The Great Divorce:

IS IT TIME FOR 'E,' 'S' AND 'G'
TO PART WAYS?

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IS IT TIME FOR E, S and G TO PART WAYS?

It's Not Your Parents' Sustainable Investing

This is not another white paper about blockbuster ESG asset flows.

Even though January 2020's ESG inflows surpassed all of 2017 and 2018. Combined.1

It's not about why environmental, social and governance concerns are central to the next decade of investing.

Despite the fact - 4 of the biggest ESG ETFs in the U.S outperformed the S&P before the Covid-19 selloff.²

It isn't even focused on investor appetite for ESG products.

Although ~10% of allocators either have open mandates for or discussions about ESG vehicles.3

But it does dig into why the billions, if not *trillions*, of metric tonnes of carbon dioxide that are expected to exit the system or be offset to meet the Paris Climate Agreement goals could have a considerable impact on financial markets.

The Great Divorce explores why the likeliest outcome for sustainable investing in the next decade may, in fact, be a separation of the three issues that have dominated ESG discussions for the last decade or more. Increasingly, investors are acknowledging that reconciling and blending companies' environmental, social and governance behaviors – while important - are extremely difficult, and in some cases, nearly impossible.

Is a renewable energy company that treats its employees poorly and has a weak governance structure a "stronger ESG" firm than a diversified fossil fuel firm with strong governance metrics and robust social policies? An MIT study revealed that across five of the largest ESG ratings agencies, of the 26 companies that appear in the top quantile (namely, that they are in the 20% highest rated companies for multiple raters) – three derive material revenues from alcohol or tobacco (Diageo, Kingfisher and Imperial Tobacco), two categories long on the exclusionary list for some ESG investors.⁴

As investors focus resources on understanding "ESG" – a growing number acknowledge how challenging it is to blend or reconcile companies' efforts across these three issues. **The Great Divorce** explores why these topics may diverge, potentially requiring specialists for each – and why climate and carbon adjacent issues will rise to the fore. We estimate it's possible 100 billion metric tonnes of carbon will be mitigated or offset, creating a new era of winners and losers. And as more companies increase reporting on these metrics, this growing body of data will allow investors to more accurately isolate certain "ESG" factors that may influence asset valuation and performance.

We have left the era where a company's "values" are fully disconnected from their valuation. Issues like climate are directly impacting business decisions, capital allocation and asset valuation. We believe ESG and sustainability will be the dominant investment trend for the coming decade, as passive investing was for the last. It is our hope that The Great Divorce helps inform the future of sustainable investing and understand what may lie ahead.

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E, S and G? | E, S or G?

First – what are we talking about? The corner of finance that has leveraged factors beyond traditional financial statements and balance sheets has gone by many names: corporate social responsibility (CSR), socially responsible investing (SRI), impact investing, sustainable investing, and environmental, social and governance (ESG) investing.

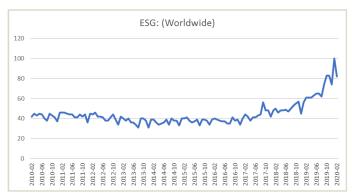
Whatever the popular term, it has endured skepticism over the years, in part because of:

- 1. Perceived conflict between non-financial "values" and asset valuation and financial performance (i.e. does fiduciary duty around performance outweigh all other issues?)
- 2. Fuzziness of prioritization and definitions of the true drivers of sustainability (i.e. which is more important? How "green" a company is, or whether they treat their employees well?)
- 3. Lack of robust, consistent and standardized data on which to evaluate companies for these issues as exists for financial reporting
- 4. Questions around correlation among ESG ratings agencies

In 2019, an MIT working paper addressed some of these issues - documenting the shades of gray among five prominent ESG ratings agencies. The authors found that the correlation among those five agencies' ESG ratings was 0.61 on average.⁵ By comparison, credit ratings from S&P and Moody's are correlated at 0.99.⁶

But the world is changing rapidly – in part facilitated by technological innovation, scientific breakthroughs and changing investor needs and objectives. We have reached the point that if a precise definition of ESG is hard to come by, it is undeniable that interest in this broad umbrella topic has skyrocketed – and more recently, assets have started to follow. It is possible that the issue that lends itself best to improvements in data transparency and reporting will land at the forefront of many investors' minds (and allocations).

If it is the case that you cannot manage what you do not measure - metrics, transparency and reporting will drive the path of growth for many of these issues.



Source: Google Trends

Figure 1. Growth in ESG Interest as Measured by Google Searches

Source: MIT Sloan School of Management

0.61

AVERAGE CORRELATION

AVERAGE CORRELATION AMONG 5 TOP ESG

RATERS

This interest has started to be echoed by flows. In the first month of 2020, ESG related inflows outpaced all that of 2017 and 2018 combined – marking a clear inflection point.⁷ An estimated \$30 trillion globally are earmarked for vehicles that take environmental, social or governance concerns into account.⁸ There is considerable divergence by region. ESG, as many have reported, is further along in Europe than in the U.S. (\$14 trillion devoted to these strategies in Europe and about \$12 trillion in the U.S.) – with both again witnessing more investment than in Asia.⁹

Assets managed with "responsible" strategies have witnessed a particularly steep growth in Canada – growing to more than 50% of professionally managed assets in 2018, up from 36% in 2016. 10

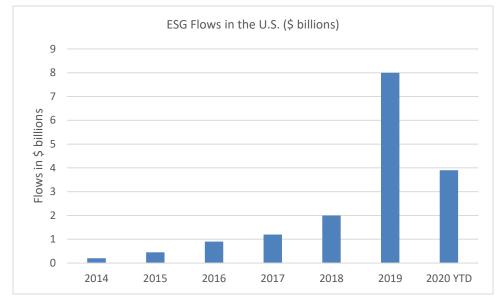


Figure 2. Growth in ESG Inflows in the U.S.

Source: Bloomberg Intelligence

What is driving these flows? Call it "big tent syndrome." Sustainable investing has multiple dimensions and means different things to different asset owners. The Global Sustainability Alliance claims its definitions as codified in the *Global Sustainable Investment Review 2012* have "emerged as a global standard of classification." These include:

- Negative/exclusionary screens
- Positive/best in class screening
- Norms-based screening
- ESG integration
- Sustainability themed investing
- Impact/community investing
- Corporate engagement and shareholder action

With so many different ways to approach this issue, it perhaps isn't all that surprising that so many assets fall into one or more of the above buckets.

But another longstanding concern has been that investing one's "values" (vis-à-vis many of the above classifications) will result in a negative trade off for performance and asset valuation.

At least for 2019 – a year when the S&P returned over 30% and hedge funds had their best year in a decade – that wasn't true. Four of the largest U.S. ESG ETFs *outperformed* the S&P last year. Four underperformed - two of these were emerging markets focused, and one didn't launch until nearly halfway through the year.

SPY Cumulative Returns Jan 2019 - Present 🗨 ■ ESGU Cumulative Returns Jan 2019 - Present ESGE Cumulative Returns Jan 2019 - Present — DSI Cumulative Returns Jan 2019 - Present SUSL Cumulative Returns Jan 2019 - Present -USSG Cumulative Returns Jan 2019 - Present ESGD Cumulative Returns Jan 2019 - Present SUSA Cumulative Returns Jan 2019 - Present ■ESGV Cumulative Returns Jan 2019 - Present 45% 40% 35% 30% 25% 20% 15% 10% 5% 0% 2019 2019 2019 2019 2019 2020 2019 2020 202 201 201 -5% Feb 7 lan Feb -10%

Figure 3. 2019 Performance of Large U.S. ETFs vs. the S&P 500. January 1, 2019 – February 19, 20201

Source: FactSet, Jefferies

This challenges the belief that there is an inherent and unavoidable tradeoff between environmental, social and governance issues and performance.

To recap. At the start of a new decade, with regards to ESG or sustainable investing:

- The interest is there.
- The flows are increasingly there.
- In 2019, the performance was even there.

But where, exactly, is 'there?' And will these flows persist in the face of challenges and skepticism around definitions, measurement and performance?

We will address each of these in turn – and explore why the likeliest outcome is that flows, will in fact, persist, but in a more precise and measurable way than they do now. And we dig into why environmental, climate and carbon strategies are likely to be the biggest winners as each set of issues gets their own specialists.

But first - identifying where the "there" is.

¹ Please note this preceded the COVID-19 sell-off, which began in earnest on February 20th, but the pattern has continued as of March 5.

What Are We Investing In Again?

Why will there have to be a separation of environmental, social and governance investing - aren't they all important?

Yes. But just because something is important doesn't mean it is measurable or that it has a direct impact on company valuation or evaluation. Traditionally, an issue with ESG investing has been in gathering a sufficiently robust data set – something ESG ratings agencies have worked to solve. But there are lingering challenges even for these houses of data.

As noted above, some researchers have called the diversity of ESG data more "noisy" than other forms of financial data. ¹² Correlations across five of the main ESG agencies hover around 0.61, where they are above 0.9 for credit ratings agencies. ¹³ This is, in part, because financial reporting is far more mature and standardized than the diverse dimensions informing ESG investing.

In fact, estimates surveying five of the top ratings agencies reveals *they track more than 500 indicators across 64 categories*. ¹⁴

500!

What is a well-meaning ESG investment analyst to do? This can help to explain why ESG investing has failed to harness consensus from investors around issues of materiality and predicting performance. Although investor preferences can influence asset prices, this is *only in the event a sufficient percentage of the market implements these preferences similarly.* Otherwise, investor "preferences" fail to rise to the level of materiality and impact. It simply is not yet clear that a sufficiently material number of investors view, interpret and measure certain dimensions of ESG in the same way to impact asset pricing...yet.

But will this inform companies' actions and investors' valuations? For the MIT researchers:

For companies, the results highlight that there is substantial disagreement about their ESG performance. The divergence happens not only at the aggregate level but also in relatively specific sub-categories of ESG performance, such as human rights or energy.

This situation might frustrate attempts by companies to improve, because the chance that their efforts are recognized consistently by ESG rating providers is small. In many cases, improving scores with one rating provider is unlikely to result in improved scores at another. Thus, in their current form, ESG ratings do not play a role as important as potentially possible in guiding companies towards improvement. ¹⁵

And this heterogeneity of data and definitions has had a similar impact for active managers. A recent AIMA and KPMG report reveals some of the main concerns around ESG investing in 1Q2020, despite growth in interest.¹⁶

Figure 4. Constraints Cited by Hedge Funds Around ESG Investing

Source: Sustainable Investing Report by AIMA, KPMG, CAIA, Create-Research

It is interesting that at least for now – with less than 10% of respondents citing fiduciary concerns – the question of whether there is an inherent tradeoff between fiduciary concerns and sustainable investing has been largely rendered moot. But lack of quality/consistent sustainability data dominates the forward challenges for funds. Unlike financial metrics and reporting – or even the growth of alternative data – sustainability and ESG data has long suffered from a perceived challenge in sourcing, interpreting and analyzing rigorous data.

But as we subsequently discuss, this is one of the main drivers shifting focus to ESG investing – as demands for more regular reporting and transparency around climate and carbon issues will benefit investors. This growth won't only come from the ESG ratings agencies, though they surely will benefit as well. More publicly available and standardized reporting benefits all ESG stakeholders. Organizations like SASB and the Task Force on Climate-Related Financial Disclosures (TCFD) are commonly cited – but investors themselves are increasingly seeking these types of disclosures from companies directly as well.

It is also interesting that at least for now – with less than 10% of respondents citing fiduciary concerns – the question of whether there is an inherent tradeoff between fiduciary concerns and sustainable investing has been largely rendered moot.

In the interim, and on the other end of the spectrum has been the exploding growth of ESG ETFs. Let's explore what is constituting ESG investing for some of the biggest ETFs in this space.

Looking under the hood, there is slightly more homogeneity of holdings – the vast majority are almost exclusively large market cap holders, with a heavy bent towards technology names. This has a few implications:

- 1. These names are more liquid
- 2. These names are followed by more analysts
- 3. These names are, on average, more large and mega cap than small- to mid-cap.

Figure 5. Selected Top U.S. ESG ETFs²

ETF Name	Ticker	AUM (Billions USD)	Weighted Avg. in Large Mkt. Cap (>12.9B)	Weighted Avg. in Mid Mkt. Cap (>2.7B)	Weighted Avg. in Small Mkt. Cap (>600M)	Weighted Avg. in Micro Mkt. Cap (<600M)	Top Sector (% Exposure)	Holdings Count	Top Holding #1	Top Holding #2	Top Holding #3	Top Holding #4	Top Holding #5
iShares ESG MSCI USA ETF	ESGU	3.525	94.00%	6.00%	0.00%	0.00%	IT (27.09%)	316	AAPL	MSFT	GOOGL	AMZN	FB
iShares ESG MSCI EM ETF	ESGE	2.083	65.00%	32.00%	4.00%	0.00%	Financials (26.51%)	310	BABA	TSM	TCEHY	KRX	PNGAY
iShares MSCI KLD 400 Social ETF	DSI	1.924	93.00%	6.00%	0.00%	0.00%	IT (29.01%)	397	MSFT	GOOGL	FB	V	PG
iShares ESG MSCI USA Leaders ETF	SUSL	1.912	95.00%	5.00%	0.00%	0.00%	IT (24.80%)	305	MSFT	GOOGL	INI	V	PG
Xtrackers MSCI USA ESG Leaders Equity ETF	USSG	1.764	95.00%	5.00%	0.00%	0.00%	IT (29.97%)	305	MSFT	GOOGL	ını	V	PG
iShares ESG MSCI EAFE ETF	ESGD	1.612	81.00%	19.00%	0.00%	0.00%	Financials (18.25%)	454	NSRGY	RHHBY	ВР	ТОТ	TM
iShares MSCI USA ESG Select ETF	SUSA	1.225	94.00%	6.00%	0.00%	0.00%	IT (27.09%)	116	MSFT	AAPL	GOOGL	ECL	ACN
Vanguard ESG U.S. Stock ETF	ESGV	1.044	84.00%	13.00%	3.00%	0.00%	IT (26.70%)	1,561	AAPL	MSFT	GOOGL	AMZN	FB
SPDR S&P 500 ETF Trust	SPY	322.645	97.00%	3.00%	0.00%	0.00%	IT (24.45%)	505	MSFT	AAPL	AMZN	FB	BRK-B

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² As of February 6th, 2020.

Select ESG ETF Sector Breakdown

35.00%
30.00%
25.00%
10.00%
5.00%
0.00%

Light of the section o

Figure 6. Sector Exposure for Top U.S. ESG ETFs

Source: FactSet, Jefferies

If we look at the sector and regional exposure of top ESG ETFs, it becomes apparent that there are also considerable sector divergences once you leave the U.S. For example, about one-third of the iShares ESG MSCI EM ETF is in China, 15% is in Taiwan and another ~12% is in South Korea. Its financials exposure is also about twice that of the S&P. So looking at non-U.S. ETFs implies not just a regional rotation, but a sector one as well.

Energy and real estate have found themselves in these ETFs less frequently – but could that be changing?

We have explored the interest and challenges. We have looked more closely at where assets have flowed.

What could lie ahead?

Where *is* there consensus (current...or growing) that could lead to opportunities for those interested in the space, but waiting for more clarity and standardization?

Two words: carbon and climate.

Where Consensus Matters: The Future of Carbon and Climate Reporting

To recap: if there is/are:

- Interest in ESG as a topic
- Flows to ESG products
- Outperformance by some ESG vehicles, but
- Lingering questions about quality and consistency of data

Are there other trends that are driving greater transparency and standardization that could assist in converging reporting standards – as has happened with financial reporting over the past century?

Absolutely.

Climate risk has exploded to the top of policy makers' and company C-suite executives' focus lists. Why? Perhaps they increasingly recognize, as Duke and National Bureau of Economic Research (NBER) researchers have reported: "In the U.S. and consistently in global capital markets, a persistent rise in temperature leads to an economically and statistically significant decline in equity valuations." ¹⁷

"A persistent rise in temperature leads to an economically and statistically significant decline in equity valuations." 18

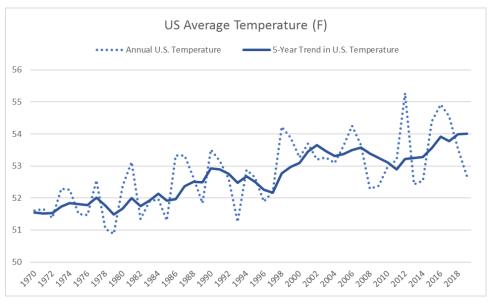


Figure 7. Five year moving average of U.S. temperature and annual temperature variations¹⁹

Source: NOAA National Centers for Environmental Information

At the broadest level, debate around climate change has been largely settled as to: a) whether human behavior impacts the Earth's climate, b) whether this impact is negative, and c) options for mitigating and ameliorating these negative outcomes.

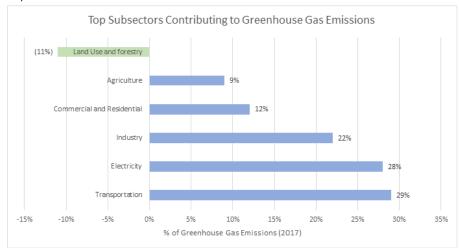
As such, different stakeholders are moving to act – with some unexpected companies planting a stake in the ground as to their carbon mitigation plans.

Who Has Done What to Date & What Are We *Really* Talking About?

To understand what may lie ahead for companies and investors alike – it isn't necessary to assume we will achieve the Paris Climate Agreement's stated goal of -2°C by 2050. We only need to look at what companies are doing and saying *themselves* to see a trend.

- 1. What are companies saying is at stake?
 - AT&T has reportedly spent \$874 million on required repairs in the wake of natural disasters²⁰
 - Swiss Re Institute notes that 2018 "should have been an unremarkable year
 for natural catastrophes," but that \$76 billion in insurance payouts,
 constituting the fourth highest year ever, were triggered by natural
 catastrophes prompting \$155 billion in economic losses²¹
 - With a reported 44.4 million metric tonnes annual carbon footprint, Amazon
 has already invested \$440 million in Rivian to accelerate the production of
 electric vehicles, to help achieve their Shipment Zero goal. Amazon plans on
 utilizing 100,000 new electric vehicles, bikes and rickshaws across its
 delivery footprint
 - And even *Dealbook* from the *New York Times* got in on the trend: "Delta Plans to Go Carbon Neutral. Yes, You Read that Right."
 Delta's annual carbon emissions? Around 40 million metric tonnes annually.

A recent Harvard Business Review article outlined "climate policies companies should fight for" – from creating incentives for farmers to mobilize capital and R&D to innovate for cleaner energy sources across operating footprints.²³ Companies are taking on these challenges *themselves* – without necessarily waiting for restrictions to be imposed on them.



Source: U.S. EPA

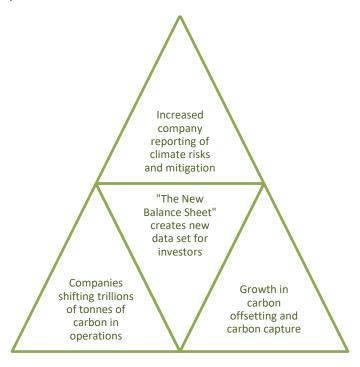
IS ALL CARBON MITIGATION CREATED EQUAL? A QUICK PRIMER

For those not up on their climate buzzwords: What are a company's climate mitigation options?

- 1. DIY Climate Mitigation.
 The "DIY" approach while perhaps glib sounding are the efforts a company pursues to decrease carbon emissions across its own operating footprint. This can take many forms some examples are swapping to more fuelefficient planes or vehicles, shifting power sources to renewable energy or decreasing actions like global travel to cut emissions.
- 2. External Mitigation Most commonly – carbon offsetting via third party efforts. In most cases, it is either insufficient or impossible to fully neutralize one's carbon footprint without offsetting. Carbon offsetting encompasses a broad array of solutions, from planting trees to preventing deforestation to providing cleaner cookstoves to families in developing countries.
- Hybrid Approach.
 Inclusive of both above.
 Most common effort and likely the way forward for most companies.

These broad based and far reaching actions are one of main drivers that will land the "E" of ESG ahead of other issues. Companies are doing something about their carbon footprints and they're reporting on it publicly.

Figure 8. Drivers of importance in environmental and climate issues for investors



As more companies report their carbon risks and mitigation efforts, there will likely be a standardization of these metrics, creating somewhat of a "new balance sheet." As it becomes easier for investors to compare risks across companies – they can increasingly isolate what factors are impacting asset valuations or a company's performance.

There are **already 930 organizations**, **representing a market cap of over \$11 trillion** that support the Task Force on Climate Related Financial Disclosures.

We expect that as: 1) a growing number of companies *report* their carbon risk and mitigation efforts, and 2) actually *engage* in these mitigation efforts – trillions of tonnes of carbon will shift, in some cases being minimized, in others getting completely eliminated, and in yet others (like reforestation) – not coming into existence in the first place.

It is precisely these seismic shifts in carbon footprints that will create a new decade of winners and losers and opportunities for investors and allocators alike.

A quick survey of which industries and sectors have the most exposure to expansive carbon footprints also establishes that the majority of these sectors have the most levers to mitigate and offset their footprint. This, of course, does not mean the world's largest carbon emitters will be carbon neutral (or carbon negative) overnight. But many investors are increasingly focusing on more carbon heavy industries to understand where the bulk of mitigation efforts will take place.

Delta Airlines and Amazon have similar size carbon footprints – despite their entirely different business models. The levers that each can pull are diverse. Some are overlapping – like the transition to more fuel efficient vehicles and planes, but others diverge, like how Amazon Web Services cools its servers. And it's worth noting that by transitioning to the cloud – many companies have already shifted the cooling-related carbon part of their carbon footprint to another firm (leaving *that* firm to wrestle with minimizing this corner of their carbon footprint).

Figure 9. Sector carbon risks and mitigation levers

	Utilities	Materials	Energy	Industrials	Consumer Staples	Consumer Discretionary	Communications	IT	Financials	НС
Carbon Intensive										
Industries										
(Red is most intensive) ²⁴										
How many levers does										
each industry have at its										
disposal to mitigate its										
carbon footprint?										
(Red is fewer levers)										
How easily can the										
industry pay to offset its										
emissions?										

Source: MSCI, Jefferies

There are dozens of different ways that companies can address their carbon footprints – from buying third party offsets to limiting business travel to shifting to renewable energy to powering offices or distribution centers.

We believe that as more companies begin to report on and measure these efforts across billions of tonnes of carbon, investors will increasingly rely on new metrics to help understand the climate and carbon related risks posed to various firms.

How Jefferies Can Help

Jefferies – like many global franchises – is putting considerable resources to understand the next decade of ESG and sustainable investing.

Our **Global Capital Intelligence team** is in constant dialogue with more than 1,000 leading alternatives allocators globally, to understand precisely what matters to CIOs and investment committees with regards to E, S and G investing. We are also deeply engaged with a number of new and emerging managers who have put sustainability and ESG concerns squarely at the center of their investment strategy.

Our **Equities** franchise – across Research and Trading – are also deeply invested in understanding the implications for companies and on trading execution, given some of the considerable asset flows to this space in recent quarters. Our **Fixed Income** division has done research on green bonds and understanding what could lie ahead in the fixed income space as investors and allocators more earnestly lean into sustainable or ESG products.

The rise of passive management dominated the last decade of financial services "innovation." We believe a number of factors – from interest and engagement to a growing data set of metrics that address some of these issues – will cause sustainable investing to help define the coming decade. Among the diverse issues that have come to be seen as "ESG" investing, we feel that climate and carbon adjacent issues will be at the fore for companies, investors and allocators alike.

We look forward to continuing to educate and engage as these issues evolve and welcome any feedback you may have.

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¹ Bloomberg Intelligence

² FactSet

³ Jefferies Prime Services

⁴ "Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

⁵ Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

⁶ "Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

⁷ Bloomberg Intelligence

⁸ Global Sustainable Investment Alliance

⁹ Global Sustainable Investment Alliance

¹⁰ Global Sustainable Investment Alliance

¹¹ Global Sustainable Investment Alliance. http://www.gsi-alliance.org/wp-content/uploads/2019/06/GSIR_Review2018F.pdf

¹² Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

¹³ Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

¹⁴ "Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

¹⁵ "Aggregate Confusion: The Divergence of ESG Ratings." MIT Sloan Research Paper No. 5822-19. Florian Berg, Julian Kolbel and Roberto Rigobon. August 17, 2019

¹⁶ KPMG, Create, AIMA, CAIA. *Sustainable Investing: Fast-forwarding its Evolution*. https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/02/sustainable-investing.pdf

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¹⁸ Climate Change Risk Ravi Bansal, Dana Kiku and Marcelo Ochoa* October 25, 2019. https://faculty.fuqua.duke.edu/~rampini/BansalKikuOchoa2019.pdf

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²³ Andrew Winston, "Leading a New Era of Climate Action." Harvard Business Review. January 2020. https://hbr.org/cover-story/2020/01/leading-a-new-era-of-climate-action

²⁴ MSCI