MSCI ESG Research LLC

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December 2020

2021 ESG Trends to Watch

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Climate. ESG bubbles. Biodiversity. Disclosure. Social inequality. The topics don't get much bigger — or more systemic. Here's our analysis of the five ESG trends that will matter most to companies and their investors in 2021.

1 Climate Reality Bites: Actually, We May Not Always Have Paris

Sluggish Action Impedes Investors from Aligning with a 2-Degree World

Five years ago in Paris, the world agreed to limit global warming to 2˚C. Investors got on board, but the easy part is over. A few exclusions and a portfolio tilt can get you only so far. In 2021, investors committed to aligning with the Paris Agreement face a steeper climb ahead: persuading companies to make radical changes or face a rapidly shrinking universe of qualifying investments.

2 Beyond Boom and Bust: ESG Investment Finds Its Footing

New Findings and Tools Replace "Belief" (or not) in ESG

Assets allocated to ESG investments have boomed in recent years. While some may fear that accelerating allocations could lead to frothy valuations, research so far suggests this is mostly unwarranted. In 2021, we see both hype and skepticism about ESG giving way to acceptance and a more nuanced understanding of when and how ESG has shown pecuniary benefits — and when it hasn't.

3 To Bee or not to Bee: Investors Tackle the Biodiversity Crisis

Could the Kunming Talks Become the Next Paris Agreement?

During the darkest days of the pandemic, emboldened wildlife roamed residential streets. The virus has reminded us of what we've unwittingly lost: nature, critical not just for personal pleasure but for sustaining the global economy. In 2021, policymakers and investors will heed the alarm on biodiversity loss, adapting a playbook they had established for measuring and managing climate risk.

4 The ESG Data Deluge: Sink or Swim for Companies and Investors

Corporate Issuers Up Their Game; Can Investors Keep Up?

When it comes to ESG reporting and sustainability strategy, it's clear that companies are stepping up their game – and just in time, as there is an avalanche of disclosure requirements coming their way. It's coming for investors too, who may find that an energized base of issuers knows a thing or two about ESG data reporting.

5 Righting the Scales: Social Inequalities Test Investors' Creativity

Targeting Systemic Problems Also Calls for Some (Reputational) Risk Tolerance

COVID-19 has put its thumb on the top 1% side of the wealth scale, undoing decades of progress toward greater equality. Engaging with individual companies might not be enough to move the needle back. In 2021, we see investors taking steps toward more creative, systemic approaches, with those in the vanguard willing to risk a few failures in pursuit of solutions.

Acknowledgements

The authors thank the following people for their contributions:

Climate Reality Bites: Laura Nishikawa, Nathan Faigle, Kenji Watanabe, Stuart Doole, Mike Disabato and Bentley Kaplan

Beyond Boom and Bust: Guido Giese, Navneet Kumar, Zoltan Nagy, Mike Disabato and Bentley Kaplan

To Bee or not to Bee: Leslie Swynghedauw, Mike Disabato and Bentley Kaplan

The ESG Data Deluge: Samantha Sue Ping, Olga Emelianova, Frank Li, Gaurav Trivedi, Mike Disabato and Bentley Kaplan

Righting the Scales: Olga Emelianova, Meghna Mehta, Mike Disabato and Bentley Kaplan

Climate Reality Bites: Actually, We May Not Always Have Paris

Sluggish Action Impedes Investors from Aligning with a 2-Degree World

The Paris Agreement on climate has been a “North Star” for global investors since its inception in 2015. It served as a guide to an escape route from climate catastrophe, outlining the steps needed to keep the world from exceeding a 2°C warming scenario. Five years on, leading investors have shown commitment to aligning with the aspirations of the agreement and reported that their portfolios are “cooler” than a business-as-usual (BAU) scenario.[1] In 2021, however, the easy part is over, and a steeper climb starts; investors will approach a series of hard limits to decarbonizing their portfolios in line with the Paris aspiration. Although many companies have reduced their greenhouse gas (GHG) emissions, the next five years must look drastically different from the last five, given the quickening pace required to get on a viable temperature pathway.

Here’s the conundrum: Barring dramatic policy and technological breakthroughs and corporate action, the availability of Paris-aligned investment opportunities will become increasingly limited with each passing year as the required reductions to reach net-zero emissions grow ever deeper. In response, investors may demand radical transformation of business models or look more creatively beyond the existing investment opportunities to align their portfolios with Paris.

We can illustrate this dilemma by examining a global investable universe of publicly listed companies: The 8,900+ constituents of the MSCI ACWI Investable Markets Index (IMI). We use MSCI’s Warming Potential metric, which provides an indication of how companies’ projected business activities align to pathways corresponding to global temperature targets.[2]

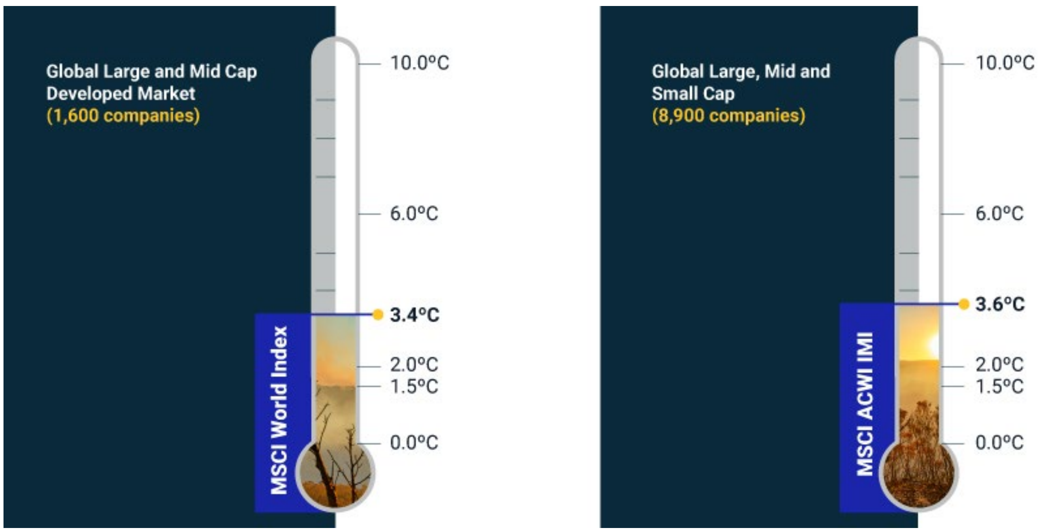
We estimate that the MSCI ACWI IMI had an aggregate warming potential of approximately 3.6 °C, as of Nov. 30, 2020, which is less “hot” than the approximately

[1] See for example: “The Bank of England’s climate-change related financial disclosure 2020.” Bank of England, 2020.; “GPIF Publishes the "Analysis of Climate Change-Related Risks and Opportunities in the GPIF Portfolio." Government Pension Investment Fund of Japan, Oct. 2, 2020; “Addressing Climate Change Risk, CalPERS’ First Response to Senate Bill 964.” California Public Employees Retirement System, December 2019.

[2] MSCI ESG Research’s “warming potential” methodology computes the contribution of a company’s activities toward climate change. It delivers an exact temperature value that signifies which warming scenario (e.g., BAU, 3°C, 2°C, 1.5°C etc.) the company’s activities are currently aligned with. Thereafter, a “portfolio warming potential” can be computed as a weighted aggregate of the company-level warming potential. The warming potential methodology can be applied to companies as well as real estate assets.

4.0 °C projected path of the global economy today. That's because the companies in a broad market capitalization-weighted benchmark undertake less carbon-intensive activities (e.g., more weighted toward technology) than the economic activities of the entire global economy.[3]

Exhibit 1: Aggregated Warming Potential for Market-Cap-Weighted Indexes



Portfolio Aggregated Warming Potential represents the weighted average of constituents' Aggregated Warming Potential temperatures; Portfolio Aggregated Transition Risk Climate VaR represents the weighted average of Aggregated Transition Risk Equity Climate VaR of constituent securities using the AIM CGE 2°C scenario. Source: MSCI ESG Research, as of Nov. 30, 2020.

Taking the target temperatures for 2100 and working them backwards makes clear the size of the challenge with aligning to the Paris aspirations.

- To meet a ***2°C temperature goal*** by the end of the century, global emissions need to be reduced by about ***5% per year***, or even more if it turns out that GHG emissions did not peak in 2019.[4]

[3] It is important to note that we would expect the global universe of publicly listed companies to measure as being aligned to a lower temperature path than the world economy. That is because the less carbon-intensive sectors take up a greater share of the publicly listed investable universe than their share of economic output. This is evident from comparing, for example, the share of the technology and communication services sector in the market capitalization of a benchmark such as the MSCI USA IMI (38% as of Oct. 29, 2019) versus these sectors' share of U.S. GDP (6.9%) in 2018, according to Bureau of Economic Analysis (BEA) statistics. That's why MSCI ACWI IMI companies measure at around 3.6°C even though scientists have projected that the world is currently headed towards 4.1°C and 4.8°C warming by 2100 (under the current "business as usual" scenario).

[4] Some studies have indicated that due to lockdowns triggered by the COVID-19 pandemic, global GHG emissions declined by 8.8% in the first half of 2020. However, by July 2020, with resumption of economic

- For a ***1.5°C world*** by the end of the century, global emissions need to be reduced by between ***9% and 15% per year***[5] from 2019 and become net-zero by 2050.

We estimate that 16% of MSCI ACWI IMI constituents were aligned to a 2°C scenario as of Nov. 30, 2020; and only 5% of MSCI ACWI IMI constituents were aligned to a 1.5°C scenario.

The societal and portfolio construction challenges involved in achieving the required reductions are significant, as summarized in Exhibit 2.

Exhibit 2: Climate Change: Honey, I Shrunk the Equities Universe

How Different Climate Scenarios Might Impact Equity Investment Opportunities

Alignment Target	Temperature	Societal Actional Required		Portfolio Construction Challenge	
Business as usual	4.0°C	Business as usual	None	100%	No portfolio rebalancing needed to align to a business-as-usual scenario.
Commitments made by countries already (NDC aligned)	3.0°C	Business as usual; NDC-aligned	Policies currently proposed in Paris Agreement	85%	Possible to reweight a market portfolio away from heavy emitters using climate-related data, shrinking the investible universe by ~15%.
2°C	2.0°C	Business as usual; 2.0°C-aligned	Net zero before end of the century, much deeper reductions than NDC pledges	40%	Large proportion of companies would need to be excluded in portfolio construction, shrinking the investible universe by ~60%.
1.5°C	1.5°C	Business as usual; 1.5°C-aligned	Net zero by 2050, -15% CO2 reduction/year	10%	Limited universe of listed companies leading to a very concentrated portfolio, shrinking the investible universe by ~90%.

This calculation is based on a hypothetical portfolio comprising companies of the MSCI ACWI Investable Markets Index (IMI), representing over 8,300 large-, mid- and small-cap companies with available climate-change data across developed and emerging markets, as of Nov. 30, 2020. The data for the warming pathways is provided by Climate Action Tracker's Global Emissions Time Series dataset. Source: Climate Analytics, NewClimate Institute, MSCI ESG Research.

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activities, most economies also resumed the previous emissions level and growth. Liu, Z., Ciais, P., Deng, Z. *et al*. 2020. "Near-real-time monitoring of global CO2 emissions reveals the effects of the COVID-19 pandemic." *Nature Communications* 11, 5172.

[5] According to Huppmann, D. et al. 2018. "IAM 1.5°C Scenario Explorer and Data" hosted by IIASA, emissions would have to be reduced by 9% per year if net-negative emissions are included, and according to Hausfather, Z. "UNEP: 1.5C climate target 'slipping out of reach.'" *CarbonBrief*, Nov. 26, 2019, emissions would have to be reduced by 15% per year without net-negative emissions.

Investors can perhaps take solace in knowing that national governments are grappling with the same challenges. Following the Paris summit, individual countries developed their own emission reduction targets, known as the nationally determined contributions (NDCs, as noted in Exhibit 2). The NDCs collectively would achieve a temperature rise of 3˚C by 2100, which still exceeds the 2°C or 1.5°C target. As illustrated by MSCI's interactive tool **"Climate Change: Honey, I Shrunk the Equity Universe** - *See How Different Climate Scenarios Might Impact Equity Investment Opportunities,"* our calculations suggest that for a hypothetical portfolio tracking the MSCI ACWI IMI, it would be possible to achieve alignment with these country commitments to reach 3˚C warming by 2100 by shifting portfolio weight away from the roughly 15% of constituents that are on a "hotter" path than 3°C and towards the remaining constituents. That's actually the easy part.

The more ambitious goal of aligning with a world that will be only 2°C or 1.5°C warmer in 2100 pushes companies and investors into much more difficult terrain. Based on MSCI's Warming Potential estimates, every company in the MSCI ACWI IMI would have to reduce its total carbon intensity (Scopes 1, 2 and 3) by an average of 8%-10% per year from now until 2050.[6]

How can investors achieve such steep reductions in their portfolios every single year? There are three possible paths:

1. **Engagement**: For companies across a portfolio to decarbonize by 8%-10% per year on average, intensive efforts to engage companies are critical. But the task is daunting, and the burden is not equal across sectors. Many companies would need to go beyond tinkering with efficiency gains, while some would need to completely transform their business models, including exiting certain business lines altogether.

   Recent track records have not inspired confidence: Over the past five years, only 3% of the 8,900+ constituents of the MSCI ACWI IMI have reduced direct and indirect carbon emissions by an average of 8% or more per year;[7] our analysis

[6] The requirement for emissions reduction every single year going forward is a critical component of indexes that comply with the EU's climate benchmark regulations. The "ratcheting down" effect can be illustrated by the "self-decarbonization" embedded in the MSCI Climate Paris Aligned Index: At the index level, the aggregate carbon intensity (Scope 1, 2 and 3) is reduced by 10% every year, which exceeds the EU benchmark minimum requirement, while meeting additional goals, including achieving a higher percentage of green versus fossil fuel-based revenue than the parent benchmark and controlling physical risk. The 10% rate is critical to reconcile the holdings with a warming potential analysis. Please see "Aligning with the Paris Agreement: An Index Approach," MSCI Blog, Oct. 22, 2020.

[7] We estimate that 3% of companies have achieved 8% or more Scope 1 and Scope 2 emissions reduction, measured on an absolute basis; 4% of companies have achieved 8% or more Scope 1 and Scope 2 emissions reduction, measured on an intensity basis (tCO2e/USD sales); 5% of companies have achieved 7% or more Scope 1 and Scope 2 emissions reduction, measured on either absolute or intensity basis. Please note that this analysis includes only company-reported emissions and excludes Scope 3 emissions, for which no reliable historical data is available.

shows only 32% of the companies that had committed to an emissions reduction target have met their own stated goals.[8] Only 472 MSCI ACWI IMI companies, or 5%, had committed to a carbon-reduction target that would put them on the required path towards 2°C, based on MSCI's Warming Potential calculation, as of Sept. 30, 2020.[9]

But there is room for hope. Some of the largest GHG emitters among public companies — including **Royal Dutch Shell PLC, Enel S.p.A. and Volvo Cars** — have recently committed to far more ambitious targets. Plus, a parade of companies such as **Alphabet Inc., Apple Inc., Walmart Inc., BASF SE** and **Repsol S.A.** have pledged to become carbon-neutral, carbon-negative or net-zero, although we caution that the fine print indicates very different levels of reduction ambition behind the headlines.[10]

2. **Portfolio concentration**: If companies don't decarbonize enough, investors could be left with a dwindling investment universe of companies that meet the 2°C or 1.5°C targets. This could lead to highly concentrated portfolios constructed either through quantitative techniques that shift significant weights toward those few companies or through bottom-up securities selection.

   As illustrated by our interactive tool, we started by applying the optimistic assumption that companies in the MSCI ACWI IMI will meet all the emission reductions targets to which they have committed. Even with the glass half full, our simulations showed that the number of companies aligned to a 2°C path would shrink by an average of about 5% per year between 2020 and 2030. By 2030, this would leave an eligible universe of about 32% of the original companies, representing only 40% of total market capitalization of today's universe.

   The threat of such a shift could conceivably push some companies to decarbonize drastically to maintain access to capital. But if they fail to do so, and

[8] We examined data on over 3,500 distinct targets set by 1,190 companies to understand the current state of corporate decarbonization pledges. Of the 1,190 constituents with carbon targets, 32% had set and met some previous targets if not all; 34% failed to meet all previous targets; and another 34% set no previous targets. Please see "Breaking Down Corporate Carbon Targets," MSCI ESG Research, May 2020.
[9] Based on the number of additional companies that have indicated their commitment to set targets in the next two years according to Science-Based Targets (SBTi), we anticipate that this number could increase to approximately 6% by the end of 2020.
[10] "Sustainability Report 2019." Shell, Nov. 25, 2020.
"Commitment to the fight against climate change." Enel, November 25, 2020.
"Climate Strategy." Volvo Group, Nov. 25, 2020.
"Google aims to run on carbon-free energy by 2030." CNBC, September 14, 2020.
Kelion, L. "Apple's 2030 carbon-neutral pledge covers itself and suppliers." BBC News, July 21, 2020.
"WalMart sets goal to become a regenerative company." WalMart, Sept. 21, 2020.
"Our climate protection goal." BASF, November 25, 2020.
"Repsol will be a net zero emissions company by 2050." Repsol, Nov. 25, 2020.

only a small universe of public companies are aligned with a 2°C or 1.5°C path, it is likely impracticable for large investors to maintain their large allocations to a smaller and smaller set of companies due to concentration risks. Additionally, confining holdings to such a small set of companies would do little to address the societal and system-wide challenges that would still exist in the world in which these companies would have to operate.

3. **Shifting to other assets**: If the Paris-aligned investable universe of public companies shrinks drastically over the next five years, the "divest/invest" approach would imply diverting the capital that had originally been allocated to non-aligned companies to investments in climate-change mitigation or adaptation initiatives across asset classes, directly contributing to solutions to reach alignment with a 2°C or 1.5°C world.

   Some leading institutional investors have started to do so. Some Danish[11] and U.K.[12] pension funds, for example, have allocated to private assets, including green infrastructure investments that may seed solutions to a zero-carbon transition while bringing down the temperature of the total portfolio. More investors seek green bonds, spurring more and larger issuances. For example, Germany's first-ever issuance of a sovereign green bond in September 2020 raised EUR 6.5 billion and was five times oversubscribed.[13]

   The number of investors willing to shift capital to zero- and negative-carbon investments could be substantial, with the UN-convened Net-Zero Asset Owner Alliance[14] alone representing over USD 5 trillion in assets. But where can these investments go? Today, we lack sufficient zero- and negative-carbon technologies to significantly transform our economy. The supply of such investment opportunities could grow over time, if supported by stronger policy measures and development of more robust carbon markets.[15] In the meantime, investors will likely need to get much more energetic and creative if they are to source green assets and fund potential breakthrough technologies yet-to-be-invented.

2020 was a sobering year, not least because we found out that even pandemic lockdowns of the global economy barely interrupted our journey toward a 4.0+ °C

[11] Gambetta, G. "Heavyweight Nordic investment trio makes €4bn green infrastructure pledge." *Responsible Investor*, Nov. 10, 2020

[12] Flood. C. "UK pension scheme pledges £5.5bn for green strategies." *Financial Times*, July 20, 2020

[13] Ainger, J., Ward, J. "Germany Seizes on Demand for Green Debt With $7.7 Billion Debut." *Bloomberg*. Sept. 20, 2020.

[14] "Institutional investors transitioning their portfolios to net zero GHG emissions by 2050." UNEP's Finance Initiative. Nov. 19, 2020

[15] The Institute of International Finance has established the Taskforce on Voluntary Carbon Markets with the stated aim of scaling up voluntary carbon markets.

world.[16] Yet, we also found out that an existential threat to humanity could focus the mind — and concentrate a massive amount of capital to fund the discovery of viable vaccines in record time. As we hurtle through 2021, climate investors will see the Paris accord transform from a guiding beacon to a mile-marker in a race where we are not keeping pace. Limiting climate change was always going to need more than a portfolio tilt. Taking a lesson from the pandemic and the race for a vaccine, investors could well find that forcing change from business as usual and pushing for innovations could make up for lost ground, even as we begin the steep climb of the next leg of the race against climate change.

16 Liu, Z., *et al., op cit.*

Beyond Boom and Bust: ESG Investment Finds Its Footing

New Findings and Tools Replace "Belief" (or not) in ESG

Assets allocated to ESG investments have accelerated in recent years.[17] But reading headlines about ESG and performance can give you pause, if not whiplash. One day it's "Better Stock Selection Boosted ESG Funds."[18] The next day, it's "ESG Investing Looks Like Just Another Stock Bubble."[19] So, which is it? Will ESG investment continue its ascent, or head for a bust? In 2021, we see both hype and skepticism giving way to a more nuanced understanding of when and how ESG has shown pecuniary benefits — and when it hasn't.

The ESG investing market is reaching a new maturity. The research has come a long way, and we know much more than we did even just a year ago. From concerns about overvaluation to why ESG ratings differ, the tools and analysis now exist for savvy investors to cut through conjecture and act on the evidence.

Let's start with that stock-bubble supposition. Some analyses have noted that "higher ESG" companies (arbitrarily defined) had higher valuations,[20] raising concerns that the performance of ESG funds overall could be an unsustainable self-fulfilling phenomenon— effectively, a price bubble.

But our own research showed little historical evidence of this when we focused on ESG approaches that integrated only financially relevant considerations. As with all things ESG, clarification of terms is a must. While the broad category of sustainable investments encompasses a range of both financial and non-financial investor objectives, ESG integration strategies typically seek a financial edge by directing more capital toward companies doing a better job of managing pecuniary ESG risks, often as reflected in their higher ESG ratings.

We compared companies with top MSCI ESG Ratings (which are industry-neutral) against their bottom-rated peers over a study period from May 31, 2013, to Nov. 30, 2020, looking at constituents of the MSCI ACWI Index. Over this period, the top third of companies by ESG ratings (re-sorted semi-annually) outperformed the bottom

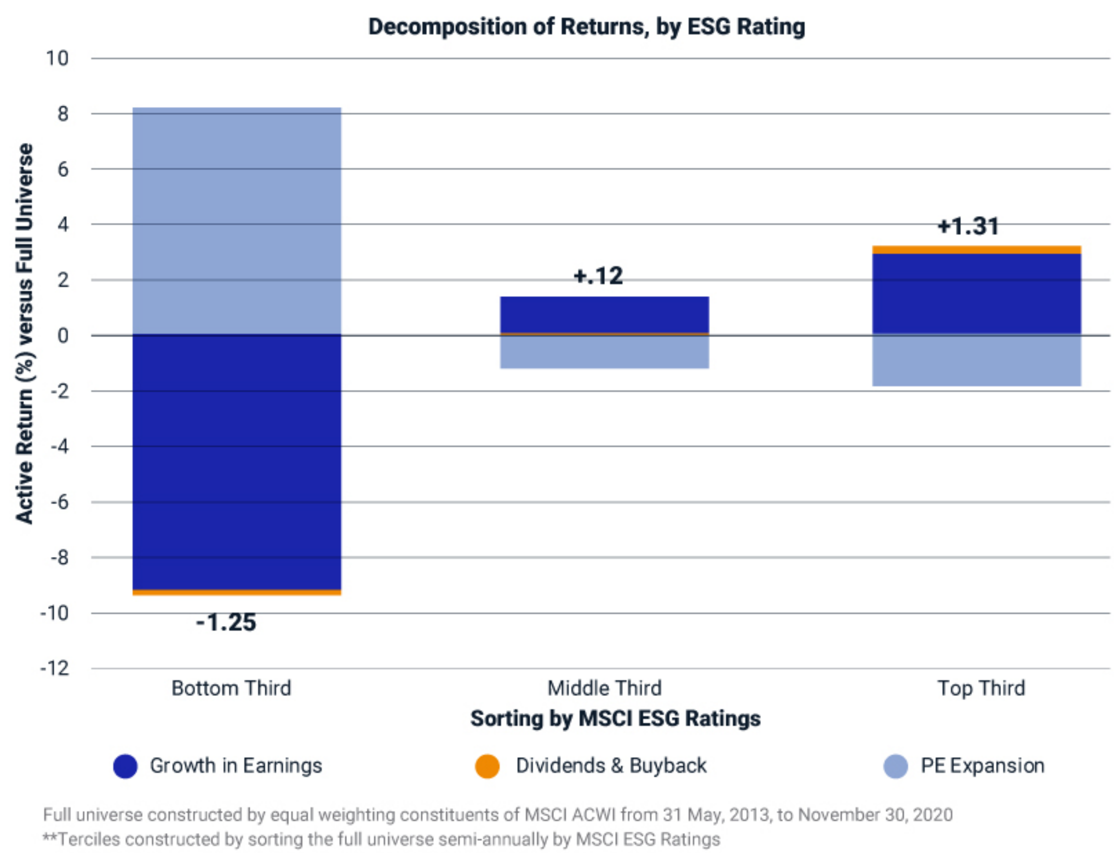
[17] "The second quarter saw investors pull $137 billion, overall, out of stock funds. However, ESG investors directed $9.3 billion into stock funds.": Elliott. A. "As ESG Investing Gives 2020 A Sustainable Spin, 50 Best ESG Companies Revealed". Investor's Business Daily, Oct. 26, 2020.
Darbyshire, M. "ESG funds continue to outperform wider market." *Financial Times*, April 3, 2020.
Riding, S. "ESG funds attract record inflows during crisis." *Financial Times*, Aug. 10, 2020.
[18] Johnson. S. "Better stock selection boosted ESG funds, research suggests." *Financial Times*, Oct. 14, 2020.
[19] Dillian. J. "ESG Investing Looks Like Just Another Stock Bubble". *Bloomberg.com*, Oct. 5, 2020.
[20] Ibid.

third by 2.56% per year (1.31% for the top third versus -1.25% for the bottom third). Was this outperformance driven by a higher premium that investors were willing to pay, as ESG investments became fashionable? The short answer seems to be no.

Breaking down the factors that explained the performance difference, we found it was primarily driven by higher earnings growth of the higher-rated companies over this time, followed by the higher reinvestment return from dividend payouts and share buybacks.

Exhibit 3: Decomposition of Returns by ESG Rating

	Growth in Earnings	Dividends & Buyback	PE Expansion	Active Return
Bottom Third	-9.22	-0.21	8.18	-1.25
Middle Third	1.35	-0.05	-1.18	0.12
Top Third	2.89	0.28	-1.86	1.31



Data for constituents of the MSCI ACWI Index from May 31, 2013 to Nov. 30, 2020.

Interestingly, the contribution from price-to-earnings expansion was a smaller explanatory factor, and even slightly negative for issuers with high ESG ratings. The findings corroborate our previous research that superior management of financially relevant ESG risks could have signaled greater competitiveness of companies relative to peers, translating over time into stronger profitability and ability to pay dividends.[21]

These kinds of findings already go a long way toward clarifying the relationships between ESG information and financial performance. But there's more. Simplistic explanations for the performance of ESG strategies are just no longer tenable.

For example, 2020 saw a lot of conjecture along these lines: *ESG outperformance is just due to avoiding the energy sector (which has suffered in stock-price performance during the recent cycle)*. But now new analytical tools can isolate the contribution of a specific ESG factor to explain performance, net of industry, country, currency and other equity style factors. These tools have shown that ESG factors have contributed more to explaining the performance of select MSCI ESG Indexes so far in 2020 than any other traditional financial factor— including exposure to the energy sector.[22]

Nor is it still tenable to disregard all ESG ratings because different providers' signals are not well correlated. We often hear: *If ESG ratings are not correlated, they must just be subjective noise and can't capture investment value.* But we now know that the financial significance of an ESG rating is highly sensitive to how underlying E, S and G issues are combined, so there is no need to give up on the entire concept.

In fact, a recent OECD report comparing ESG ratings from a range of providers found that most did not show positive correlation to returns, while one did show outperformance.[23] Further, MSCI demonstrated that different weights used for combining the exact same underlying E, S and G inputs led to significant differences (by between 7.4% and 11.1%) in how well an aggregate ESG rating ultimately captured stock market performance over the past 13 years.[24]

Last but not least, wishful thinking hasn't held up consistently either. The common refrain here is that you can "*do good and do well*." That's historically been true more

[21] Giese, G., Lee, L.E., Melas, D. Nagy, Z. and Nishikawa, L. 2019. "Foundations of ESG Investing: How ESG Affects Equity Valuation, Risk, and Performance." *Journal of Portfolio Management* 45:69-83.
[22] For performance attribution of MSCI ESG Indexes including the ESG factor from March 31, 2015, to March 31, 2020, please see Giese. G, Nagy. Z. "MSCI ESG Indexes during the coronavirus crisis." MSCI Blog, April 22, 2020.
[23] The report said: "In our hypothesis we wanted to examine how ESG scores perform in comparison to the market, and in particular to assess whether high ESG scoring stocks outperform low scoring ESG stock we use the Fama & French 5 factors model. We can notice a similar pattern for each provider, except for one, which shows positive alpha on the best scoring ESG portfolio." See Figure 18 for a graphic representation. Boffo, R., Patalano, R. 2020. "ESG Investing: Practices, Progress and Challenges." OECD.
[24] Giese, G., Lee, L., Nagy, Z. 2020. "Combining E, S, and G Scores: An Exploration of Alternative Weighting Schemes." *The Journal of Impact and ESG Investing,* Fall 2020, 1 (1) 94-103; Giese, G., Lee, L., Nagy, Z. "ESG Ratings: How the Weighting Scheme Affected Performance." MSCI Blog, June 29, 2020.

often than the naysayers think, but far from always.[25] It is very clear that some investment strategies use ESG criteria that are not primarily aimed at improving financial performance— usually because they are trying to accomplish something else.

We see growing discipline among market participants to more explicitly distinguish what a given ESG strategy is targeting — and what it's not. A self-declared "sustainable" strategy, for example, might aim to do anything from aligning investments with a set of norms, such as the UN Global Compact or the Tobacco-Free Finance Pledge (typically implemented through exclusions), to targeting innovations that can solve an environmental challenge such as climate change (typically selecting companies from a narrow set of sectors). These approaches, as with all approaches that do not aim to track the market, can underperform or outperform depending on the time horizon and market cycle. Efforts such as the CFA Institute's initiative to develop a disclosure standard for ESG funds reflect the move among market players to better distinguish between these different "ESG features" that aim to meet different "ESG needs."[26]

What does this all mean? With the demand for ESG and climate-related investment products on the rise, we think the market for sustainable investments is set to expand further. But investors no longer need to "believe" in ESG, or not. A sharper understanding is emerging as to which ESG approaches are financially relevant and which are more focused on social objectives, allowing investors to more precisely build their own strategies based on a track record. A better-informed, cooler-headed ESG investment market ultimately paves the way for a more sustainable growth of inflows in 2021 and beyond.

[25] See for example: Fulton, M.; Kahn, B.; Sharples, C. 2012. "Sustainable Investing: Establishing Long-Term Value and Performance." June 12, 2012.; Hong, H. and Kacperczyk, M., 2009. "The price of sin: The effects of social norms on markets" *Journal of Financial Economics*, 93: 15-36; Lee, L.-E., Nagy, Z., Eastman, M.T. 2017. "Do Corporate Controversies Help or Hurt Performance? A Study of Three Portfolio Strategies." *Journal of Environmental Investing* 8 (1).

[26] "ESG Disclosure Standards for Investment Products." CFA Institute. 2020.

To Bee or not to Bee: Investors Tackle the Biodiversity Crisis

Could the Kunming Talks Become the Next Paris Agreement?

During the darkest days of the pandemic, cities saw clear blue skies[27] and emboldened wildlife roamed residential streets.[28] The virus has reminded us of what we've unwittingly lost: nature, critical not just for personal pleasure but for sustaining the global economy. In 2021, policy makers and investors will heed the alarm on biodiversity loss, adapting a playbook they had established for measuring and managing climate risk.

Life on earth is in danger.[29] A quarter of existing animal and plant species face extinction,[30] and many are already gone.[31] Continued losses could have devastating human and economic impacts.[32] In response, global regulators have begun to develop more stringent biodiversity protection strategies.[33] And in 2021, the 15th Conference of the Parties to the Convention on Biological Diversity is slated to take place in Kunming, China, with a goal to adopt a post-2020 global biodiversity framework, featuring global and national measurable targets. While few would mistake the city of Kunming for Paris, this conference has the potential to mark a tipping point for biodiversity as the Paris Agreement did for the climate in 2015.

This all has implications for investors. Understanding what it could mean for a portfolio can be complicated, but it starts with a mapping of individual companies along two dimensions: impact and dependency. Some companies have an outsize impact on biodiversity (think mining, energy); some companies depend on it for their inputs and operations (e.g., travel, consumer). And some do both.

Nowhere is that double burden more apparent than in the food industry. Food producers are highly dependent on healthy soil, crop diversity, pollinators, fresh

[27] Patak, S. "With Coronavirus Lockdown, India's Cities See Clear Blue Skies as Air Pollution Drops." NPR. April 10, 2020.
[28] "The urban wild: animals take to the streets amid lockdown – in pictures." *The Guardian*. April 22, 2020.
[29] "Convention on Biological Diversity". 2006. United Nations
[30] "The Global Assessment Report on Biodiversity and Ecosystem Services." 2019. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)
[31] Ceballos, G., P. Erlich and P. Raven. 2020. "Vertebrates on the brink as indicators of biological annihilation and the sixth mass extinction." Proceedings of the National Academy of Sciences. Vol. 117, No. 24.
[32] Value of natural resources has been estimated at USD 44- USD 125 trillion: "Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy." 2020. World Economic Forum and PwC.; Costanza, R. et al. 2014. "Changes in the global value of ecosystem services." *Global Environmental Change* 26: 152-158.
[33] The European Commission is currently working on a proposal for a strict legislation to achieve deforestation-free supply chains.

water and climate stability. Without these inputs, yield and quality drop precipitously,[34] which is bad for food businesses as well as for all of us who need to eat every day. Agriculture also contributes to about 80% of deforestation globally,[35] with cattle, soy, palm oil and timber driving the bulk of the impact. That means food producers are contributing to the very problems that threaten their business while simultaneously inviting regulatory restrictions and reputational damage.

Not all companies in an industry have the same impacts or are equally vulnerable, though. We take the example of soy, which has recently been in the spotlight for fueling deforestation and wildfires in the Brazilian Amazon and Cerrado regions. The situation in Brazil has become serious enough that Nestle stopped buying Cargill's Brazilian soy last year.[36] How much individual soy producers and traders contribute to deforestation depends on agricultural practices across their supply chain.

We analyzed the world's largest soy processors, traders and purchasers and found that a gulf remains between aspiration and practice. The largest soy processors and traders have all adopted zero-deforestation targets, but the vast majority of their soy exports remained uncertified to third-party sustainability standards[37] as of November 2020.

A few of their big buyers have likewise adopted targets to source "deforestation-free" soy. But among the largest soy users[38] in the food industry, so far only Danone and Mowi have achieved significant levels of sustainable soy certification.

[34] "Let's #StopSoilErosion to ensure a food secure future." Food and Agriculture Organization of the United Nations. May 15, 2019.; Haile, M. et al. "Impact of Climate Change, Weather Extremes, and Price Risk on Global Food Supply." 2017. *Economics of Disasters and Climate Change* 1:1-21.; Reilly, J.R. et al. "Crop production in the USA is frequently limited by lack of pollinators." *Proceedings of the Royal Society B*. July 29, 2020.

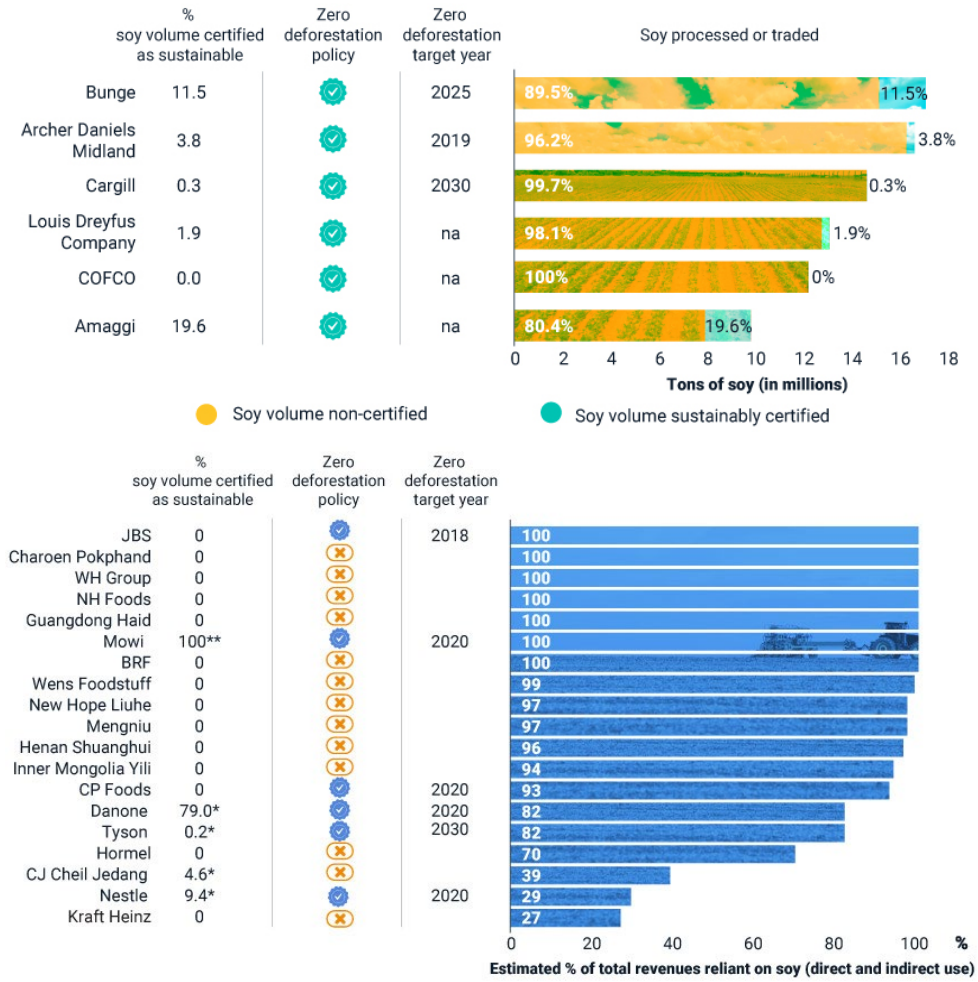
[35] "Industrial Agriculture." 2020. Global Forest Atlas.

[36] Bunge, J., "Brazil's Shrinking Rainforest Prompts Nestlé, H&M, Others to Shake Up Supply Chains." *The Wall Street Journal*, Dec. 25, 2019.

[37] Third-party sustainable certification standards include Roundtable of Responsible Soy (RTRS) Mass Balance, International Sustainability and Carbon Certification (ISCC) and ProTerra Certification.

[38] We refer here to both direct use (soy as a product or ingredient in the food product; e.g., soy milk, soy sauce) and indirect use (soy used in feed mix for animal products; e.g. dairy, meat, eggs) of soy. More than 70% of global soy production is used for animal feed.

Exhibit 4: Soy Producers and Users: Revenue Dependency and Progress Toward Zero Deforestation



Soy producers: Universe: top six corporate processors and traders in volume of processed and traded soy. Soy buyers: Universe: top 20 food products companies based on total revenues (FY2019) reliant on soy use. MSCI ACWI Index food products constituents, as of Nov. 24, 2020.

**We refer here to both direct use (soy as a product or ingredient in the food product; e.g., soy milk, soy sauce) and embedded/indirect use (soy used in feed mix for animal food products and ingredients; e.g., dairy, meat, eggs, farmed fish). Food processors typically do not disclose their level of reliance on soy, especially when it is embedded in their supply chain and not directly sourced by them. We made soy reliance estimates based on companies' publicly available operating segments description and commonly known food products derived from soy.*

** direct use only (CJ, Nestle, Danone, Tyson) CJ figure includes only CJ Selecta sourced soy certified to RTRS*

*** Mowi's Feed production*

Sources: CDP 2020 responses, RTRS report, Company disclosure, MSCI ESG Research, Nov. 24, 2020.

Like climate change, the biodiversity crisis is already here. The climate-change risk mitigation journey now provides a useful blueprint. While many institutional investors today conduct sophisticated exercises to model scenarios, implement stress tests and assign dollar values to portfolio climate risk, all of them started with simple portfolio carbon footprinting just a few years ago. Measuring a portfolio's biodiversity footprint is a similarly logical starting point for biodiversity protection. In fact, investors and stakeholders have banded together to develop a shared framework and metrics to help investors measure and report their portfolios' impact and risks related to biodiversity issues. The name of the group? The Task Force on Nature-related Financial Disclosures (TNFD), modeled after its better-known relative, the Task Force on Climate-related Financial Disclosures (TCFD).

There were institutional investors concerned about climate change before 2015, but the Paris Agreement spurred regulators to action and gave everyone concrete targets to work toward. Today, policymakers already have their hands full dealing with a few other global crises already. But biodiversity loss is intricately linked to both climate change and the emergence of new diseases, in addition to posing its own panoply of threats. With Paris as a model, Kunming's moment may have arrived.

The ESG Data Deluge: Sink or Swim for Companies and Investors

Corporate Issuers Up Their Game; Can Investors Keep Up?

The demand for ESG disclosures is on the rise, and more are becoming mandatory. What are corporate issuers to do?

Dear corporate issuers,

What will 2021 bring? More pressure on your company for ESG disclosures — from investors, regulators, employees, activist NGOs and those dreaded ESG data providers? More media scrutiny if you screw up, even slightly? More demands from employees and customers to "Take a stand on …"? Well… yes, yes and yes. So how is that different from 2020 or 2019, you ask? We think the answer is *you*.

A tiny handful of you are old pros at this; you've been going out proactively to talk to your investors and other stakeholders about sustainability as part of your business strategy for years. You're already reporting your workforce racial diversity, your carbon-reduction targets, your efforts to phase out plastic packaging and myriad other things. But the vast majority of you have told us repeatedly over the years that you feel inundated by requests for ESG information and struggle to know how and where to respond. We've got bad news: The demand volume is about to get worse. In fact, what feels like a flood today may look like a trickle in coming years. That's because new regulations are taking effect and voluntary reporting standards are becoming mandatory in some countries, and these requirements are putting a lot more pressure on your investors.

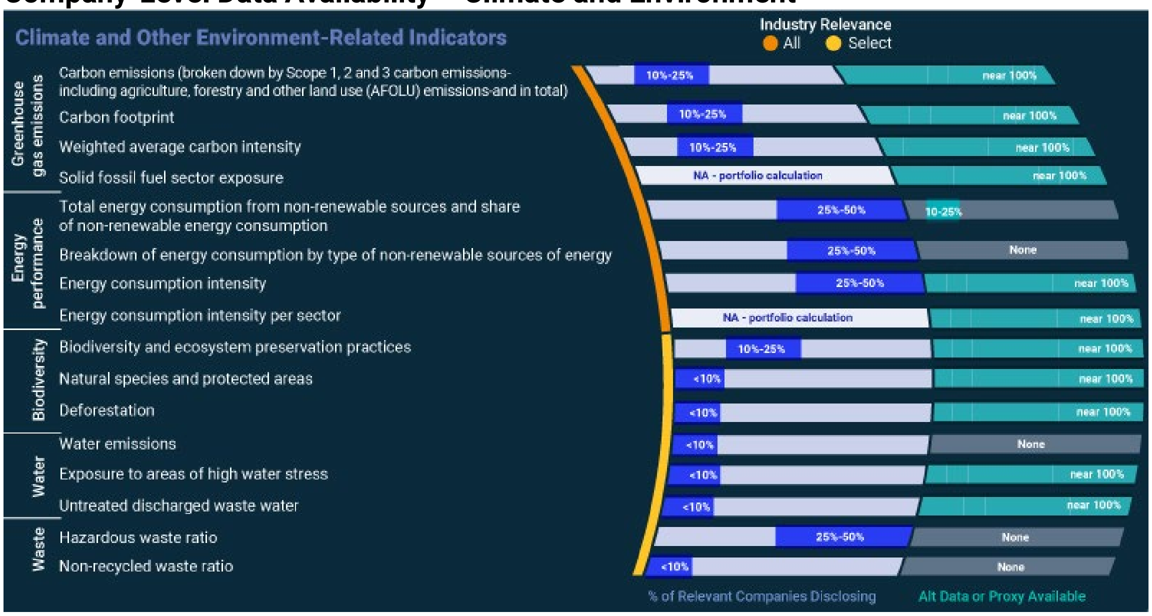
Did you know, for example, that Task Force on Climate-related Financial Disclosures (TCFD) reporting became mandatory for UN PRI signatories in 2020[39] and is set to become required over the next few years in the U.K.,[40] New Zealand[41] and perhaps — don't hold your breath — even the U.S.?[42] Or that the European Union's Sustainable Finance Disclosure Regulation (SFDR), if finalized in its current form, will require investment institutions holding your shares to report on whether your company operates in or around areas of high biodiversity value? Or how much you pay your

[39] "FAQ on mandatory climate reporting for PRI signatories." UN PRI. 2020.
[40] Holger, D. and E. Bartha. "U.K. Requires Companies to Report on Climate Change by 2025." *The Wall Street Journal.* Nov. 9, 2020.
[41] "Mandatory climate-related financial disclosures." New Zealand Ministry of the Environment. Sept. 21, 2020.
[42] Whieldon, E. and D. Harty. "Biden plan to make companies disclose climate risks key to decarbonization." S&P Global. Nov. 2, 2020.

male employees versus your female employees? This data could be required as soon as March 2021.[43]

The last we checked, only a few MSCI ACWI IMI constituents reported *all* of the 32 datapoints needed to fulfill the draft entity-level SFDR requirements. The rest of you will no doubt start hearing from some investors soon about the many disclosures you're missing there, if not about your Scope 3 carbon emissions (most of you don't report those either), or eventually your revenues from qualifying EU Taxonomy green activities. Exhibit 5 lays out in stark relief how big some of the disclosure gaps are.

Exhibit 5 – Part 1: SFDR Draft Principle Adverse Impacts Indicators: Company-Level Data Availability – Climate and Environment

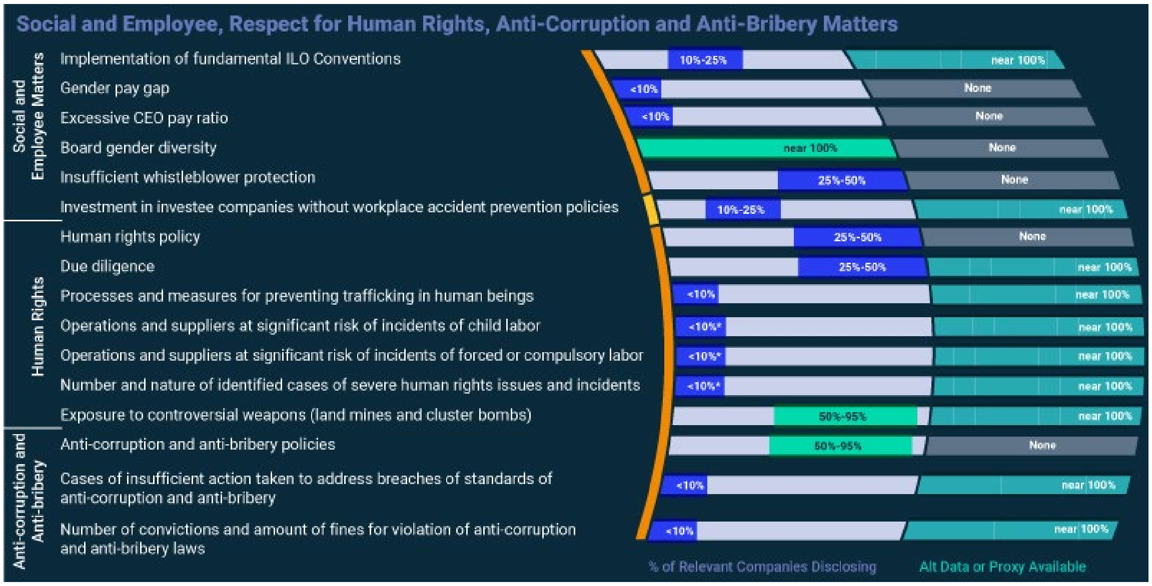


** Estimated*

Data for constituents of MSCI ACWI IMI as of Nov. 12, 2020. Source: MSCI ESG Research.

[43] Humphreys, N. "Demystifying the Sustainable Finance Disclosure Regulation." Bloomberg Professional Services. Aug. 10, 2020.

Exhibit 5 – Part 2: SFDR Draft Principle Adverse Impacts Indicators: Company-Level Data Availability – All Other



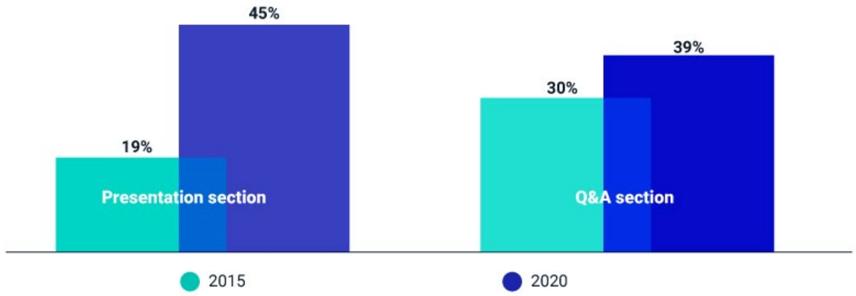
** Estimated*

Data for constituents of MSCI ACWI IMI as of Nov. 12, 2020. Source: MSCI ESG Research.

It's no small task that lies ahead — for you or your investors. But we can see that more of you have been trying to rise to the occasion, reaching out to investors instead of waiting to be asked.

How can we tell? For one thing, when we compared the contents of earnings calls in 2020 versus 2015 for the 100 largest companies (by market capitalization of the MSCI ACWI Index, as of Oct. 31, 2020), we found that fewer than 20 had mentioned "sustainability," "environmental" or "climate" in their 2015 presentations. By last year, that number had more than doubled. Interestingly, the frequency of these terms in the Q&A portion of the calls was up as well, but much less starkly. It's not the investment analysts who have been driving the conversation — it's your top executives who have proactively brought these topics to investors' attention.

Exhibit 6: Sustainability-Related Keyword Mentions in Earnings Call Transcripts — Global Top 100 Companies



Source: MSCI ESG Research, S&P Market Intelligence

We see this, too, in your outreach to MSCI's Issuer Communications Team to verify your ESG data and ask about your ratings. We gotta admit, we feel the love: Whereas only about a sixth of you used to contact us five years ago, so far this year we have heard from more than half the constituents of the MSCI ACWI Index, covering large- and mid-cap companies in developed and emerging markets (and nearly 70% of constituents of the MSCI World Index, which covered the same universe minus the emerging-market companies). And we're hearing from each of you on average twice as often in 2020 versus 2015, as updates to ESG data now flow continuously.

What's more, there is an evolving cast of your colleagues who are becoming ESG-savvy. Five years ago, it was mostly people in corporate responsibility or sustainability departments who cared to talk to us about your ESG data and ratings. Today, the balance has shifted: A majority of our interactions are with your colleagues in finance, investor relations, legal and governance. Even a few of your C-suite executives are getting in on the action, with a sevenfold increase in their outreach to us during this time.

From where we sit as intermediaries between investors and corporate issuers, it's clear that companies are stepping up their game. And a rising army of corporate advisers, bankers and others is lining up to help you with ESG reporting and sustainability strategy (believe us, we hear from them, too). In fact, we wonder whether institutional investors are entirely prepared to field your volley of questions and proactive engagement right back at them. As they feel the pain of disclosure requirements that is already familiar to you, there just might be an opportunity for some mutual learning amid the next wave of ESG data demands from stakeholders. In the meantime, we're here to help you both. Stay tuned.

Yours faithfully,

MSCI ESG Research

Righting the Scales:
Social Inequalities Test Investors' Creativity

Targeting Systemic Problems Also Calls for Some (Reputational) Risk Tolerance

COVID-19 has put its thumb on the top 1% side of the wealth scale, undoing decades of progress toward greater equality.[44] The toll can be counted in lives lost, economic pain and instability. The conventional investor toolbox, however, has never been well equipped to tackle social inequalities.[45] Investors' go-to lever on social issues has typically been to engage individual companies to change their practices, but that may not be enough when the problem is systemic. In 2021, we see investors venture into new approaches, including financing vehicles like social bonds, to address a challenge that extends beyond the neat boundaries of individual companies. Finding truly innovative solutions will probably require a willingness to risk a few failures along the way.

Our research has shown that the "S" in ESG is different from governance and environmental issues. While companies' governance problems have tended to materialize in negative events (e.g., scandals, resignations, major drawdowns), poor environmental risk management has manifested in a gradual erosion of competitiveness and stock price value. But when they fall short on social issues like workforce management, they can get hit on both sides: with periodic negative events like lawsuits and strikes, plus the gradual erosion of waning productivity and stifled innovation.

At a more systemic level, an issue like social inequality can fester quietly until it erupts. Case in point: Racism has continually degraded the long-term potential for individuals, businesses and whole economies.[46] Under added stressors such as the pandemic, racism has manifested itself into both peaceful and sometimes violent protests. In response, some companies such as Adidas[47] and PepsiCo[48] pledged to fill more positions with racially diverse candidates. Investors, too, have invoked the

[44] "UN report finds COVID-19 is reversing decades of progress on poverty, healthcare and education." United Nations, July 7, 2020.
[45] Giese, G., Nagy. Z., Lee, L. "Which ESG Issues Mattered Most? Defining Event and Erosion Risks." MSCI Blog, June 22, 2020.
[46] Losavio, J. "What Racism Costs Us All." International Monetary Fund, Fall 2020.
[47] Cresswell, J. and K. Draper. "Adidas Pledges to Increase Diversity. Some Employees Want More." *The New York Times*, June 10, 2020.
[48] "The next step in our equality journey." PepsiCo press release, June 18, 2020.

tried-and-true playbook of urging companies to improve workforce disclosures and diversify their leadership ranks.[49]

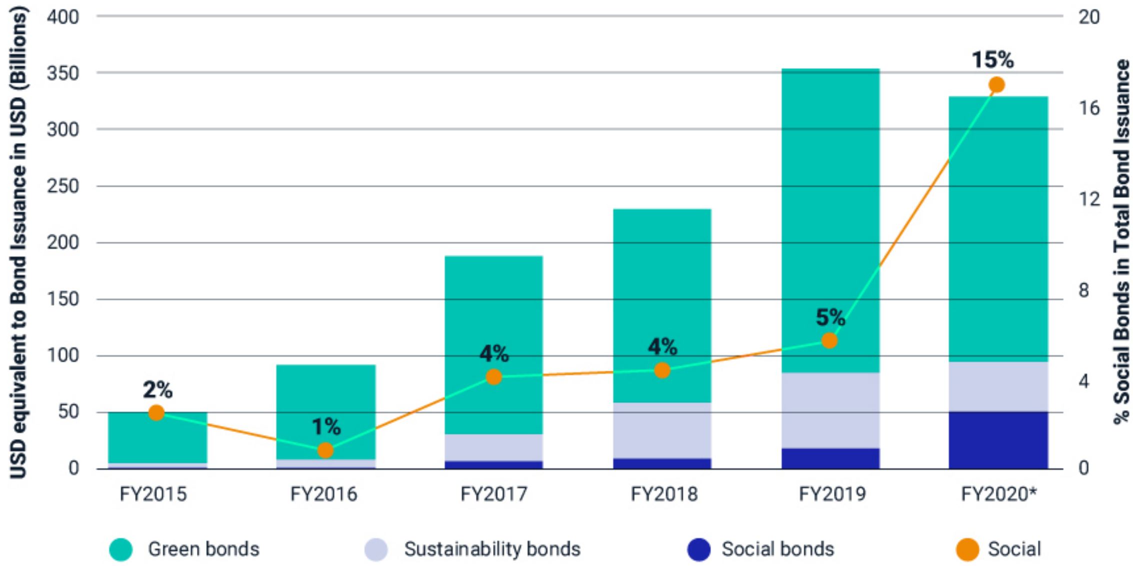
But let's be honest. Company action is important, but there are limits to what individual firms can do to address the underlying root causes of inequality. As long as the root causes remain, the inequalities — and the risks — remain, too. We see investors waking up to that reality and beginning to shake things up.

First, some investors have been turning to the UN's Sustainable Development Goals as a framework for developing their approach to addressing inequalities.[50] Though only SDG 10 explicitly addresses inequalities, many of the other goals target related issues like poverty (SDG 1), hunger (SDG 2), health (SDG 3), education (SDG 4), gender equality (SDG 5) and decent work (SDG 8). Whether the motivation is risk mitigation or a sense of justice, more investors are looking at their own portfolios' net alignment — positive or negative — with each of these SDGs as a first diagnostic of where they may be falling short and where they could have the most impact. Some may decide that a targeted focus on a specific SDG, such as decent work (SDG 8), is a cornerstone of the progress that private capital can feasibly achieve, rather than a more scattershot approach.

Second, there has been an explosion of social bond offerings in the last year, many focused explicitly on mitigating the negative impacts of the pandemic. Early signs reveal investors' growing appetite for these instruments. In October 2020, for example, the European Union issued EUR 17 billion in social bonds — the largest-ever social bond issuance to date — aimed at providing pandemic relief, explicitly tied to SDG 3 (good health and wellbeing) and SDG 8 (decent work and economic growth).[51] The offerings were heavily oversubscribed, with investors placing bids totaling more than EUR 233 billion.[52] Will this encourage other government entities to follow suit?

[49] McGregor, J. "Urged to back up pledges for racial justice, 34 major firms commit to disclose government workforce data." *The Washington Post*, Sept. 29, 2020.
[50] "The SDG Investment Case." Principles for Responsible Investment (PRI) in cooperation with PWC. 2017; "Investing to Achieve the UN Sustainable Development Goals." US SIF Foundation. 2020.
[51] "World's largest social bonds support EU COVID-19 response." BNP Paribas, Oct. 20, 2020
[52] Stubbington, T. "EU enjoys 'outrageous demand' for first Covid-related bond." *Financial Times*, Oct. 20, 2020.

Exhibit 7: Social, Sustainability and Green Bond Issuances 2015-2020 (USD)



Social bonds aim to finance projects or operations with social benefits, as green bonds aim to finance environmentally beneficial projects. Sustainability bonds incorporate both social and environmental elements. Data as of Oct. 15, 2020. Source: Climate Bonds Initiative, MSCI ESG Research.

Corporate issuers have jumped into this market as well. Two social bonds issued this year by Bank of America provide a good illustration of the range of purposes these issuances aim to serve. One was intended to provide financing to the healthcare industry, while the other was aimed at reducing racial inequality through a comprehensive program of lending to underserved groups (see Exhibit 8 below).[53] Pfizer, too, issued a social bond for healthcare purposes, but its use of proceeds explicitly includes vaccine production in low- and middle-income countries and addressing global health emergencies — and helped fund the development of its COVID-19 vaccine.[54]

A key challenge for investors lies in the tension between a desire for certainty that an investment will have the desired social outcome and the need to try new things in the time before clear definitions and assessment criteria can be developed. Investors are not always clear as to what is a legitimate socially beneficial offering and what might actually be "social washing." We see a lot of fear among institutions that they

[53] "Bank of America Issues $1 Billion Corporate Social Bond. First Bond Issued by a U.S. Commercial Bank Entirely Focused on COVID-19 Pandemic." Bank of America, May 19, 2020.

[54] "Pfizer completes $1.25 billion sustainability bond for social and environmental impact." Pfizer, March 27, 2020.

might unwittingly finance the latter. But if that fear yields paralysis, then bold, large-scale solutions will remain untried. As Exhibit 8 shows, some of the most visible social bonds issued in 2020 have been nothing short of revolutionary in the ambitious societal goals they aim to achieve through private financing. Investors may find their (reputational) risk appetite tested as they weigh what they don't know about the details and implementation against the potential benefits.

Exhibit 8: Selected Corporate Social Bonds Issued in 2020

Issuer	Amount	Stated Social Use of Proceeds (summary)	What We Don't Know
Pfizer Sustainability bond **March 2020**	1.25 billion	Provide affordable medicines and vaccines to underserved patients globally, including via "capacity expansion." Reference to funding multi-stakeholder initiatives and health systems. Focus on women, newborns and children, the elderly, and migrants and displaced persons, especially in low- and middle-income countries.	Details on specific capacity expansion planned; which multi stakeholder initiatives will receive funding and what the targeted outcomes are; which health systems would be funded.
Banco Bilbao Vizcaya Argentaria Social bond **June 2020**	1 billion	Hospitals, medical equipment and technologies • Educational institutions at all levels • SME financing and microfinancing; access to banking and financial services in underserved populations; financial literacy • Access to adequate, safe and affordable housing for excluded and/or marginalized populations and/or communities	For-profit or non-profit status of financed education or medical entities; lending rates; Definition of affordable housing and how housing units will be categorized for target populations
Alphabet Sustainability bonds **August 2020**	5.75 billion	• Affordable housing • Advancing economic opportunities and equity for under-represented communities, including the Black+ community. May include business financing, job training, access to education, amplification of Black voices on YouTube. • Support for small businesses and COVID-19 crisis response such as lending and training.	Definition of affordable housing and how housing units will be categorized for target populations; lending rates and measure to prevent predatory lending or unfavorable terms.
Bank of America Sustainability bond **September 2020**	2 billion	Reduce racial inequality by funding business and mortgage financing for Black and Hispanic-Latino borrowers and communities in the U.S. Equity investments in Black and Hispanic-Latino owned or operated businesses and funds that invest in Black and Hispanic-Latino owned businesses.	Lending rates and measures to prevent predatory lending or unfavorable terms.

We selected high profile (as measured by media coverage) corporate social and sustainability bond issuances of at least USD 1 billion that were issued in 2020 to address COVID-19 or racial inequality. Source: MSCI ESG Research, issuer filings

At no time in the recent past has the growing gap between the haves and have-nots been so apparent, or so threatening to social stability and prosperity.[55] While individual companies can each do much more to combat inequality within their spheres of influence, to reduce the systemic risks of large-scale social instability, institutional investors may choose to try something different. In 2021, the lack of standards in a fast-growing area means that a few bumps in the road are inevitable. But the lessons learned by companies and investors willing to forge ahead could lay the foundations for others as they innovate scalable investable solutions.

[55] "UN report finds COVID-19 is reversing decades of progress on poverty, healthcare and education." United Nations, July 7, 2020.

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