but to remain grounded in good sense on materiality. This will require an emphasis on total system-wide returns on capital rather than just a localized focus. This scenario has been reinforced by the COVID-19 pandemic, which has brought more attention to major system-wide risks — particularly climate change, racial justice, social inequality, and the social responsibilities of business activities in these areas.

ODEA

Further aspects of this scenario for the investment industry include the following possibilities:

- Investors are pressured by outside movements that legally challenge investors on climate change responsibilities. The industry's license to operate is tested.
- Asset owner collaboration and influence grow, working more closely with asset managers and with greater attention to transparency and to multiple stakeholders. Universal owners are a particularly strong industry force.
- Companies further develop the stakeholder model and are increasingly open about their wider mission and vision. They use their culture as a differentiator. The investment industry contributes to the expansive debates on what shape capitalism should take and what responsibilities companies should assume.
- The stewardship focus of investors grows markedly with active ownership and engagement embedded. Sustainability and stewardship become completely mainstream as a component of risk management and regulatory framing.
- Investors and regulators increase focus on sustainability and impact.
- The interpretation of fiduciary responsibility for investors continues with a trajectory that accommodates system-wide thinking, but short-horizon attitudes and fiduciary risk aversion generally act as a drag on more progressive strategies that are longer-term focused.
- There is increased public leadership demonstrated by investment organizations. Such institutions are trusted by their stakeholders for their preparedness to express convictions that resonate.

Sustainable investing scenario applications

The following two new scenario applications are deeper dives into the sustainable investing landscape.



Climate Energy describes the increased energy and effort directed toward managing the effects of climate change on investment portfolios and the effects of investment portfolios on climate change.

In this scenario, climate conditions continue to evolve adversely, as climate science has suggested, with some expected, some unexpected, some linear, and some non-linear characteristics, and the trajectory of climate change is a major destabilizer to geopolitical conditions. Popular attention grows as "climate emergency" issues start to settle into deeper societal and governmental consciousness. Governments, regulators, and firms collectively work in a new direction toward recognition of climate issues. Significant traction to the direction set in the Paris Agreement is developed through further Conference of the Parties (COP) initiatives. Innovation in breakthrough carbon-reducing technologies, such as renewable energy and direct air capture, start to emerge but take time to achieve industrial scales. A mixture of carbon pricing regimes emerges as supported by national regulatory frameworks, with goals to deliver transparency, liquidity, and ease of access for global market participants. But the lack of global lockstep acts as a drag. Notwithstanding this, there are industry initiatives to bring greater convergence into investor strategies that are aligned with the Paris Agreement, which becomes a rallying call, and companies respond to investor pressures to set out Paris Agreement-aligned strategies and pathways.

Further aspects of this scenario for the investment industry include the following:

- Investment organizations account for carbon prices and their future expectations in climate risk analysis that becomes increasingly sophisticated.
- Investors engage with issuers to ensure that climate data, scenario analysis, and related disclosures are sufficiently thorough to support robust climate risk analysis in the investment process.
 Standards including those of SASB, GRI, and TCFD are widely used by most investment professionals to aid in the assessment of climate-related risks.
- Investors engage with policymakers to ensure an efficient allocation of capital to investments that support the carbon transition and to ensure capital is available in new and undersupplied areas.
- Investment management organizations differentiate themselves considerably in the quality of their climate risk management and the energy transition pathways they are working toward.
- End investors increasingly are able and willing to express climate views supporting de-carbonizing pathways in wealth management, retail, and defined contribution (DC) contexts, following the lead of institutional investors.
- The skill profile of investment professionals develops in the ability to understand climate issues and the technology surrounding renewable energy and climate risk resilience and mitigation.
- Growth in issuance and liquidity of green bonds continues, and the climate context is extended into most major asset classes.





Social Status describes the growing importance and materiality of social factors.

In this scenario, companies increasingly must demonstrate their purpose and the benefits of their

operation to all stakeholders. In particular, their obligations to their workforce grow significantly. This stakeholder mindset supplants shareholder primacy, so greater focus is given to acts of social responsibility in all settings: clients, workforce, suppliers, community, and environment. More companies have a mission to address issues of inequality. Increasingly, the business plans of companies are more specifically aligned to the UN Sustainable Development Goals (SDGs) and identify positive impacts and targets that are intrinsic to this rubric.

The health and safety of various communities becomes a larger consideration following the COVID-19 pandemic. Companies' responses include a higher standard of care for employee well-being and engagement. The diversity and inclusion field grows markedly. There is much more attention to and action on fairness and justice within companies. There is also increased attention to worker rights in the supply chain by companies taking more responsibility for its social integrity.

Further aspects of this scenario for the investment industry include the following:

 Innovations occur in transparency and corporate reporting as social factors become better defined and measured. Initiatives built on reporting frameworks, such as those of SASB and GRI, enable investors to better compare organizations on the basis of previously hidden areas of operation.

- Social media is increasingly influential in highlighting good and bad examples of company behaviors. These data alongside other alternative data sources add further information to enable assessments to be made on the softer aspects of corporate conduct.
- There is increased public accountability demonstrated by corporate leaders. They are prepared to take on controversial issues, such as racial equality, and commit to actions to make changes where injustices are revealed. Trust in institutions then reflects how authentically and consistently actions follow words.
- Companies and governments act in greater concert with respect to matters of public good. This reduces the externalities of the corporate sector: tax arbitrage, workforce reduction at moments of crisis, putting employee social insurance back on the state, and so on.
- There are also greater expectations for the health services and pharmaceuticals industries. The level of public-private partnership in this area increases, with more direct collaborations taking place. Thematic investment opportunities grow with the development of ground-breaking technologies.
- There is more issuance of social bonds, and the social context of ESG investing is extended into most major asset classes.

There is increased public accountability demonstrated by corporate leaders. They are prepared to take on controversial issues, such as racial equality, and commit to actions to make changes where injustices are revealed. Trust in institutions then reflects how authentically and consistently actions follow words.

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two frameworks needed to implement sustainable investing. The investment model and business model of both asset owners and asset managers will need fresh approaches.

DRIVERS

A. Business Model

Core attributes on value and competitive differentiation

Asset owners and asset managers must have a "business model" to function, and it comprises these components:

- 1. An economic model of how value is created from the application of various sources of capital (financial, manufactured, intellectual, human, social and relationship, and natural are the six major sources of capital)xviii
- 2. A clear identification of the clients served, the distribution model used, and the stakeholder outcomes sought
- 3. A model of the external factors that are influencing client demand and client need, including those arising from regulation
- 4. A clear organizational identity that comprises values, beliefs, brand, and culture

So, the business model in essence looks at the core attributes of investment organizations and the way in which they create value and competitive differentiation.

In "Investment Firm of the Future," we set out four key drivers for business model enhancement: the likelihood that regulations and standards get tighter, professionalism becomes increasingly recognized, brand and reputation become increasingly valuable, and culture and leadership resonate.xix

Client demand for ESG

In the development of a previous CFA Institute paper, "Earning Investors' Trust," we gathered data from institutional and retail investors about their use of ESG investing and views around it.** This section highlights some of the findings from this investor dataset. We found that only 19% of institutional investors and 10% of retail investors currently invest in products that incorporate ESG factors, but 76% of institutional investors and 69% of retail investors have interest in ESG investing. This represents a huge opportunity for the investment industry to deliver value.

As investment organizations focus more on their purpose of achieving investor outcomes - that is, increasing their clients' wealth and well-being - they will have a better sense of stakeholder responsibilities. Evidence of changing business models comes in the form of new product development driven by client demand.

The business model for investment organizations pursuing sustainable investing must make commitments on the full range of resources, processes, and incentives that are necessary to drive an innovation of this magnitude. The organization's sustainability orientation should be set by its senior leadership and embedded into values, reflected in its beliefs, and extended into culture (its way of doing business). Sustainability should be reflected in the governance surrounding the development of new products and strategies that cater to demand, including client reporting, disclosures, and incentives. As discussed in "Investment Firm of the Future," sustainability is embedded in Operating Model (particularly data and technology), People Model (particularly ESG specialisms), Investment Model (ESG integration and other approaches), and Distribution Model (particularly investment products and reporting).

The needs are most critical in matters of ESG training, mindset, engagement focus, data, innovative capacity, purpose, and culture. We develop these areas in the "Actions Needed" section.

As shown in Exhibit 11, in every market we surveyed, a majority of investors have interest in ESG investing, and it is growing. Institutional investor interest was already strong, and retail investor interest has increased most in the last two years in the United Kingdom, followed by Canada, Germany, Australia, and Hong Kong SAR.

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By region, the results indicate that interest in ESG investing is highest in Asian markets (77% of respondents on average). By usage, the dataset also shows that current use of ESG is highest in EMEA (12% usage on average).

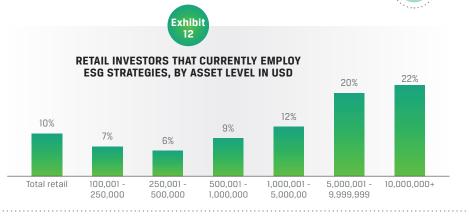


Exhibit 11





Furthermore, **Exhibit 12** indicates that investment firms looking to attract more high-net-worth investors would be wise to offer ESG strategies, since retail investors across these markets at higher asset levels were more likely to use ESG strategies.



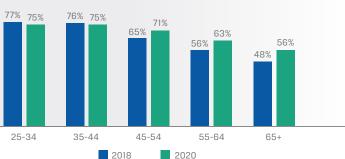
One of the most widely known trends is that younger investors have more interest in sustainable investing than older investors. This is consistent with the fact that younger investors are the ones who will have to bear more of the cost of an unsustainable world. Our findings are consistent with this trend. Among retail investors aged 25–34, 19% now use ESG strategies, whereas among those 65 and older, just 3% use ESG strategies. We find there is a widening *action gap*, from 11 percentage points two years ago to 16 percentage points today. However, in part because younger investors with interest have now invested, the interest gap by age has narrowed, with just 19 percentage points separating the youngest and oldest age groups, versus 29 percentage points two years ago. **Exhibit 13** shows that a majority of investors at all ages now have interest in ESG strategies.

With such high interest levels, the question is what will convince more investors to begin using these strategies. Given the large difference between interest level and use, we explored the reasons for the levels of investors' interest.

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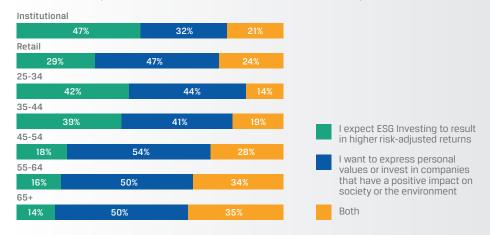
RETAIL INVESTORS INTERESTED IN ESG STRATEGIES, BY AGE



Client motivations

For those who invest in ESG strategies or have interest in them, we explored their investment motivations, or objectives. As shown in **Exhibit 14**,^{xxi} institutional investors are more likely to expect ESG investing will generate higher risk-adjusted returns, whereas retail investors mostly look to ESG characteristics to express their personal values. Younger retail investors are less likely to prioritize their values versus older investors.



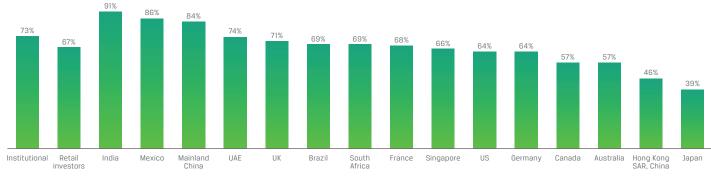


Among those with a values objective (or dual objective combining financial outcomes with values), 73% of institutional investors and 67% of retail investors would be willing to give up some return in exchange for meeting the values objective, as shown in **Exhibit 15**.

WOULD YOU BE WILLING TO GIVE UP SOME RETURN FOR AN INVESTMENT STRATEGY THAT MEETS YOUR VALUES-BASED OBJECTIVES? (% REPLYING YES) (ASKED ONLY OF THOSE WITH A VALUES-BASED OBJECTIVE OR DUAL OBJECTIVE)

Exhibit

15



N = 1,454 retail investors, 264 institutional investors

This finding was controversial when these data were discussed with industry participants in our sustainability roundtables, who suggested that this question perpetuates a historic framing of ESG investing as being associated with a return trade-off. In reality, this is a picture of the "Parallel Worlds" we experience when discussing ESG investingnamely, that preferences, views, and motivations vary among different socio-geographic segments. In ESG and Responsible Institutional Investing around the World, Pedro Matos (2020) noted that older research studies that showed a negative relationship between ESG criteria and performance focused on specialized socially responsible investing (SRI) funds that are not as common today, yet the influence of these studies persists. Meanwhile, many investment specialists have been hired in the era since the formation of the PRI and the shift in focus from mostly negative screening-based approaches (excluding certain assets according to ESG or SRI criteria) toward greater adoption of ESG integration; this change is predicated on the view that integration of ESG factors into financial analysis provides a more thorough assessment of idiosyncratic and market-wide risk, which can improve risk-adjusted returns.

From a behavioral viewpoint, there can often be a bias around "goal dilution," meaning that there is skepticism about the ability to achieve more than one objective.^{xxii} A *Financial Analysts Journal* article by Amel-Zadeh and Serafeim (2018) examined perceptions of a performance trade-off by ESG investment strategy, based on a 2016 survey of 650+ asset managers and asset owners. A summary is provided in **Exhibit 16**, which shows that a majority of institutional investors expect a positive correlation between performance and three ESG strategies: full integration, positive screening, and engagement/active ownership.

Exhibit							
ESG Investment Style	% expecting improved returns (4 or 5 on scale)						
Full integration into individual stock valuation	61.2%						
Positive screening	59.6%						
Engagement / active ownership	52.7%						
Relative / best-in-class screening	49.7%						
Risk factor/risk premium	42.4%						
Thematic investing	42.4%						
Negative screening	39.1%						
Overlay / portfolio tilt	37.4%						

Source: Amel-Zadeh and Serafeim (2018)

In another recent study,^{xxiii} researchers worked with beneficiaries of a Dutch pension fund to examine to what degree individual beneficiaries within the pension system prefer their pension savings to be used to promote sustainability, and 68% favored an approach that invests their pension savings in a sustainable manner even if it implied lower returns.

Note that neither the Dutch pension study nor our investor survey specified how much of a return trade-off might be palatable or how one might measure the impact of a values-based objective. We did ask, however, which areas were of most interest, and retail and institutional investors similarly ranked environment as their greatest interest (89% and 84%, respectively), followed by social factors (82% and 71%, respectively) and governance factors (77% and 67%, respectively). One roundtable participant observed that the trade-off results may be correlated with absolute return levels; in markets where there have been higher absolute returns, there is a greater willingness to trade off some of the returns for outcomes aligned to values.



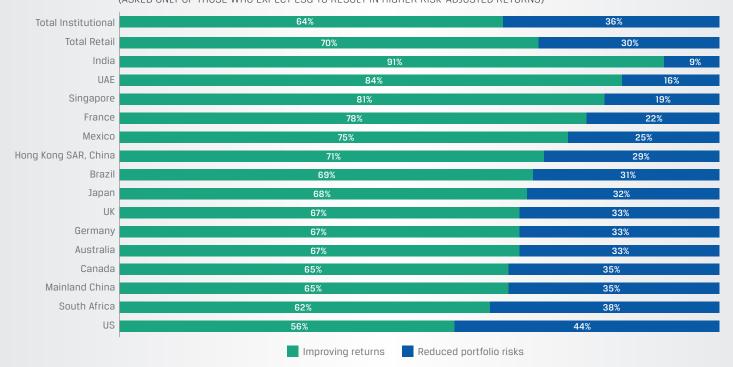
The variety of ESG investment strategies has complicated efforts of academics to demonstrate a performance link. The most commonly cited study is a meta-analysis of 2,200+ studies that found 90% identified a nonnegative relationship between ESG and financial performance, but the direction of causality is unclear.^{xxiv} There are methodological challenges with this study, but there is evidence that ESG integration has been positively correlated with performance; by mapping materiality guidance from the Sustainability Accounting

Standards Board to CSR scores, researchers found that firms with high CSR materiality scores outperform firms with low materiality scores.^{xxv}

The materiality of the E, S, and G components have been separately explored. Research on index data from MSCI reached high-level conclusions suggesting performance differences have been biggest with governance, followed by environmental and then social factors.^{xxvi} This study tracked the transmission of performance gains from profitability, idiosyncratic risk, and systematic factors. The differences



WHICH IS THE GREATER PRIORITY IN YOUR ESG ASSESSMENTS? (ASKED ONLY OF THOSE WHO EXPECT ESG TO RESULT IN HIGHER RISK-ADJUSTED RETURNS)



needed to be judged, however, in the context of temporal factors, which showed that although governance had more financial significance in the short term, environmental and social issues' contributions to performance grew over longer periods.

In addition, roundtable participants discussed the role of recent strong performance by some ESG funds in attracting new investors to the area. Research has shown that some ESG strategies provided downside protection in the 2008–09 global financial crisis,^{xxvii} as was the case in early 2020, as described earlier.

Returning to the investor survey, we asked another question of those who said they have a values objective (or dual objective) and expect higher risk-adjusted returns from ESG investing. When asked whether they prioritize improving returns or reducing risks, a strong majority of retail (70%) and institutional (64%) investors said they prioritize improved returns, as shown in **Exhibit 17**. Retail investor responses by market are also included in the exhibit.

Retail investors are most focused on improved returns in all markets, and this result is most pronounced in India, the United Arab Emirates, and Singapore. The markets that have a relatively higher focus on risk mitigation are the United States, South Africa, and China. Given the stronger academic support for ESG investing as a risk mitigator versus a return enhancer, it is interesting that the client view is not aligned. It may suggest that the language the industry is using to sell these products is not working very well. In addition, women were more likely than men to prefer higher returns (76% versus 67%) to risk mitigation (24% versus 33%), in contrast to the commonly held perception that women are more risk averse as investors.

The number of clients who want to be very targeted in their objectives, whether thematically or otherwise, is increasing. It will be a challenge to move sustainable investing from a relatively standardized set of offerings for end investors to a product framework that caters to different needs and wants. Institutional offerings can be highly customized, but costs may be a constraint on the retail side. The more



market demand grows, the more particular clients will become about how sustainability approaches differ from one another, so an approach with more sophisticated solutions is essential.

A special case of client demand: The rise of the universal owner

As a general concept, sustainability involves increasing corporate and financial stability by making sure that actions today do not compromise outcomes tomorrow, as originally set forth in the Brundtland Report (see Exhibit 1). Sustainable investing is fundamental to the adoption of universal owner (UO) strategies that recognize that the future value of an investment portfolio is affected more by overall economic performance than by the return on individual assets or sector exposures.

Universal owners are asset owners that, because of the size of their investment portfolios, own a portion of the entire economy and financial market, which also results in direct and indirect exposures to their investee companies' positive and negative externalities.

Driven by enlightened self-interest, their goal is sustainable growth and well-functioning financial markets. They look to reduce or mitigate the negative net effects of externalities, which occur when an organization's or person's activities impose a cost on (or provide a benefit to) other organizations or people — for example, pollution. Externalities can jeopardize future investment returns, and a buildup of unchecked externalities can lead to fast-changing and uncertain investment environments and greater systemic risk.

Universal owners manage their risk exposures to externalities through integration of ESG factors. This integration is carried out principally through active ownership, which is performed through stewardship and engagement principles and active engagement with companies, to motivate their investee companies to integrate financial and nonfinancial perspectives into corporate strategy. Through the universal ownership lens, engagement is more than opening a dialogue; rather, "engagement starts with understanding key issues for the company's sustainable growth and identifying key individuals who can drive decisions for change."^{xxix}

Extra long-term investment goals

Most universal owners are pension funds that are long-term investors, with long-term liabilities, which must fulfill the needs of current beneficiaries without compromising the outcomes for future generations. For this reason, they advocate for a very longterm investment horizon and a stakeholder focus in their investee companies over one focused solely on shareholders. A shareholder primacy value model, which says that the ultimate measure of a company's success is the extent to which it enriches shareholders, often leads to short-termism, since short-term profits provide the most common measure of performance and are the basis for incentives. For a corporation, the stakeholder return framework differs from the shareholder framework and its focus on the financial bottom line. In the context of corporate social responsibility, the stakeholder framework's focus is on multiple bottom lines, such as profits, people, and planet.^{xxx}

Since the financial ecosystem is made up of participants and stakeholders, engagement is also performed with various stakeholders that can affect the long-term stability and strength of the overall global economy, such as governments, policymakers, and industry organizations. The world's largest pension fund, the Government Pension Investment Fund (GPIF) of Japan (which has approximately \$1.5 trillion in AUM), is known as a developer and principal leader of the universal owner concept. The GPIF idea is that you can help build a better, more stable global economy and create a bigger "pie" or "better beta" by amassing greater influence and positive change through engagement, not through asset allocation, which just reshuffles ownership between investors that avoid certain externalities and others that do not.

We are gradually coming to the realization that a more holistic understanding of fiduciary duty is critical to preserving capital over the long-term. Issues such as climate change or social disruption caused by inequality pose long-term systemic risks that ultimately affect our fund performance, and these risks cannot be hedged away through traditional portfolio diversification.

Hiro Mizuno, Executive Director of GPIF xxxi

The universal owner concept championed by GPIF's former chief investment officer, Hiro Mizuno, also advocates for partnerships with like-minded organizations. For example, in 2016, GPIF founded the Global Asset Owners' Forum with the California Public Employees' Retirement System (CalPERS) and the California State Teachers' Retirement System (CalSTRS) in order to share principles and best practices among universal owners and global pension funds.^{xxxii} GPIF also mandated a new business model for its asset managers that incentivized them to integrate ESG factors and that included multiyear contracts with them to reduce short-termism. In a letter written in March 2020 by executives from GPIF, CalSTRS, and USS Investment Management, the group emphasized this issue by explaining that "asset managers that only focus on the short-term, explicitly financial measures, and ignore longer-term sustainability-related risks and opportunities are not attractive partners for us."^{xxxiii}

Universal owner requirements

Although there is growing interest in the universal owner concept, few organizations are fully committed to this philosophy. Part of the reason is because it is the very largest asset owner funds that are best suited. Currently there is a limited set of about 10 organizations like GPIF that meet the size and investment universe necessary to be considered a top tier universal owner (approx. \$200+ billion AUM). There are other middle tier asset owners that despite their size have a leadershipmindset and influence and can use their reputation akin to the larger asset owners, with the Church of England as a notable example.

Then there are smaller asset owners that can have a similar philosophy as the large asset owners if they pool their influence to be a catalyst for change by collaborating with other universal owners. Indeed, all asset owners can provide mandates to their asset managers to pursue universal owner strategies, and this is leading to a larger group of investors that are prepared to collaborate in this way. Examples of this type of collaboration include broader efforts like Climate Action 100+ and IIGCC and focused efforts by larger investors like the Net-Zero Asset Owner Alliance, a \$5 trillion AUM collaboration to get to net zero emissions by 2050.^{xxxx}

Can you imagine a world in which...

- Companies can easily attribute how benefits accrue to all stakeholders through integrated reporting and advancing data sophistication?
- The norms for investment products are customized portfolios that incorporate risk, return, and specific impact objectives for each investor?
- Executive compensation in both the investment industry and wider industries is tied to progress toward net zero carbon?
- Investors can easily determine an investment fund's place in the risk, return, and impact matrix?
- The Sustainable Development Goals are met by 2030 with investment organizations making a substantial contribution to their achievement?



D

B. Investment Model

The component parts of the organization's investment philosophy, beliefs, and capabilities

The end-to-end investment process

The **investment model** comprises the thinking and processes that result in the end portfolio.

The various component parts of the investment model, therefore, include the following:

- Investment objectives considering both financial and non-financial objectives (such as environmental or social objectives).
- Investment beliefs Good investment beliefs are important because, in the absence of a unified theory that clearly describes how financial markets work, investment decisions must necessarily be guided by beliefs. Strong beliefs can be characterized as being reflective of good investment insight and of the organization's competitive advantages. Beliefs on the significance of ESG factors, including the materiality and mispricing of ESG risks and opportunities, are very important to effective investment processes. But leading investors have tended to have difficulties with alignment of views on ESG factors, making such beliefs difficult to develop.
- A risk management framework for identifying and prioritizing various risk measures, and a methodology for effectively allocating the risk budget at any point in time. *Risk is clearly introduced by some aspects of ESG factors, and the materiality (and, therefore, financial relevance) of ESG issues varies among industries. The increased attention to climate risk as a source of financial risk has been a recent trend.*
- The portfolio construction process considering the risk and return attributes of all the constituent parts (i.e., securities, asset classes, individual manager strategies) and then combining these so that the resulting portfolio has the desired risk and return characteristics. Sustainability necessitates a view of how systemwide risks affect portfolio risk and return characteristics and how portfolio decisions affect system-wide risks. In some cases,

sustainability may introduce impact as a third dimension to allocate to explicitly alongside risk and return.

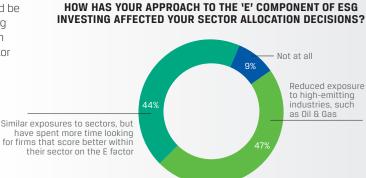
- **Outsourcing** determining which investment management and implementation activities are to be carried out internally and which are to be outsourced. *Considerations of which aspects of an organization's investment capabilities in sustainability are best retained internally or delegated is one aspect of the organization's outsourcing arrangements. With external mandates, the specification of the mandate will be tailored to the firm's sustainability objectives and beliefs.*
- External investment managers assessing and monitoring their level of skill and suitability for the portfolio. The skills in the sustainability area will be a part of this assessment, and the weighting attached to these considerations will reflect the significance given to sustainability in the mandate.
- Factor exposures viewing the portfolio through multiple lenses, including an assessment of the portfolio's exposure to different risk factors or return drivers. Sustainability introduces particular aspects of risk – notably, risks from non-financial sources and also longerterm risks that are not always adequately captured in traditional factor premiums.
- Resilience assessing how any resulting portfolio is expected to fare under various "stress tests" or alternative economic and market scenarios. Sustainability scenarios are discussed in the section titled "Influences." Climate change scenarios, decarbonization goals, and physical and transition risks are particularly important considerations.
- **Stewardship** determining how stewardship of assets owned should be managed by seeking to exercise voting and engagement in ways that support risk-adjusted returns and other objectives. *This has particular significance for sustainability where active ownership decisions may have a greater impact than allocation decisions.*

Critically, all these components will naturally consider how sustainability can be incorporated in financial analysis. In that sense, sustainability in financial terms is embedded in the investment model and should not be regarded as an ancillary part of the process.

Exhibit

18

As one example of how sustainability is embedded in product and process interaction, the asset owners in our investor survey were asked whether their interest in environmental considerations would be implemented through sector allocation or security selection. Among the 700+ respondents, slightly more than half said incorporating an environmental consideration would have little or no impact on sector allocation, as shown in **Exhibit 18**.









Investment objectives

All asset owners and asset managers face the same investment challenge in trying to meet their objectives through both 'capital allocation' and 'active ownership' activities.

All investors have financial objectives. These confer a set of financial benefits that an investor must obtain (needs) or would like to obtain (wants). These will be concerned with return and risk and involve time horizons. The parameters extend in a number of directions – particularly, short term versus long term, relative returns versus absolute returns, risk as volatility versus risk as drawdown or impairment, and liquid assets versus illiquid assets.

Many ESG factors are intrinsic to financial objectives, which involves identifying environmental, social, and governance data points that have financial materiality. The issues arising here have been challenging for investment professionals in several ways: Many of these data points are soft and are not contained in financial statements, often the financial materiality emerges over time, and ESG factors captured in data are often classified as an externality, where the actions of one company result in unpriced costs to other stakeholders involved. Investors that fully incorporate these ESG factors in their analysis and decisions are undertaking "integrated ESG" investing.

Investors may also have non-financial objectives.

There are two major categories of non-financial objectives. First, there is investing in a way that aligns with mission factors, such as prosocial, pro-environmental, ethical, or faith-based factors, and that does so by directing capital in a deliberate direction reflecting these factors. This type of investing is "values-based investing."

In excluding certain investments from a portfolio, the investor aims to avoid violating his or her specific beliefs or the mission, principles, and/ or beliefs of their organization. In tilting the portfolio by reference to ESG factors, the investor has a portfolio with relatively fewer negative side effects and more positive side effects.

These investment actions are likely to have rather minor or secondorder impacts for the investee companies themselves and the economic activities enabled by them. The reason is that other investors will buy these assets and this transfer is substantially about reshuffling ownership, without significantly changing the economics.

Investing for impact is the second category of non-financial objectives. The strong version of this is intentionally contributing, wholly or partially, to the realization of environmental and social outcomes that would not occur without investors' efforts to achieve those outcomes through their investment actions ("additionality"). This is "impact investing." The issues arise in identifying what outcomes materialize as a direct consequence of these actions (the additionality) and in measuring the contribution to this impact.

Impact objectives for investment products

Investing with an impact objective seeks to generate a positive, measurable social or environmental impact alongside a financial return. An environmental or social impact objective is the intention to attain a change in outcomes with respect to one or more environmental or social matters. "Measurable" means the impact objective is well defined and the progress with respect to the stated impact objective can be measured.

The investment model for impact investing strategies and products must address a number of elements of new ground:xxxvi

- The impact objectives, including intentionality, measurability, and additionality
- A weighting of all objectives, inclusive of both impact objectives and financial objectives
- Methods used to assess, measure, and monitor performance against the stated impact objectives
- Methods by which the strategy or product intends to achieve the stated impact objectives
- How reporting proceeds, with attention given to the framing, the narrative, and the outcomes of particular impact investments

In reporting on impact, many of the large asset owners are working on aligning with the UN SDGs. The SDGs are building blocks for impact goals and can form the basis for identifying whether there is an underlying "real-world impact." Asset owners are asking their asset managers for increasing amounts of reporting on impact.

As an example of impact in investing, take one classic ESG factor – climate change and the carbon footprint of companies – where reporting requirements are increasing steadily. For investors seeking positive impact on climate change through investing, a range of possible actions is potentially called for:

- Allocating to companies on the basis of their carbon footprints
- Allocating to companies on the basis of their energy transition pathways and in ways that align with the Paris Agreement
- Allocating to companies involved with climate solutions in clean energy, energy efficiency, and carbon capture, among others (very often in private equity areas)
- Joining representative groups, such as the Climate Action 100+ initiative, which seeks to influence the biggest carbon emitters toward Paris Agreement alignment and net zero policies
- Advocating for public policy change and joining coalitions that engage on public policy, such as the development of carbon pricing measures
- Using other advocacy and engagement measures to influence change in the transition to renewable energy sources





THE SPECTRUM OF CAPITAL

CHOICES AND STRATEGIES FOR INVESTORS ON THE 'SPECTRUM OF CAPITAL'

Approach	Traditional	Responsible	Sustainable		Impact Driven		Philan	thropy
Financial goals	Accept competitiv	ve risk-adjusted finar	icial returns			Accept lower risk-adjusted returns	Accept partial capital preservation	Accept full loss of capital
		Act to avoid harm	1					
			Benefit stake	nolders				
Impact goals				C ontribute to	solutions			
	Don't consider May generate negative outcomes for people and the planet	Act to avoid harm Mitigate or reduce negative outcomes for people and the planet	Benefit stakeholders Generate positive outcomes for peop or the planet	Generate substanti change for otherwi	Contribute to solutions Generate substantial positive change for otherwise underserved people or the planet			
	\wedge							
Intentions	"I am aware of potential negative impact, but do not try and mitigate it"	"I have regulatory requirements to me "I want to behave responsibly"	eet" have on th susta	t businesses to positive effects e world, and help in long-term financial 'mance"	"I want to he climate cha "I want to he the educati	nge" Ip tackle		

Source: Bridges Fund Management and Impact Management Project

Investment product features

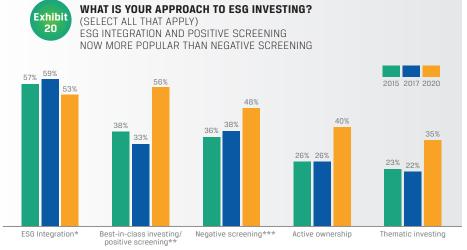
The Spectrum of Capital in **Exhibit 19** is a common way of evaluating financial and impact goals.

There is a need for different types of products to meet various investor needs. The practical challenge has been confusion between these strategies and their intended outcomes. Investment products — the component parts that make up an asset owner's whole portfolio — are made up of one or more product features that map to the benefits identified previously in the section on objectives. For a fuller discussion of the mapping, refer to "Consultation Paper on the Development of the CFA Institute ESG Disclosure Standards for Investment Products" (CFA Institute 2020b). The product features, as set out in this document, can be separated into the following distinct categories:

- ESG integration (explicitly considers ESG-related factors that are material to the risk and return of the investment, alongside traditional financial factors, when making investment decisions)
- ESG-related exclusions (excludes securities, issuers, or companies from the product on the basis of certain ESG-related activities, business practices, or business segments; these can be derived from principles, values, religious beliefs, and societal norms)
- Best-in-class (aims to invest in companies and issuers that perform better than peers on one or more performance metrics related to ESG matters)
- ESG-related thematic focus (aims to invest in sectors, industries, or companies that are expected to benefit from long-term macro or structural ESG-related trends)
- Impact objective (seeks to generate a positive, measurable social or environmental impact alongside a financial return)
- Proxy voting, engagement, and stewardship (uses rights and position of ownership to influence issuers' or companies' activities or behaviors)

Our practitioner survey of CFA Institute members shows that the most-used features are best-inclass/positive screening and ESG integration, followed by ESG-related exclusions. As noted earlier, 85% of respondents said they consider E, S, and/or G in their process, meaning that just 15% are still performing "traditional investment management" without regard to ESG factors. In this sense, ESG analysis has already become mainstream in the investment process, but this fact does not mean that all products need to carry an ESG label.

Looking over time at explicit ESG strategies, **Exhibit 20** shows that ESG integration has been consistently popular, although adoption of other ESG investing approaches is increasing.



Notes: The 2020 descriptions were taken from the 2018 Financial Analysts Journal paper "Why and How Investors Use ESG Information: Evidence from a Global Survey" by Amir Amel-Zadeh and George Serafeim.

* In 2020, "ESG integration" combines "full integration," "risk factor/risk premium investing," and "overlay/portfolio tilt." The latter two were not collected in 2015 or 2017. ** 2020 combines "relative/best-in-class screening" and "positive screening"; in 2015 and 2017 there was a single category called "best-in-class investing/positive alignment." *** In 2015 and 2017 the term used was " exclusionary screening."

N = 1,325 in 2015, 1,088 in 2017, and 2,081 in 2020.

The various approaches to sustainable investing and the increase in investor interest have led to a proliferation of products and confusion in the marketplace, which the forthcoming CFA Institute ESG Disclosure Standards for Investment Products aim to reduce through better product-level reporting to investment clients.

Some existing products have adapted their processes to incorporate ESG factors as a broader set of risks and opportunities for consideration, and

they may or may not consider this a significant change in philosophy. This explains the gap between the number of practitioner survey respondents who consider ESG issues (85%) and those whose firms offer a standalone ESG product or standalone accounts (48%); the use of standalone products varied by region, with a majority of respondents from the Americas and EMEA saying their firm has these products, compared with just a third of those in Asia Pacific.

Active ownership/engagement will be an effective strategy for investors, and the next 5–10 years will be an important time period for transition pathways, given the Paris Agreement and the Sustainable Development Goals. Historically, this type of approach was dominated by activist hedge funds and private equity, but clients now expect other investors to effect change in companies as well.



Other investment product innovations

Many interesting new product ideas surfaced in our sustainability industry roundtables.

Index tracking and quant funds: Sustainable investing has become a popular area for index innovation and is attractive to those investors that want an ESG product with relatively low fees, including defined contribution participants. Similarly, this has encouraged and supported some ESG systematic and quantitative strategies.

ESG thematic products: Although some argue that thematic funds ignore the interconnectedness of ESG issues and narrowly focused themes can be unduly risky, there could be new types of funds that specifically look at interconnected issues, such as inequality or "climate justice," a human rights issue. SDG-related products may emerge as a way to channel capital to address the social problems revealed by COVID-19.

Multi-asset products: The use of ESG factors in more asset classes will grow, along with a deeper derivatives market. In particular, we should expect more ESG interest in fixed-income and alternative products. Multi-asset products will be an opportunity for product development. One example of a new product is in commodities: The London Metal Exchange low-carbon aluminum fund focuses on aluminum produced with renewable energy, which marks the first time a metal will be traded on the basis of its environmental footprint.^{xxxvii}

Climate transition strategies: Targeting non-financial outcomes explicitly in clients' investment objectives is likely to grow. One specific area for growth is funds catering to client objectives regarding decarbonization by investments that show progression over time in aligning with the goals of the Paris Agreement.

Long-term engagement: Participants suggested some of the best investing opportunities are in firms that are ESG laggards in terms of ESG metrics and have the potential to improve. As sustainable investing gets more common, firms that experience rating increases can develop an ESG premium due to ESG momentum. This situation is similar to how governance factors stopped producing abnormal returns in the 2000s, as investors rewarded high-G firms with higher market valuations and a lower cost of capital.xxxviii Active ownership/engagement will be an effective strategy for investors, and the next 5-10 years will be an important time period for transition pathways, given the Paris Agreement and the Sustainable Development Goals. Historically, this type of approach was dominated by activist hedge funds and private equity, but clients now expect other investors to effect change in companies as well. Research shows that active ownership can improve financial performance of the target companies but can generate sufficient returns only for funds with large positions or with coordinated efforts, since active owners incur the costs but the benefits accrue to all shareholders.xxxix

Better benchmarks: Along with product customization is the need for more sustainability-related benchmarks, which act as building blocks for effective portfolio construction. These benchmarks are having increased influence in the investment industry and are being created to effect change; when GPIF announced it would use the MSCI Japan Empowering Women Index, for example, it resulted in more proactive efforts on this issue among Japanese corporations. ESG-focused indexes must be well designed, transparent, and methodologically robust, or they can fuel skepticism over greenwashing. One roundtable participant's firm had adopted a carbon-efficient index and noted the importance of clear communication and governance surrounding it.

Can you imagine a world in which...

- Consideration of ESG factors is the default and traditional investment and sustainable investing blur into one?
- Investors widely use a common language for sustainable investing and ESG matters?
- Corporations regularly and transparently discuss the balancing of short-term costs incurred relative to long-term goals?
- Stewardship activities are given more than 5% of the organization's investment budget?
- Universal owner strategies are pursued widely by a spectrum of large-scale, long-term, and leadershipminded investment organizations working collaboratively to achieve real-world impacts?

ENABLERS

The organizational configuration needed for sustainable investing practice will come from the fundamental resources used in the investment industry production function — namely, from people, organizational process, and information. We frame the challenge as harnessing and calibrating the collective capabilities of technology and people in the deployment of these resources toward sustainability objectives. This is referred to as artificial intelligence plus human intelligence, or "AI + HI," in "Investment Professional of the Future" (CFA Institute 2019a).

Through technology, the synergies between these fundamental resources – people, organizational processes, and information – can be more completely developed and exploited.^{xi} So, we start there.

ENABLERS

A. Operating Model

How the organization manages its products and services

In the operating model, we consider data, technology, systems, and tools.

ESG data were a minor part of all investment data 5–10 years ago and now are a very significant data source when looking across all data use at investment organizations. We note a long list of improvements that investors seek from their data and technology.

The operating model challenges in deploying sustainability capabilities can be split into problems with data quality and challenges related to organizational structure, culture, and focus in managing and using data.

Data quality

ESG data are substantial and fast growing but unwieldy. In the area of data quality, investors desire their data and the management of data to be material, to enable investment decision making to be more data driven and evidence driven; valid, to provide a consistent view for all assets and allow comparability; and usable and adaptable, to build an information edge from data and improve knowledge management.

We can characterize the data challenge generally for investment firms as creating a technology system that aims to process and channel relevant high-quality information adaptably, cheaply, and efficiently with security and resilience into the investment process and into reporting to clients. The test of quality in data will be substantially about the depth of inferences that can be made from the data and the connected judgements, heuristics, and algorithms that can be applied to the data.

Data quality requires two essential features — materiality and validity. Materiality tracks the degree of insight possible from any data point in addressing investment-relevant questions. Validity tracks the actual capture of that insight in that data point. Validity will reflect objectivity, accuracy, timeliness, granularity, and transparency. Objectivity carries particular weight in this list; it is how repeatable the results are if measured again, or how much they derive from direct measures or from a model. Objective data are seen as "hard"; subjective data are seen as "soft."

Materiality is the degree to which the precise form of a measure reflects decision-useful insight about investment-relevant questions.

Validity is the degree to which an actual data point is an accurate representation of the measure in question, where validity is reduced by subjectivity and various problems of accuracy, timeliness, granularity, and transparency.

Soft data are data that are hard to measure and express, contrasting with hard data, which are the traditional form and the opposite of soft data. Soft data generally come from assessment, opinion, experience, or interpretation or through modeling that is, therefore, relatively

subjective and has validity issues. There is considerable soft data in ESG areas that have high materiality but validity issues.

For example, diversity data are material for identifying good corporate culture and effective decision making, but data on racial backgrounds are typically not adequately captured, relying on estimation. Therefore, such data are relatively soft. Good diversity practice is likely to be captured only by employee surveys that are subjective in that they are opinion based.

Investors tend to evaluate the benefits of a given level of data quality somewhat narrowly; they often unduly favor simple facets of data quality, such as objectivity and accuracy; and they usually do not sufficiently consider the full data context, in terms of its materiality and the natural scarcity of good quality data in complex systems where simple causality is not present.

Investors also tend to use data without sufficient regard to data drawbacks. By explicitly assessing materiality and validity, the data "provenance" can become a better input to how much weighting is justified. But the behavioral context is critical as well. This suggests the need to handle soft data with a full appreciation of its influences. For example, if soft data are made an explicit and "hard" target, there are likely "gaming" and other governance difficulties. It is possible to diminish these impacts if multiple data points are included as *reference points* instead of explicit targets.

Investors have growing opportunities to put soft data and alternative data, derived from non-traditional sources such as financial transactions, sensors, mobile devices, satellites, public records, and the internet, alongside traditional data as enhancements to overall data quality or to use such data in Al algorithms.

The challenges of all types of data, but soft data in particular, produce large-scale problems of consistency in issuer reporting of ESG data, as well as in understanding the outputs from the ESG rating companies, where large differences can exist from the data models used.

Investors face overlapping challenges because of these problems: distributing data efficiently, using data efficiently, knowing the levels of data quality provided in the current systems and tools, and contributing to better data quality.

These issues make reporting standards particularly important to improve company and issuer disclosures.

ESG data across the investment ecosystem

Analysis and data on ESG factors are critical at three points in the investment ecosystem:

- Company reporting
 - Companies' obligations to report on ESG factors in their financial and statutory reporting are relatively light
 - The SASB and GRI initiatives have been setting standards that extend these obligations. The "Statement of Intent to Work Together Towards Comprehensive Corporate Reporting," published by SASB and GRI, as well as CDP, the Climate Disclosure Standards Board (CDSB), and the International Integrated Reporting Council (IIRC), marks an important step forward.

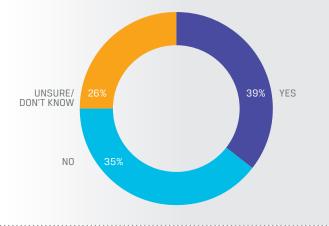


- Investor analysis and decisions
 - Investors rely on a mix of internal and external resources for their analysis.
 - ESG ratings by such organizations as MSCI and Sustainalytics are used widely as inputs to analysis.
 - The ESG analysis is turned into active portfolios and, via rulesbased methods, into ESG indexes.
- Investor reporting
 - Asset managers reporting on their ESG-related products with product disclosures will be subject to industry standards in the future (we have previously highlighted the forthcoming CFA Institute standards).
 - Asset owners reporting on their portfolios are subject to increased regulation in certain jurisdictions, particularly in Europe. Climate reporting is increasingly expected, consistent with TCFD disclosure standards.

It is important to recognize how company reporting plays a key part in the sourcing of ESG data. But in sustainable investing we have areas where regulations and standards are still developing. Although many practitioners see substantial opportunity for standards to play a bigger part in better data and expect that standards will converge, onequarter are still unsure about how the data challenge will be resolved, as shown in **Exhibit 21**.

Exhibit 21

IN YOUR OPINION, DO YOU EXPECT THAT IN THE NEXT 5 YEARS THE VAST MAJORITY OF COMPANIES WILL BE SUBJECT TO A SINGLE STANDARD FOR ESG DISCLOSURES?



COMPANY REPORTING

The consistency and comparability of ESG data from companies is poor. There are very limited national requirements for companies to report on most ESG data, with companies left to determine for themselves which ESG factors are material to their business performance and what information to disclose to investors.

But there are signs that certain initiatives will pay off over time. The major global ESG information disclosure frameworks/standards are as follows: the GRI Standards developed by the Global Reporting Initiative, the SASB Standards developed by the Sustainability Accounting Standards Board, the International Integrated Reporting Framework developed by the International Integrated Reporting Council (IIRC), and the recommendations prepared by the Task Force on Climate-Related Financial Disclosures (TCFD) at the request of the Financial Stability Board.

Each has its part to play at this point in the developing ecosystem. Both "rule-based" (GRI and SASB) and "principle-based" (IIRC) methods are adopted. On one hand, rules have the advantages of being clear and easy to understand as to what should be done; on the other hand, there are many instances where strict rules and regulations end up with inflexible and superficial responses. Hence with TCFD, which has both rules and principles, for example, explicit data are sought on greenhouse gas emissions, but in scenario testing models, the TCFD framework requires companies to just illustrate their approach.

ESG data usage varies by context, and the range of standards may enable a degree of bespoke reporting that is helpful for firms. The alignment of ESG use cases with the different reporting approaches is illustrated in research by Nissay Asset Management in **Exhibit 22**. Although the convergence of standards may seem attractive, the underlying issues are complex and the specialisms in the current arrangements seem at present to function adequately.





ESG INVESTMENT STRATEGY AND INFORMATION NEEDS*

CLASSIFICATION	ESG INVESTMENT STRATEGIES				NATURE OF INFORMATION PRIMARILY REQUIRED*	MAJOR EXAMPLE OF RELEVANT FRAMEWORK / STANDARD
JUDGMENTAL	fundamental analysis approach	ESG related engagement in traditional active investment				
		Adjustment of revenue forecasts based in ESG analysis	ESG related engagement (e.g., conducted as a part of fundamentals analysis)	•	Specifically tailored ESG Information useful for Fundamental analysis / corporate valuation	International (IR) Framework
		Adjustment of operating margin and / or cost forecasts based on ESG analysis				
		Adjustment of book value and / or depreciation of forecasts on ESG analysis				
		Adjustment of capital expenditure forecasts based on ESG analysis				
		Adjustment of terminal value of valuation model based on ESG analysis				
		Adjustment of beta / discount rates of valuation model based on ESG analysis				
	Adjustment of portfolio weight based on ESG analysis		ESG related engagement			SASB
SYSTEMATIC	Smart beta / quantitative strategies utilizing ESG factors		(e.g., targets and / or themes are systematically selected)		Normalized, easy to quantify and compare ESG information relevant for companies' financial performance	SASB Standards
PASSIVE	ESG Indices		Selected)			1873 V -
	ESG related engagement in traditional passive investment					GRI Breast
OTHERS	Impact Investment (※Consideration of impact besides / instead of risk / return)		ESG related		Information about economic, environmental, and / or social impacts	
		cially Responsible Investment / Ethical Investment Isideration of impact besides / instead of risk / return)	engagement		(positive or negative) driven by company	GRI Standards

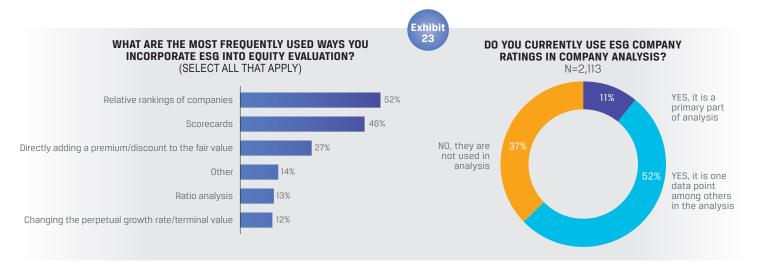
* The exhibit indicates only the most basic ESG information for each strategy, and thus other types of ESG information, which are not mentioned above, might be utilized. Source: Prepared by Nissay Asset Management Co., Ltd. on the basis of CFA Institute & PRI (2018) "Guidance and Case Studies for ESG Integration: Equities and Fixed Income" and other various data

The current reporting ecosystem has been a work in progress for more than a decade. There is a wide base of dissatisfaction among investment industry stakeholders with the present position on data and reporting. Going forward, we can expect a greater degree of urgency from the industry to make significant progress, with a stronger framework likely to emerge, albeit slowly. In January 2019, the World Economic Forum (WEF), in collaboration with Allianz SE and the Boston Consulting Group, suggested the following actions are necessary:

- Improved transparency of the entire ecosystem (such as alleviating duplication of activity and unintentional conflicts)
- Effective and active cross-system interactions (such as incorporating more of the end user's needs)
- Stricter harmonization of methodologies for measuring key performance indicators (KPIs) related to ESG (such as enhancing the comparability of KPIs to help the decision making of investors and others)

INVESTOR ANALYSIS AND DECISIONS

Valuation approaches lack consistency, and investment professionals report various ways of incorporating ESG into equity analysis, as shown in **Exhibit 23**. ESG company ratings are widely used by practitioner survey respondents, with 63% using them as a part of their data analysis.



ESG data providers, such as MSCI and Sustainalytics, play an important role in sustainable investing by gathering and assessing information about companies' ESG practices and then scoring those companies accordingly. These ratings systems are widely used by investment organizations in both analysis and reporting.

The rating approaches naturally vary and are not the subject of standards. These differences in approach arise in what data are collected, what research is conducted, and the models then applied to produce ratings, including scoring methodologies and weightings attached to various ESG issues. As a result, the rating for a single company can vary widely among different providers. Research by State Street Global Advisors demonstrated a correlation of 0.53 for MSCI and Sustainalytics ratings across the MSCI World Index of companies.^{xiii} As a point of comparison, correlations in company credit ratings have generally been around 0.9.

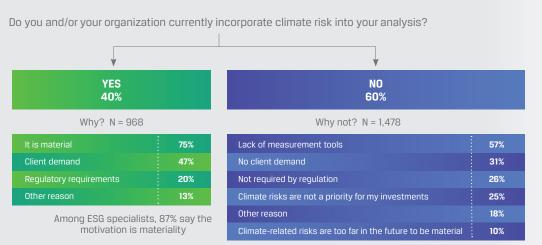
This inconsistency, alongside issues about transparency, has been the source of adverse industry comments. It is inevitable that a range of ratings would emerge, given that so many ESG data sources are intrinsically soft, the data purpose can vary, and the source data can be structurally weak. Nevertheless, we expect correlations to increase somewhat over time. But the lack of correlations can be viewed as an opportunity to differentiate investors' approaches by adding value with proprietary research. Among practitioner survey respondents, 73% expect the influence of ESG ratings on firms' cost of capital to be greater in the next five years.

Another area of data growth has been in data related to climate, and the following exhibits highlight data from the recent report "Climate Change Analysis in the Investment Process." xiii As seen in **Exhibit 24**, about 40% of investment professionals incorporate climate risk into their analysis, and the primary reason is that it is material.



CLIMATE RISK ANALYSIS

MATERIALITY, CLIENT DEMAND, AND REGULATION ARE THE PRIMARY DRIVERS, THOUGH LACK OF MEASUREMENT TOOLS IS A BARRIER

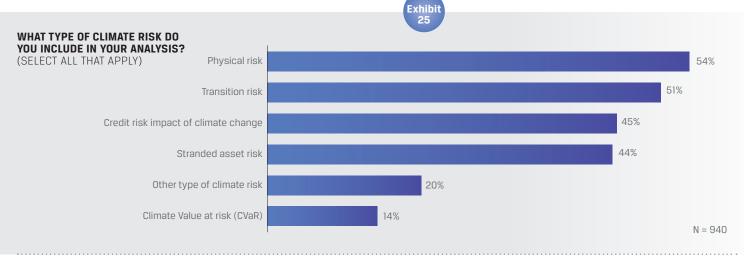


N = 2,497, including 250 ESG specialists

ESG specialists were defined as those who claimed proficiency in the subject and/or spend >50% of their daily work on ESG analysis

Client demand is another motivating factor, with a third of APAC investors and half of EMEA and Americas investors looking for their investment firm to incorporate climate change.

Exhibit 25 shows that the most common types of risk considered are physical and transition risks.





However, there are data needs, and 78% of practitioner survey respondents want at least one type of climate information that is missing; details are provided in **Exhibit 26**.



IS THERE CLIMATE INFORMATION YOU DON'T CURRENTLY HAVE, THAT YOU WANT? (SELECT ALL THAT APPLY)



ESG research and ratings from specialist data providers are currently a key part of the ESG ecosystem, and we expect this position to strengthen further in the next 5-10 years.

INVESTOR REPORTING

The challenges of data in sustainable investing have allowed growth in the practice of "greenwashing." Greenwashing means conveying a false impression or providing misleading information or a misleading narrative about how a company and its products are environmentally sound or positive in an ESG context. There is some concern that the recent significant inflows to ESG products may not be based on full information and that if outcomes disappoint, there could be a backlash.

In **Exhibit 27**, we have evidence of a strong conviction that the issue is problematic and a wish to introduce standards to diminish greenwashing; 78% of practitioner survey participants support such standards.

Greenwashing exists across the chain in the ecosystem. One particular area where standards appear to be timely is in the confusion surrounding investment products that offer one or more ESG-related features. The EU taxonomy for sustainable activities and the Sustainable Finance Disclosure Regulation (SFDR) will help reduce greenwashing, and CFA Institute is developing a voluntary global industry standard that would establish disclosure standards for investment products with ESG-related features. The purpose of the standard is to provide greater product transparency and comparability for investors by enabling asset managers to more clearly communicate the ESG-related features of their investment products.



IN YOUR OPINION, DO YOU THINK THAT THERE IS A NEED FOR IMPROVED STANDARDS AROUND ESG PRODUCTS TO DIMINISH "GREENWASHING"?





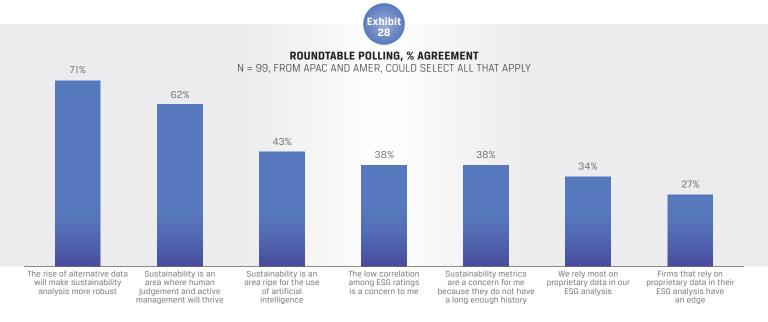
ORGANIZATIONAL AND CULTURAL ASPECTS OF DATA AND TECHNOLOGY

In the organizational structure and culture of data management, organizations naturally seek data to be easy to access and consistent at all parts of the organization or wherever it has significance. The degree to which there is external dependency for data interpretation militates against this goal, as do inconsistent data architecture for different parts of the portfolio and investment process, an inability to view data in a total portfolio context, and investors' ability to be agile in innovation and adopting new technology. In each of these four areas, current data practices fall far short of "fit-for-purpose" status.

Critical to good practice is for investors to be able to analyze ESG data their way to reach their conclusions. This is not an argument

for excluding the views of other experts but is a complement to the investor's analysis.

Investment organizations seeking to achieve a competitive advantage with their ESG analysis will recognize that technology is a necessary foundation. The discussions on technology and data in our roundtables demonstrated that the technology opportunity was growing for all, with more data sources becoming available and more differentiation possible. As shown in **Exhibit 28**, 71% saw alternative data as benefiting the robustness of sustainability analysis, and 43% saw sustainability as benefiting from the application of artificial intelligence. The proportion that saw a particular edge from proprietary data in the ESG area was 27%.



Views were spread out on the best technology strategies. Many asserted that larger-scale change projects were necessary. Others were more supportive of adding to technology incrementally. All expressed a view that ESG data needed to be managed better going forward. Most expressed the view that effective changes to technology were extremely difficult to execute and that cost and time overruns were routine.

The technology issues were in large part cultural in nature and started with many organizations working in siloed and fragmented organizational structures. This separation problem produces disparate management views on technology and limits investment organizations' capabilities with and capacity for technology.

The outcome in the ESG area is that data management tends to be segregated and disjointed and struggles to support the integrated management of ESG insights alongside the traditional sources of data. In current practice, a combination of siloed structures and large-scale, heterogeneous datasets means that ESG data tend to be uneven and fragmented across the organization and lack search and research ease. The organizational issues include the all-pervading presence of legacy technology — spreadsheets, e-mail, and electronic shared file structures — as the key infrastructure for ESG data. We are still some way off from bespoke software systems and cloud computing innovations in this area.

The proliferation of new data sources and analytic technologies that are likely to be a feature of the ESG growth phase could potentially overwhelm current data-governance practices by greatly increasing fragmentation. We suggest that ESG success will hinge heavily on how well an organization's technology adapts to the new circumstances of more data alongside more complexity in organizational structure.

These problems are exacerbated by the cost-benefit disconnect that inevitably exists in an area where the core problem of a strategy for effective technology is so ill defined and contested. We are accustomed to robust risk budgets, governance budgets, and financial budgets, but technology budgets do not seem to be very effectively managed because of the challenges from silos and the communication gaps that are at the center of these problems.

Can you imagine a world in which...

- Material ESG factors for a company are as easily obtained as an income statement?
- All inputs and outputs related to business processes, including externalities, are priced accurately and equitably?
- Performance attribution reports include impact attribution alongside risk and return?
- Internal technology end users don't have to rely on others for data inference or analysis?
- Legacy technology is fully replaced by bespoke software systems and cloud computing innovations?

B. People Model

xhibit

The staffing model and the attract-and-retain methods used

Organizational commitments to ESG research

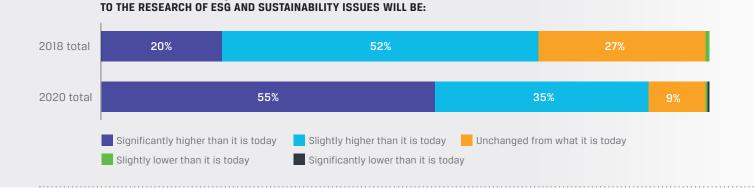
Investment firms recognize the opportunity of sustainable investing as well as the regulatory forces and increased client expectations. Accordingly, we have seen a significant increase in expectations for ESG research going forward. **Exhibit 29** shows that 90% of investment professionals expect their firm's commitment to ESG research to increase, up from 72% just two years ago. Notably, 88% of the senior executives in our sample agree, and they will be the ones to make the needed resource allocations. Even at the largest investment firms, the number of ESG specialists is small on an AUM-weighted basis.

IN THE NEXT 5-10 YEARS, I EXPECT MY FIRM'S FUTURE COMMITMENT

Incorporating ESG factors works only with senior leader support, because whatever the official organizational structure is, success will depend on collaboration. There should be incentives to reduce silos and develop education on ESG across a wider base of professionals. It is one thing when the CEO says that sustainability is important; it is another thing if that commitment is supported by a budget.

Changing the culture is not easy, and there are some parallels to be drawn and lessons learned from how risk management departments were set up in the past as separate from portfolio management. ESG factors should be integrated into the process, and it is a recipe for failure to simply have someone conduct an ESG review after the rest of the analysis has been done. All investment professionals need to understand risk, and it is the same with sustainability.

Today, there is no shortage of ESG information, and the critical need is to curate that information across investment teams and help change culture. These skills need to be spread out across the firm.



NO, because we don't integrate ESG

process

reasons

NO, for other

26%

into our investment

Current structure and roles

Among the investment professionals surveyed, the structure of teams in their ESG responsibilities varied. About one-third have dedicated ESG specialists, as shown in **Exhibit 30**, and in the sustainability industry roundtable discussions, we discussed this structure further. For those with ESG specialists, about half are in a separate function and half are embedded in the investment teams. One-third consider ESG expertise something that portfolio managers must know about and incorporate themselves. Many investment organizations do not have specialists because they are too small to justify the cost of an employee, their strategies do not require it, or they outsource much of this work. Although there is not a one-size-fits-all approach, most roundtable participants agreed that it is ideal for the portfolio managers to learn more about this subject and to have some specialized resource available to teams for the technical aspects of ESG analysis.



An investment organization's sustainability approach may determine how it structures its teams and ESG capabilities.

- **Exclusionary screening** can be done by ESG specialists who are not part of the team since they are simply asked to give a yes or no opinion because of screens.
- If the focus is on **impact**, a centralized ESG team with a consistent approach is needed or it will be hard to measure and report on impact, which could become challenging with clients.
- Multi-asset groups need a centralized ESG team to support the integrated view of ESG across the portfolio.
- With an emphasis on **ESG integration**, everyone can carry out some sustainability analysis and fund managers can have different views. Each investment team should ideally have an ESG champion.

The following are some examples in practice taken from the roundtables:

NO, because

YES

ESG analysis is conducted by the

portfolio managers

• Most big mutual funds in China have separate or specific ESG research analysts/teams. Their approach to ESG research is mostly qualitative rather than quantitative.

Exhibi 30

DOES YOUR ORGANIZATION EMPLOY

DEDICATED ESG ANALYSTS? (EXCLUDES THOSE WITHOUT ESG STRATEGIES)

- One firm's approach is to have equity analysts, fixed-income analysts, and dedicated ESG analysts; all three meet with the investee company, develop a view, and triage opinions on the company. This collective view is then passed to the portfolio manager.
- In the past, some firms had separate, specialized ESG teams reporting to the CEO that carried out special projects, but now these efforts are more mainstream.
- Because traditional analysts know more than ESG analysts about any company they cover, it is difficult for ESG researchers to gain credibility. Their expertise must be complementary. One firm has specialists covering themes (e.g., water, oil), not individual stocks, and this setup allows more global support. For example, a mining company may be thought of only narrowly in terms of ESG issues, but a water specialist could help the analyst recognize that its ports will be underwater based on current projections.^{xliv}



ROLE OF SPECIALISTS

There is some debate about whether the role of an ESG specialist is primarily to train colleagues so that ESG considerations become fully mainstream (essentially working oneself out of the job) or to be a permanent addition to a team. Integration may be possible as more professionals with sustainability-related qualifications from universities join the workforce. However, most agree that the change in approach will be a long-term process, so specialists will continue to have a prominent role for some time.

The main argument for the long-term need for specialists is that the data are getting more complex and the generalist approach of the past won't work any longer. It is not possible for someone with another "day job" to stay on top of the developments; not keeping up is a risk. Another challenge is the multi-disciplinary nature of sustainability, requiring knowledge and expertise that straddle disparate subject matter areas.

Collaboration between specialists and portfolio managers is essential, yet in active management it is important to avoid groupthink. As

A SIGNAL OF COMMITMENT

Some roundtable participants noted that they want a fully integrated team, but consultants and clients want a named specialist as a signal of their commitment to the area. Similarly, ESG standalone products provide an indication to the marketplace of a firm's expertise and intent

Demand for ESG Expertise

A review of 10,000+ investment professional job posts in the month of August on LinkedIn found that approximately 6% mentioned sustainability-related skills, as shown in **Exhibit 31**.^{xiv}

Currently, this talent is in high demand from a hiring standpoint, and this demand is rated by LinkedIn as "very high."^{x/vi} Across all investment professional roles with sustainability-related expertise, these professionals received on average more LinkedIn Recruiter InMails over the past 12 months compared with all other investment professional talent pools on LinkedIn.

sustainability becomes more integrated into investment processes, portfolio managers will need to become more engaged in the conversation. The specialist team can help others frame the questions and understand the issues, but the analysts still must do the work to incorporate these issues into their analyses. Analysts are taught to be skeptical — even cynical — so they need education in this area and need to be able to own these decisions. When engaging with a company, it can help if a senior portfolio manager asks the ESG questions because doing so adds weight to the discussion.

The deeper and more specialized the ESG expertise needed, the more it will command a premium salary, and participants in our sustainability roundtables noted a relative scarcity of specialist talent. Not all firms can afford ESG specialists, however, and smaller firms may choose to outsource sustainability capabilities while slowly building up internal expertise. We suggest, however, that all firms should at a minimum have an ESG champion who is a strong leader. One drawback noted in regard to an integrated team is that all analysts and portfolio managers then require access to data providers, which could add to costs.

("It is easier to sell an ESG fund to showcase the area"), even though the skills needed for implementation may not be as extensive as those needed for an integration strategy. Meanwhile, some organizations are wary of saying they have ESG specialists, since that will imply they have not fully integrated ESG factors.

Exhibit						
31 Job Title Family	Job Posts on LinkedIn	Seeking Sustainability Skills	Ratio			
Portfolio Manager	1,032	186	18%			
Analyst	1,519	27	2%			
Financial Advisor	7,571	364	5%			
Chief Executive Officer	4	0	0%			
Chief Investment Officer	31		10%			
Total	10,157	580	6%			

Supply of ESG expertise

It has become increasingly possible over time to hire people who are trained in sustainability, either academically or through previous work experience. There is an established job market now, but there is still a lack of talent/specialized skills in this space relative to the high demand for that talent.

An analysis of approximately 1 million investment professionals on LinkedIn found that less than 1% had disclosed sustainability-related skills in their profile, as shown in **Exhibit 32**.^{xivii}

Previous research by CFA Institute has indicated that most investment professionals have LinkedIn profiles and the total universe approximates earlier estimates,^{xiviii} although industry ESG expertise may be understated because not all individuals list relevant skills on their LinkedIn profile. Because this skillset is in demand, however, the likelihood that profiles have been kept relatively current in this regard is increased.

There has been 26% growth in sustainability expertise among this group in the last year, and details by job title are provided in **Exhibit 32**.

The top three locations for investment professionals with sustainabilityrelated expertise are London, New York City, and San Francisco. These professionals are employed by nearly 500 firms, and most have a very small number of employees with sustainability expertise: The majority of firms (62%) have only one employee with sustainability-related expertise on staff. The distribution of sustainability professionals across firms is shown in **Exhibit 33**.

In this dataset, the gender split for all investment professionals is 74% men/26% women, but the gender gap is much smaller among sustainability professionals: Among ESG analysts, the split is 58% men/42% women, and among ESG portfolio managers, it is 65% men/35% women. A 2016 Morningstar study found that sustainability roles were more often held by women than men, although this gap had narrowed over time. During the study period (2008–2015), 1,042 new funds identified as socially conscious entered the market, which created more than 2,090 new portfolio manager positions. The authors concluded, "The rate of fund launches was so swift that there aren't enough qualified women to maintain the same percentage of fundmanagement roles that they previously held."^{xdix}

When trying to attract and retain talent, a clear commitment to sustainability and demonstrated adherence to those commitments can help. Many employees want to work at an organization that makes a difference and one that has values they agree with. Job applicants are increasingly asking employers about their sustainability policies and views during interviews. Sustainability objectives can be a motivational factor and spark creativity, adding an additional sense of purpose. Given the demand for ESG talent, it can be difficult to retain these employees. Because they tend to be people who want to make a difference, it is not just about compensation; if a firm won't move fast enough, they move on.

Exhibit						
3 Job Title Family	2 Profiles on LinkedIn (rounded)	With Sustainability Skills	1-Year Sustainability Expertise Growth			
Financial Advisor	630,000	0.5%	32%			
Portfolio Manager	146,000	1.5%	32%			
Analyst	180,000	0.7%	34%			
Chief Executive Officer	37,000	1.9%	12%			
Chief Investment Officer	15,000	2.0%	18%			
Total	1,008,000	0.7%	26%			

Exhibit						
Employees with Sustainability Expertise		%				
	304	62%				
5	111	22%				
10	48	10%				
20	20	4%				
21+	11	2%				
Total	494	100%				



Training

Training in ESG issues has increased in the last three years, but still fewer than half of respondents say their firm provides ESG training. Those in EMEA are most likely to have had training, and training has increased the most in the Americas, as shown in **Exhibit 34**.

As shown in **Exhibit 35**, just 11% of respondents consider themselves proficient in the area, but an equal number are currently being trained and more than 70% have interest in training — half of these within the next year. This training will be accomplished through a mix of formal courses, learning on the job from others, and learning by doing.

Training is challenging, since it should not just turn into a compliance exercise. At a minimum, portfolio managers should better understand how to manage tail risk and risk-adjusted returns via understanding of material ESG risks. When an ESG problem arises, it can be catastrophic and unprecedented, so there is a relative lack of history and knowledge.

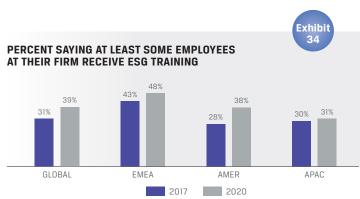
Furthermore, very senior portfolio managers who have been successful for years may not see much incentive to change their approach, and building up another set of investment beliefs is hard. Exceptions come when people experience success and the added value of ESG investing and become self-motivated champions; some of these champions are even better than actual sustainability experts, since they know the limitations and do not have unreasonable expectations, testing application of ESG considerations to the portfolio more and thinking more pragmatically about sustainability.

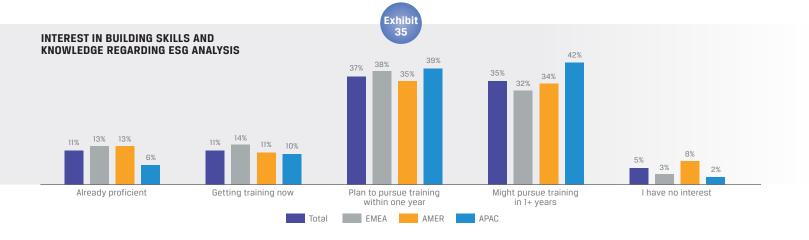
To be proficient in sustainable investing, investment teams need to fully understand all parts of the subject and the data in terms of what sustainability means for the investment proposition. ESG specialists will be needed to help traditional analysts get a sufficient level of ESG expertise, and as that is completed, many specialists will be able to focus on the more detailed and technical aspects of sustainability. One global firm in a roundtable had sent experts from Europe to other regions to train them and start up local sustainability committees.

Interest in up-skilling in this area has also prompted the creation of several ESG certificates and designations. Although the first for investment professionals was introduced in 2014 and others have been created for different audiences, interest levels have increased significantly, including new climate-related certificates. In 2019, CFA Society United Kingdom, with the support of the PRI, launched the Certificate in ESG Investing. It had more than 2,000 registrants in the first year alone and is expanding rapidly around the world. It was designed for practitioners working in investment roles who want to learn how to analyze and integrate material ESG factors into their day-to-day roles, but it has also been of interest to those in sales and distribution, wealth management, product development, financial advice, consulting, and risk management.

As further evidence of industry interest in the subject, the institutional investor research network Savvy Investor had more than 600 ESG papers published on its website in 2019, which represents a 31% increase from the prior year. Since 2016, ESG papers have grown from 4% to more than 8% of all the papers on the site. In the year ended 30 June 2020, ESG and ethical investing was the fourth most popular topic on the site, following the much broader topics of global economic outlooks, global strategic outlooks, and debt and credit outlooks. ESG papers have also been in the top five most viewed articles each of the last two years.

Meanwhile, the *Financial Times* began its Moral Money newsletter in 2018, and it now has 19,000 subscribers and is the most successful *FT* newsletter in terms of readership.





Types of skills needed

Sustainability experts may be called on to do many different tasks, and a combination of technical skills, soft skills, and T-shaped skills will distinguish the most successful ones. A greater focus on reporting will require technical expertise, and the increased client interest will mean that ESG professionals may need to spend more time interacting with clients.

Some roundtable participants noted that the ability to negotiate is important to convince other team members of the importance of ESG issues, and it is important to have the confidence to ask tough questions of the issuers in order to get decision-useful information. Meanwhile, the amount of ESG data is increasing, and distinguishing the right types of metrics to use may become more difficult. Increasingly, quant models are incorporating ESG data, and having an expert to validate the inputs and outputs will be essential.

Technical skills

One roundtable participant noted that it is important to look for competence rather than passion. An ESG expert must understand materiality and how sustainability affects asset prices. Subject matter expertise in asset management is helpful. Those with technical expertise can also build better models, and increasingly, ESG experts must conduct data analysis, including looking at alternative data from news sources, government websites, and satellite data, among others. Natural language processing and related programs are used to process such data in some firms, but it will take time for data to become more structured and ESG analysts will need to be able to explain the significance of the output, combining human and artificial intelligence.

Legal and regulatory knowledge is also playing a bigger part, and demand will only grow because of regulations. Firms need professionals who can create practical solutions to comply with regulations.

Soft skills

Good ESG professionals must not be afraid to sit down with company management or stand up at an annual general meeting and ask tough questions. They must have an ability to ask the difficult questions and know when to ask them. They must be able to listen well and build trust so companies know that investors are interested in their stories. They need to collect information from disparate sources and align it into a mosaic; it is about more than just metrics. One roundtable participant's firm looks for people who are able to analyze the softer issues, such as culture, integrity, and attitude toward risk.

The role of an ESG specialist involves talking to many internal stakeholders to explain the issues and relevance and engaging with companies and clients externally. Good communication skills are needed for both types of relationships. One firm hired an ESG specialist charged with being a "diplomat" and "educator" across functions to persuade colleagues to consider nontraditional risks.

Another characteristic of a good ESG expert is having a long-horizon perspective — a desire and willingness to partner with management over extended cycles given the long-tailed nature of these issues. People who have been inside companies at an operational level can be very effective because they know what it means to work at a firm and they understand the politics and the constraints.

T-shaped skills

Sustainable investing is an area where T-shaped skills are needed – that is, the ability to combine deep-level knowledge with wider connections, understanding, and perspectives across the whole organization with the application of multiple relevant disciplines.

A multidisciplinary view, including the understanding of systems, is helpful for ESG specialists. They may come from many different backgrounds — for example, agriculture or biology — but they need to understand finance, too. There is a need for education and collaboration across disciplines, with different viewpoints surfacing, and an understanding of how data and human judgment work together.

In summary, finding just one person to cover all of this is difficult, and well-rounded teams might be more successful. For example, it may be beneficial to have a trust builder and relationship builder who has the requisite soft skills and negotiation skills to be firm and ensure that the conversations continue and develop, a data person who can work with new and alternative data and incorporate them into the investment process, and a person to translate the mission and vision of responsible investing into a coherent and realistic framework.

Can you imagine a world in which...

- The investment industry primarily attracts those wanting a career where they can change the world and hiring interviews are dominated by discussions of the organization's values and beliefs?
- Investor meetings about ESG don't require a specialist to join the meeting because all portfolio managers and analysts can describe and defend the portfolio positions and materiality of ESG factors?
- Investment professionals are compensated by reference to the accomplishment of long-term risk, return, and impact objectives?
- Diversity is something that your organization no longer worried about because it is both measured and managed?
- Your organization's annual report starts with soft data on the impacts of intellectual capital, human capital, and social capital on earnings?

IDEA

ACTIONS NEEDED

Where are we on the sustainable investing journey? Where are current trends likely to take us, and what *scenarios* are plausible for the next 5–10 years?

The preferable future state is the industrywide attainment of excellent investing outcomes, balancing intergenerational equity and regard for multiple stakeholders. What are the catalysts to achieve this outcome? What is holding us back?

ACTIONS NEEDED



A. Rubric for Progress

The rubric concept

In education terminology, rubric means a scoring guide used to grade students' knowledge and provide feedback on improvement.

Its wider application involves providing the framework to produce a combination of a *grade* for performance and a *guide* to improve performance.

The areas for change and ideal outcomes

Our application in this research is to identify six areas of practice and to determine the following for each:

- An industry grade: What is the current industry grade on this area?
- An industry action *guide*: What *changes* are required to make the *grade* for a healthy-functioning, sustainable industry overall?
- The organizations' and investment professionals' action guide: What changes are required to make the grade for each contributor to the industry – organizations and investment professionals?

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RUBRIC FOR PROGRESS

to a critical threshold across the industry so that ESG thinking is embedded in all investment settings.

Industry: ESG knowledge and skills are developed

Organizations: Provide training to build ESG expertise, and hire new resources as needed.

Investment professionals: Core knowledge on ESG considerations is acquired by all industry professionals. T-shaped skills help professionals make better connections and draw on multiple disciplines.

Currently, there is a considerable gap in sustainable investing between what we need to know and what we actually know. The relative newness of sustainability as a factor in the investment industry has created inevitable challenges for knowledge, skills, and abilities. Understanding of ESG principles and practices is currently very uneven. This problem is exacerbated by the limitations of the body of knowledge in sustainable investing, which is still a work in progress. The challenge goes deeper than this in that many of the skills needed are more lateral than those that were needed before. We need professionals who are better grounded and who make better connections and draw on multiple disciplines, something that we described before as requiring T-shaped skills.



The key here is for core knowledge on ESG considerations to be acquired by all industry professionals. On a positive note, professional credentialing has been developed in this area, as noted in the previous section. But older generations of professionals will not have had to learn about ESG issues, and acquiring ESG knowledge has been somewhat haphazard. The uneven nature of that knowledge is underscored by the way that language has developed in the ESG area, where terms are routinely used with overlapping definitions. One of the key markers for maturity in knowledge is standardization of terminology. The importance of understanding data in ESG investing cannot be stressed enough: the sources of data; data strengths, weaknesses, and significance; and how disclosure standards are increasingly consequential.

The ESG Investing Course Curriculum Topics provides a more detailed listing of core coverage.

ESG Investing Course Curriculum Topics

The Certificate in ESG Investing developed by CFA Society United Kingdom

- The context for different approaches to sustainability in investing and, specifically, consideration of ESG factors
- The underlying issues that constitute factors within each of the environmental, social, and governance areas
- The ESG market: relevance, size, scope, key drivers, challenges, risks, and opportunities
- Environmental factors, including systemic relationships, material impacts, megatrends, and approaches to environmental analysis at the country, sector, and company levels
- Social factors, including systemic relationships, material impacts, and approaches to social analysis at the country, sector, and company levels
- · Governance factors, including key characteristics, main models, material impacts, engagement, and stewardship
- ESG analysis, valuation, and integration
- The analysis of how ESG factors may affect industry and company performance and security valuation across a range of asset classes
- ESG integrated portfolio construction and management
- Application of a range of approaches to ESG analysis and integration across a range of asset classes and to investment
 mandates, portfolio analytics, and client reporting



System-level thinking

Current industry grade: Sustainable investing is lacking a key building block.

Changes required to make the grade:

Industry: Theory and practice integrate systemlevel thinking on top of traditional investment thinking, in an additive and complementary way.

Organizations: Organizations do much more to integrate ESG and sustainability into their investment models.

Investment professionals: Investment professionals understand the main features of systems theory and use this thinking when considering sustainability topics.

Although the traction with sustainability concepts has been significant, the rigor given to the subject has not been sufficient to make sustainability practice very effective. Part of the difficulty in the area lies with the coordination challenges between asset owners and asset managers, where weak specification of ESG considerations and stewardship in the investment mandate has limited the asset managers' sustainability influences. In addition, although asset owners have made good progress with transparency in their investment policies, they have not developed a sufficient depth of thinking in their systems theory understanding.

Investment professionals should seek to understand the main features of systems theory and make sure that this thinking is present when considering sustainability topics. Examples of this theory include the multiplicity of factors, reflexivity, and nonlinear pathways. The dominant paradigm taught in mainstream investment theory has been influenced by an equilibrium model of prices with rational investors. In contrast, systems theory supports the idea that states of equilibrium will be temporary and that investors are motivated by a range of considerations, not all of them rational. In short, investor behaviors matter and connect with fundamentals.

Systems theory is more than just an extra discipline to be studied; it is as much a way of thinking and communicating that needs a cultural grounding. The key principle is that there are multiple interconnected factors that drive the investment ecosystem that need to be recognized. This again calls for balance — the balance to our thinking that does not seek to oversimplify complex elements.





Current industry grade: The industry is siloed and not collaborative.

Changes required to make the grade: Industry: Strengthened collaborations within

and across organizations drive engagement and combinatorial power.

Organizations: Stewardship commands considerably more focus, and there are many more resources committed to ownership duties and opportunities.

Investment professionals: Strengthened collaborations within organizations, across groups and functions, provide a more joined-up, holistic, and teamwork-oriented approach to sustainability.

The most common configurations for investment organizations can be characterized by biases toward specialized functions and "silos," which diminish collaborations. In addition to problems of weak links between groups within an organization, there are limited interactions with relevant groups outside – peers, issuers, providers, regulators, and government.

The sustainability challenge in our industry needs to involve more collaboration that scales up the fragmented contributions of people

and organizations into something much more significant. This suggests a major commitment of more resources to give time and energy to creating improved collaborations and, consequently, better combinatorial outcomes. The competencies necessary call for a much wider and deeper roster of skills than what exists at present for collaborations to be effective.

One of the most significant opportunities for combinatorial power is in the stewardship and active ownership areas. These activities have so far been minor elements in the investment toolkit, despite clear evidence of the potential impacts from this activity. The issue is how this situation can be changed so that investors play a much bigger part in corporate governance by influencing a pathway to a low-carbon, more renewable economy and more sustainable corporate value creation. If this is executed well, there can be longer-term positive effects on the performance of the economy, of individual companies, and of investors themselves. For this to happen, considerably more resources will be needed at investment organizations devoted to engagement and collaboration, both in the number of professionals and in their depth of skills.



Current industry grade: Data is a legacy and coordination problem.

Changes required to make the grade:

Industry: ESG data practices are developed to support more substantial decision-useful application, and data go from being part of the sustainability problem to part of the solution.

Organizations: Investment organizations reduce the cultural impediments and structural limitations that have prevented the efficient handling of the large and growing datasets involved.

Investment professionals: Investment professionals understand the issues of materiality and validity of ESG data and are adept at evaluating all forms of data: hard data, soft data, and alternative data.

The significant abundance of data should not be a signal that ESG data are always useful in investment decision making. There are many circumstances in which ESG data lack relevance or require contextualizing. In some cases, data can be inconsistent. In other cases, data may have accuracy or timeliness issues. Elsewhere, the target factor cannot be directly measured and proxy measures must

be considered instead. ESG data can also have other materiality and validity issues.

Because of these practical challenges, the superabundance of data we are dealing with in ESG investing has not yet been accompanied by similar levels of data insight. Instead, we have many important investment theses in sustainable investment that are strongly contested. Investment organizations disclose many structural limitations to the efficient handling of the large datasets involved, and work is needed in these areas to ensure good outcomes.

The successful application of technology can be realized only if considerable resources, energy, and innovation are applied to streamlining the capture, processing, and organization of data. This is true in both mainstream and sustainable investing, and it is both a governance and a technology challenge. The development of stronger data cultures is critical, and it will require a new generation of techsavvy professionals to drive change at the center of our investment organizations. The future is not about technology alone; it is about people plus technology. The skills model for investment professionals in this regard has a long way to travel.





Current industry grade: Innovation in sustainability is slow and narrow.

Changes required to make the grade: Industry: Organizational commitment to

sustainability innovation incorporates better incentives, agility, and iteration and comes from all parties.

Organizations: Demonstrated commitment to sustainability innovation through organizational agility in people and processes and iterative improvements.

Investment professionals: Demonstrate a willingness to explore new approaches to sustainability investment approaches, measurement, and impact.

The sustainability journey has had its innovations, but we should recognize that on the basis of the high standards we should expect in our industry, there is considerable innovation that has not yet taken place. The areas where further innovative changes are needed include climate change risk management, reporting on impact, ESG benchmark and index design and the integration of ESG considerations with factor risk, and scenario planning. Also, there is fiduciary interpretation, where the regulatory machinery at work in each jurisdiction has not been able to secure a well-balanced set of investor behaviors and has produced short-term decision making, with performance versus benchmarks unduly influential. In certain jurisdictions, sustainable investing is politicized, with adverse consequences for all. In summary, investors are unsure how to balance the priorities they should give to their beneficiaries alongside any wider stakeholder considerations. These subjects call for regulatory and legal guidance that is balanced and effective.

The investment industry must throw away the status quo bias that it has. It does not serve the fast-changing ESG and sustainability areas well, where dynamic and agile responses appear valuable.

We suggest that the development of innovative thinking in ESG finance will follow from improvements in culture that establish better incentives and encourage new ideas to flourish. The portfolio applications are areas where novel ideas have been well used, and the applications in shaping organizations' business models should follow this example. This might also apply in the application of strategic foresight actions, including scenario planning. In particular, climate change risks and opportunities represent areas where forward thinking and focus are critically needed.



Current industry grade: The enlightened selfinterest principle provides better stakeholder alignment.

Changes required to make the grade:

Industry: Positive ethics and values are martialed into organizations that have purposeful culture and a mission-driven ethos.

Organizations: Organizational transformations produce purpose-driven organizations with a strong fiduciary culture, recognizing the need for more balance.

Investment professionals: Individuals with strong values make up a more committed and happier workforce, and individual accountability contributes to purposeful cultures.

Organizations in all industries are embracing a form of multistakeholder capitalism. This greater attention to purpose fits well with the needs in sustainable investing for attaining better balance. This balance goes beyond reconciling various stakeholder interests to integrating the multiple and complex time horizons, risks, and resources that are central investing questions. This is intrinsically both a "hard data" challenge, something our industry is exceptionally strong with, and a "soft data" challenge mixing in issues about culture, values, and society, something our industry is getting progressively better with but still has much to improve on.

Many investment organizations demonstrate positive ethical principles and strong values. The key aspect is then mapping such organizational assets into an organizational culture that is purposeful in addressing stakeholder goals. The key transformation is toward culture centered on purpose and mission to provide the motivations supporting sustainability principles. It is increasingly the case that such culture will attract a more committed and happier workforce.

Organizations that have strong values around such issues as climate change, inequality, and intergenerational fairness will be in a good position to explore different ways to create impact from their investment actions.

We suggest that the enlightened self-interest principle is central to exploring ways to produce positive environmental and societal impact while simultaneously serving clients through producing excellent investment outcomes. This represents strong alignment with exercising a fiduciary culture. And we note the alignment with the concept of "license to operate," which involves investment organizations being required to demonstrate such a culture.

B. Role of CFA Institute

In addition to the actions that organizations and investment professionals must take to improve the effectiveness of sustainable investing, there is a need for collaboration across the industry. CFA Institute, as the largest global association of investment professionals, can play a role in each step of the information value chain, as depicted in **Exhibit 36**.

The first need in this value chain is for companies to provide decisionuseful material data to investment teams. This is most notably enabled by the SASB Materiality Map, the TCFD disclosure standards, and the GRI Standards, and it is welcome news that they are partnering with organizations including the CDP, CDSB, and IIRC. CFA Institute supports these efforts by providing the investor view on advisory committees and working with accounting standard setters to advocate for users' needs.

The next information need is to help the analyst (and the rest of the investment team) decide on holdings for the portfolio. This is an area of significant innovation. There is a proliferation of research sources with ratings systems and indexes that are tools that can be used. CFA Institute believes this is an area where active management can thrive and analytical skill is rewarded. We do not endorse particular providers but focus on educating our members and candidates on the skills needed to incorporate ESG analysis into their decisions. Resources include curriculum readings in the CFA Program, the Certificate in ESG Investing developed by CFA Society United Kingdom (described in the previous two sections), practitioner-focused research, and various continuing education events around the world.

Consistent with the trends we have described thus far regarding increased client demand and more widespread implementation of ESG analysis, the CFA Program curriculum is significantly increasing its coverage of the subject. ESG issues are not easily contained in a single area of investing, and therefore, the content is spread throughout the curriculum across various topic areas to reflect how it is integrated into investment professionals' workflows. Currently, there is ESG content in 10 different readings across the three levels and across six topic areas: Quantitative Methods, Financial Reporting and Analysis, Equity, Fixed Income, Alternative Investments, and Portfolio Management. In the next edition of the curriculum, this number will increase by 130%, with 23 readings containing ESG content in seven topic areas (adding Economics to the current list). This means the CFA Program curriculum will have ESG coverage in 16% of readings in 2022. In the next three to five years, as ESG standards develop and practice advances, we anticipate the coverage to reach or perhaps exceed 20%.

In continuing education, the number of event sessions on ESG investing nearly doubled from 2018 to 2019, and nearly every event had at least one ESG session. The CFA Institute Research Challenge added ESG analysis as an evaluation component in the 2021 competition year.

The last step in the process is to communicate outcomes to clients. Many market participants are concerned that inconsistency and variation in ESG-related terms, investment approaches, and disclosures have led to confusion and misunderstanding between investors and asset managers that may, over time, lead to erosion of trust in the industry. Although the debate over how to measure impact will take some time to resolve, CFA Institute is developing a set of voluntary global industry standards, the CFA Institute ESG Disclosure Standards for Investment Products, to establish disclosure requirements for investment products with ESG-related features. The purpose of the standards is to provide greater transparency and comparability for investors by enabling asset managers to clearly communicate the ESG-related features of their investment products. They are expected to be released in late 2021. The primary benefits, for all users, will be enhanced clarity and efficiency when presenting, identifying, comparing, or discussing products with ESG-related features.^{IIII}





C. Conclusion

One might call this a "threshold moment" for the investment industry as we view the paths ahead and decide which to take. When we first proposed the scenario of Purposeful Capitalism in 2017, many dismissed it as too aspirational, although we have seen these concepts gain traction in the years since and now society is expecting more from all industries, including the investment industry. We have arguably been positioned in the *misaligned industry* quadrant of **Exhibit 37**, with threats of being seen as an *unnecessary industry*.

Can we move to be the *professional industry* that provides greater societal benefit?

We believe it has become a highly plausible direction of travel brought about by the opportunities in sustainable investing.

It is ultimately a direction that makes sense all around. Investment organizations – by employing purpose-led culture and pursuing more societally beneficial actions – will produce more sustainable and beneficial outcomes for themselves over time.

In sustainable investing, we have the ingredients for the sustainability of investing. Investors and the investment industry have a considerable role to play in determining the pathway and shaping a future worth investing in.

Exhibit 37

MISALIGNED INDUSTRY

Untrusted and value-unfocused; unethical and unsustainable industry

Investment industry does not have "clean license to operate"

Investment industry profits but from a smaller industry base of revenue

MORE INDUSTRY BENEFIT LESS SOCIETAL BENEFIT

LESS INDUSTRY BENEFIT LESS SOCIETAL BENEFIT

ABSENT INDUSTRY

Malfunctioning capital markets: limited investment opportunities

> No investment industry of any material size

No innovation and no growth of any material size

PROFESSIONAL INDUSTRY

Trusted and value-focused; ethical and sustainable industry

Investment industry does have "clean license to operate"

Investment industry and society ultimately flourish

MORE INDUSTRY BENEFIT MORE SOCIETAL BENEFIT

LESS INDUSTRY BENEFIT MORE SOCIETAL BENEFIT

UNNECESSARY INDUSTRY

Traditional industry untrusted; radical disintermediation

Industry as we know it is displaced and declines

Alternative providers/technology platforms fill the gap

NOTES

- Markets included Australia, Bahrain, Brazil, Canada, Chile, China (Mainland and Hong Kong SAR), Denmark, Egypt, Finland, France, Germany, India, Japan, Jordan, Kuwait, Lebanon, Mexico, Netherlands, Norway, Oman, Peru, Qatar, Saudi Arabia, Singapore, South Africa, Sweden, Switzerland, the United Arab Emirates, the United Kingdom, and the United States.
- CFA Institute (2017).
- BlackRock (2020).
- ^{iv} Governance & Accountability Institute (2020).
- v Kuh (2019).
- vi CFA Institute (2017).
- vii See Tollefson (2020) and a corresponding study by Rory, Redding, Chin, Donnelly, Blackburn, Newbold, and Jones (2020).
- viii Giese and Nagy (2020).
- ^{ix} Demers, Hendrikse, Joos, and Lev (2020).
- ^{xi} An update on this program will be published in early 2021.
- xii S&P Global Market Intelligence (2020).
- xiii CFA Institute (2017).
- xiv Carney (2015).
- ** See Principles for Responsible Investment, "What Is the Inevitable Policy Response?" www.unpri.org/what-is-the-inevitable-policy-response/4787.article.
- xvi Allen (2020).
- xvii Soft data are measures and assessments that can be qualitative or quantitative but are difficult to assess in terms of accuracy. They may involve extrapolation or estimation from population samples, or they may measure subjective topics. Soft data can nevertheless be extremely relevant and material in decision making. Examples include sentiment indicators, opinion polls, and platforms, such as Glassdoor, in which employees and former employees review companies' cultures.
- xviii See International Integrated Reporting Council, "Getting to Grips with the Six Capitals." https://integratedreporting.org/what-the-tool-for-better-reporting/get-to-grips-with-the-six-capitals/.
- ^{xix} CFA Institute (2018).
- xx CFA Institute (2020c).
- xxi Previously published in CFA Institute (2020c).
- xxii Caseau and Grolleau (2020).
- xxiii Bauer, Ruof, and Smeets (2020).
- xxiv Friede, Busch, and Bassen (2015).
- xxv Khan, Serafeim, and Yoon (2016) and Khan (2019).
- xxvi Lee, Giese, snd Nagy (2020).
- xxvii Lins, Servaes, and Tamavo (2017).
- xxvii Dunn, Fitzgibbons, and Pomorski (2018) found that firms with higher ESG ratings have lower risk, and Gibson, Glossner, Krueger, Matos, and Steffen (2019) found evidence that some ESG strategies lower portfolio risk. Gibson et al. (2019) also found that PRI signatories appear to have lower portfolio returns on their respective equity strategies versus non-PRI signatories.
- ^{xxix} Henderson, Serafeim, Lerner, and Jinjo (2019)
- ^{xxx} Urwin (2011).
- xxxi Sullivan, Martindale, Feller, Pirovska, and Elliott (2019).
- ^{xxxii} Henderson et al. (2019).
- xxxiii Ailman, Mizuno, and Pilcher (2020).
- xxxiv Climate Action 100+, "Investors." https://climateactiozqn100.wordpress.com/investors.
- xxxx United Nations Environment Programme Finance Initiative and Principles for Responsible Investment, "United Nations-Convened Net-Zero Asset Owner Alliance."
- www.unepfi.org/net-zero-alliance.
- xxxvi CFA Institute (2020b).
- xxxvii Sanderson (2020).
- xxxviii Bebchuk, Cohen, and Wang (2013).
- xxxix Dimson, Karakas, and Li (2015) and Shleifer and Vishny (1986).
- As described by Monk and Rook (2018).
- ^{xli} Nissay Asset Management (2019).
- xiii State Street Global Advisors (2019).
- xiiii CFA Institute (2020a).
- xliv Nelson and Schuchard (2011).
- xiv As of August 2020.
- x^{tvi} On a four-level scale used by LinkedIn to gauge hiring demand that ranges from low to moderate, high, or very high.
- x^{thii} See the full methodology in the online Appendix for details on the LinkedIn search parameters. Variations of these titles were also included, and results were limited to those in financial services and specific investment segments.
- xiviii Research conducted by Mercer indicated 1.05 million core investment professionals globally, as published in "Investment Professional of the Future" (CFA Institute 2019a).
- xlix Sargis and Lutton (2016).
- ¹ The EFFAS Certified ESG Analyst Programme (CESGA) began in 2014. In 2018, SASB launched the Fundamentals of Sustainability Accounting (FSA) credential specifically to help practitioners use the SASB standards, and US SIF and the College of Financial Planning began offering the Chartered SRI Counselor (CSRIC) designation for financial advisers. In 2020, the Global Association of Risk Professionals launched the Sustainability and Climate Risk (SCR) Certificate, aimed at risk managers.
- ¹ As described in "Investment Professional of the Future" (CFA Institute 2019a), T-shaped skills are a combination of deep knowledge in a single field or part of the ecosystem and wider knowledge in the other fields or other parts of the ecosystem and the competencies to connect them.
- The online ESG resource hub (www.cfainstitute.org/en/research/esg-investing) features relevant research, including publications from CFA Institute Research Foundation and articles in the Financial Analysts Journal. See the methodology section for important reference documents.
- CFA Institute (2020b).
- Note that in addition to serving as the strategic director for the Future of Finance initiative, Mr. Urwin is advisory director at MSCI Inc. and global head of investment content for Willis Towers Watson.

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About CFA Institute

CFA Institute is the global association of investment professionals that sets the standard for professional excellence and credentials. The organization is a champion of ethical behavior in investment markets and a respected source of knowledge in the global financial community. Our aim is to create an environment where investors' interests come first, markets function at their best, and economies grow. There are more than 178,000 CFA charterholders worldwide in 162 markets. CFA Institute has nine offices worldwide, and there are 159 local societies. For more information, visit www.cfainstitute.org or follow us on Twitter at @CFAInstitute and on Facebook.com/CFAInstitute.



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