Environmental, Social & Governance (ESG)

The ABCs of ESG

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An increasingly important signal for investors

Our Environmental Social and Governance (ESG) work has expanded since our initial report in 2016, but our conclusion is intact: ESG is too critical to ignore. Asset potential is substantial: we conservatively estimate that flows into ESG-type funds over the next few decades could be roughly equivalent to the size of the S&P 500 today. Corporate America is waking up to ESG as it pertains to sustainable growth, and the role of ESG in investing is fast becoming institutionalized via regulators, indices, exchanges and consultants. But for investors, the real question is: does ESG drive financial results?

Good companies can make good stocks

It turns out that you can "do good" *and* do well: during the full period we analyzed (2005 to 2017), S&P 500 stocks with high Environmental scores based on the three datasets we analyzed would have outperformed their low ranked counterparts by as much as 3ppt per year. An investor who only bought stocks with above-average Thomson Reuters' Environmental and Social scores five years ahead of a company's bankruptcy would have avoided 90+% of the bankruptcies that occurred in the S&P 500 since 2005. And ESG is a better signal of earnings risk than any other metric we have found.

Best practices: (1.) ESG + fundamental investing = alpha

Amid a rise in ESG investing, we have seen dramatic re-rating in top-ranked ESG stocks (similar to the "Low Vol" phenomenon). To avoid overpaying for perceived quality, we recommend using ESG in conjunction with fundamental attributes like valuation, growth and quality. In this report, we analysed results from combining ESG with other fundamental factors, and found that adding ESG would have consistently outperformed fundamental strategies with less risk. For example, dividend investors who had added ESG to their process would have increased their average returns by ~200bps per annum.

(2.) The devil is in the details

Like any dataset, ESG metrics have issues. For example, company-disclosed attributes may have a positive skew, so less biased sources are advisable (e.g., glassdoor.com versus self-disclosed employee survey data). More opaque measures (e.g., "Board Structure") require a leap of faith, while more transparent metrics ("Same/Split Chairman CEO") are unequivocal; our work suggests that signalling power improves with transparency. And some attributes work perversely: e.g., reliance on part-time labor is considered a negative, but actually drives positive financial results in some sectors.

(3.) One size does not fit all: sectors matter

A sector-specific framework is critical, in our view. Based on our analysis, Environmental Innovation (a Thomson Reuters score) was a strong signal of return in Materials and Energy (3-year alpha of ~30ppt and ~20ppt, respectively), but generated no alpha in Consumer sectors. Ethics-related governance (e.g., MSCI's Business Ethics & Fraud, Sustainalytics' Bribery & Corruption Policy) were among the most alpha-generative factors within Financials and Health Care, but not within Discretionary. See our sector cheat sheet, p. 10.

Case studies: Financial Crisis, Media, Software & Retailers

Did you know that governance ranks deteriorated for Financials ahead of the crisis, and more so for companies that did not survive? Our Media team's ESG deep dive reveals that ESG would have been a good way to mitigate risk in a sector plagued by controversy. Our Software team has used glassdoor.com for years as a talent retention signal. And our Retail team's board gender diversity work helped target companies whose leadership decisions were aligned with their diverse, and largely female consumer base.

This is a redacted version of our ESG primer. BofA Merrill Lynch clients can access the full report through their BofA Merrill Lynch representative

FAQ's about ESG

Our work on Environmental, Social and Governance (ESG) factors has expanded since our initial report in 2016, but our conclusion remains the same: ESG is far too critical to ignore. We explore the efficacy of ESG signals here.

Our conversations with clients reveal a split between believers and skeptics. We can relate to the skeptics, as we too were unconvinced before we embarked on our research into these attributes. We here tackle the frequently asked questions we receive on ESG that span the basics (what is ESG, and why should I care?) as well as the pushback we hear: How do you know ESG isn't just another Wall Street fad? Isn't ESG correlated with other quality measures, so why bother? Aren't companies responsible to shareholders, not to the earth and humankind? How can you do good *and* do well (i.e., outperform) at the same time? It turns out you can, but the devil is in the data details, which we explore in the subsequent sections. But first, let's tackle the basics.

Q: What is ESG?

A: ESG stands for Environmental, Social and Governance (ESG) factors.

Exhibit 1: Examples of Environmental, Social & Governance (ESG) factors

Environmental factors	Social factors	Governance factors
Natural resource use	Workforce health & safety	Board independence
Carbon emissions	Diversity/opportunity policies	Board diversity
Energy efficiency	Employee training	Shareholder rights
Pollution/waste	Human rights	Management compensation policy
Sustainability initiatives	Privacy/data security	Business ethics
	Community programs	

Source: BofA Merrill Lynch US Equity & US Quant Strategy

Q: What is ESG investing?

A: ESG investing captures the notion of using non-financial factors that incorporate the environmental impact (E), social impact (S) and governance attributes (G) of a corporation. Another related vein of investing is Thematic investing, which delves into areas of investment that impact the global economy/investment landscape and are often environmental or social in nature (climate change, education, obesity, etc.) "Green" investing is another related category, where the focus is explicitly on companies that better the environment by employing/supporting "green" initiatives like clean energy, resource conservation, etc. In this report, we focus on the first aspect of ESG investing. The data we use help us to evaluate whether companies run themselves responsibly, and consider environmental impact (such as emissions or resource use), social impact (such as employee training or diversity policies), and governance attributes (such as board structure or shareholder rights).

Our focus here is not to be confused with exclusionary ESG investing, which dates back to the mid-70s. Early attempts, sometimes branded as Socially Responsible Investing (SRI), primarily used negative screening—excluding "sin" stocks/industries from portfolios. The unintended consequence was a loss of diversification and fund concentration, which inhibited outperformance. We here explore an approach which can be applied across sectors, and can be incorporated via both positive and/or negative screening; that is, by seeking out companies which rank well on ESG metrics, and avoiding companies which rank poorly on these metrics.

Q: Why should I care about ESG?

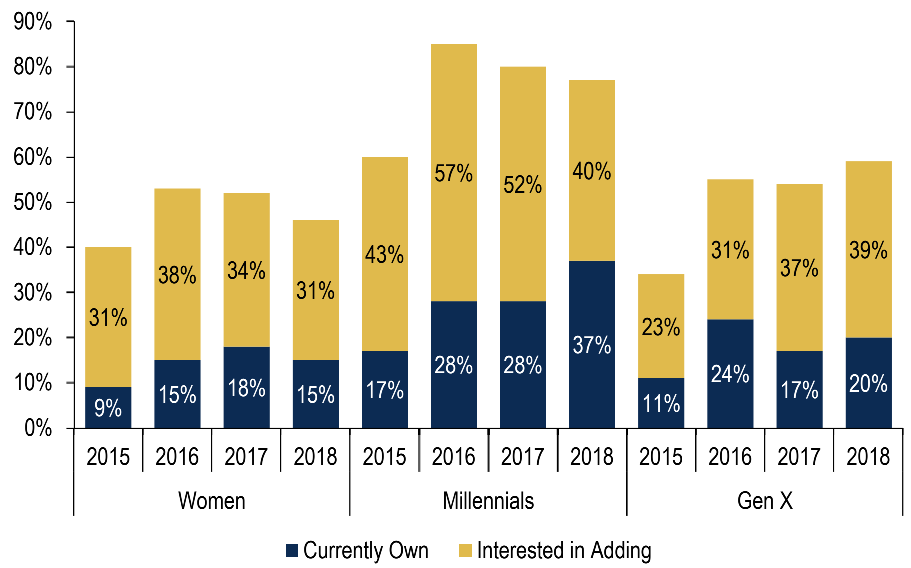
A: Two reasons: (1) a wall of money is poised to flow into ESG strategies, and (2) ESG seems to work.

We conservatively estimate that inflows into ESG type strategies over the next few decades could be roughly equivalent to the size of the S&P 500 today.

Trends in the US investment landscape indicate that trillions of dollars could be allocated to ESG-oriented equity investments, and thus to stocks that are attractive on ESG metrics.

Assuming an increase in wealth in the US of around $4tn per decade (in line with historical trends), as well as the transfer of wealth from baby boomers to millennials beginning in the late 2020s of $30-40 trillion of financial and non-financial assets, inflows could become parabolic. According to the 2018 U.S. Trust Wealth and Worth Survey, 77% of Millennials either own or are interested in adding exposure to "impact investing" vehicles, which — assuming that a conservative 30-40% of their wealth is invested in equity ESG funds — would equate to $15 to $20tn of asset inflows over the next two to three decades.

Chart 1: Momentum building for Impact Investing in bellweather demographic segments



Source: 2018 U.S. Trust Wealth and Worth Survey

In addition to potential inflows, ESG investing has worked.

What if we told that you we could help you to identify the following?

- Stocks less likely to go bankrupt over the next five years
- Stocks less likely to have large price declines
- Stocks less likely to have earnings declines or increased EPS volatility
- Stocks that were likely to *become* high quality stocks
- Stocks that were likely to see extreme inflows over the next few decades
- Stocks with three-year returns significantly better than their peers

We think you would care.

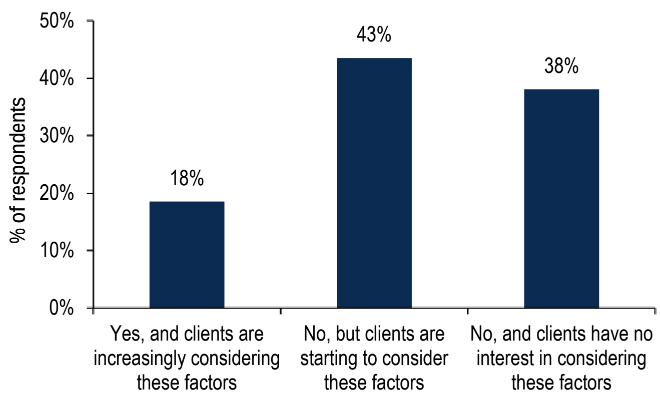
Q: Is ESG just another Wall Street fad?

A: We see sticking power. Similar to the shift in consumer preferences toward healthy, organic, pesticide-free products, or the shift from traditional commodities toward alternate energy sources, the mindset of the average American is changing and is unlikely to revert back. And within the investment landscape, individual investors are increasingly adopting ESG considerations into their portfolios.

The three broad groups of clients that care about ESG are high-net worth investors (those who control the largest share of assets), millennial investors (the next generation of investing) and women (where 44% of women in US and 74% of women globally make decisions over financial assets in their households[1].)

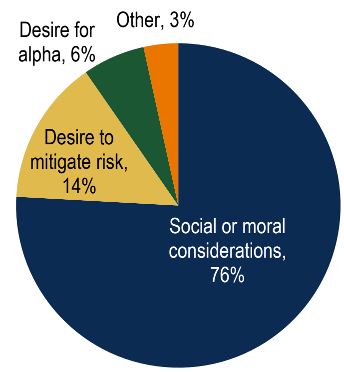
Results from the Merrill Lynch 2018 Global Wealth & Investment Management Survey revealed that nearly 20% of financial advisors use ESG factors and another 43% are considering their use, suggesting adoption is in its early stages. Drivers for use were led by social/moral considerations, but closely followed by risk reduction and alpha generation.

Chart 2: Are Environmental, Social & Governance (ESG) factors a consideration in your average client's investment process?



Source: Merrill Lynch Global Wealth Management Enterprise Market Research & Insights team, BofAML US Equity & US Quant Strategy

Chart 3: What is the primary driver of considering ESG in your/your clients' investment decisions?



Note: most popular "Other" response was "request of the client."
Source: Merrill Lynch Global Wealth Management Enterprise Market Research & Insights team, BofAML US Equity & US Quant Strategy

Q: Is ESG getting to be a bubble?

A: One argument we hear against buying wholesale into the ESG doctrine is the fact that stocks with attractive characteristics on ESG metrics have re-rated significantly over the last market cycle.

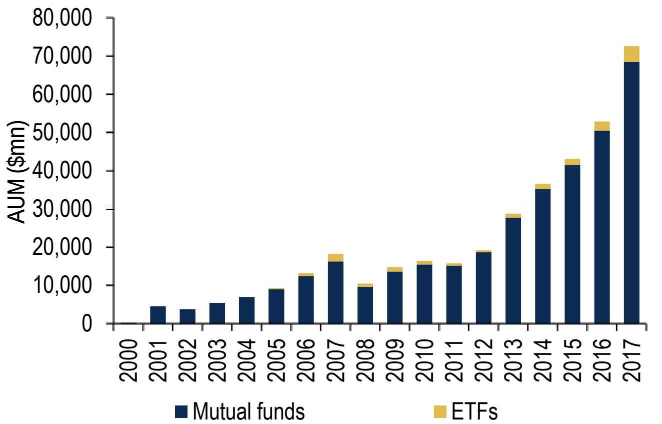
Today, companies with attractive ESG ranks trade just in line with their poorly ranked counterparts, where they historically traded at almost a 20% discount to their weaker ranked counterparts, contrary to the theory that higher quality investments should trade at a premium to lower quality counterparts.

Admittedly, extreme asset inflows can create bubbles, and flows into ESG types of vehicles have been robust in recent years (Chart 4 and Chart 5 below). For investors concerned that they are overpaying for ESG attributes, we recommend combining ESG signals with valuation.

[1] Andrea Turner Moffitt and Sylvia Ann Hewlett, *Harness the Power of the Purse: Winning Women Investors* (Los Angeles: Rare Bird Books, 2015).

Chart 4: Assets tied to ESG strategies are growing exponentially

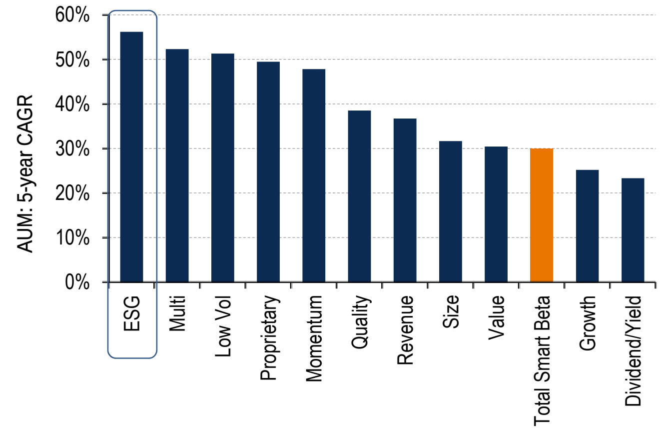
Total assets in US-domiciled equity funds with ESG strategies ($mn), 2000-2017



Source: Strategic Insight SimFund, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 5: ESG: the fastest-growing smart beta strategy

5-year CAGR in AUM growth (2012-2017) of smart beta ETF categories in Bloomberg



Source: Bloomberg Intelligence, BofA Merrill Lynch US Equity & US Quant Strategy

To avoid overpaying for quality, investors may be best served combining ESG with a valuation overlay. Based on our analysis, investors would have increased their alpha by 100bps per annum if they had combined low PE with ESG, using any of the three ESG ratings data vendors we analyzed.

Q: ESG matters for less transparent emerging economies but do we need it for US stocks?

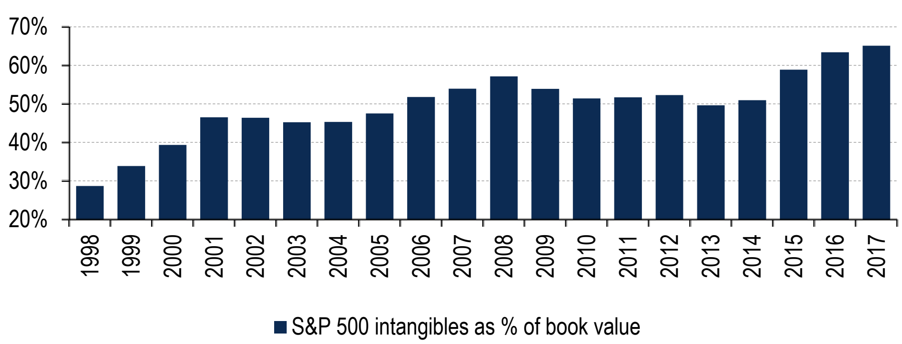
A: In our view, analyzing stocks using non-fundamental attributes might be even more important for US stocks than ever, as S&P 500 asset transparency is at an all-time low, based on the intangible assets-to-book value ratio going back to 1998.

Asset transparency in the US is at a 20-year low: S&P 500 intangible assets have gone from less than 30% of book value in 1998 to 65% in 2017 (Chart 6).

Growth in intangible assets – which include things like brand equity and intellectual property – suggest that a more diverse evaluative framework is paramount.

Chart 6: Asset opacity in the US is at an all-time high

S&P 500 intangible assets as a percent of book value, 1998-2017



Source: FactSet, BofA Merrill Lynch US Equity & US Quant Strategy

Q: ESG is big in Europe, where does it stand in the US?

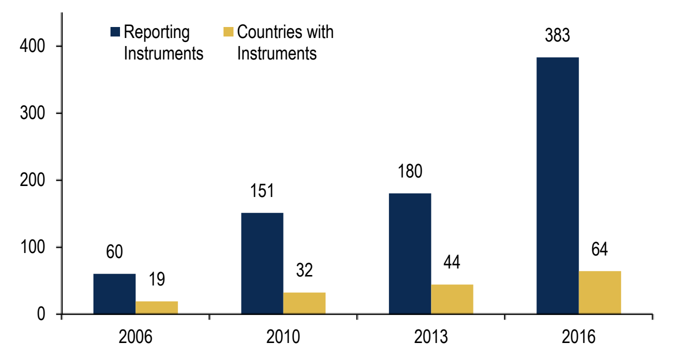
A: US ESG asset growth is high and likely to continue, but AUM trails other developed regions, partly because of mandates like the non-financial reporting directive, stock exchange requirements, and other institutional factors.

The non-financial reporting directive, one of the most binding to date, should result in approximately 6,000 companies in EU member states publishing ESG disclosures from 2017 onwards.

The number of sustainability reporting instruments[2] globally has doubled between 2013 and 2016, and the number of countries with these instruments has increased by 50% (Chart 7). Sustainability reporting has improved, but most dramatically in Asia Pacific countries (Chart 8).

Chart 7: The number of ESG reporting guidelines doubled in three years

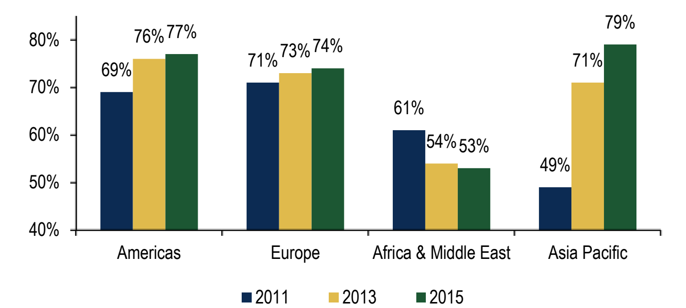
Number of sustainability reporting instruments around the world (2006-2016)



Source: Carrots and Sticks. (2016) KPMG, GRI, UNEP and Centre for Corporate Governance in Africa.

Chart 8: Sustainability reporting enhancement has been most pronounced in Asia Pacific countries

Rate of sustainability reporting among the 100 largest companies by country (2011-2015)

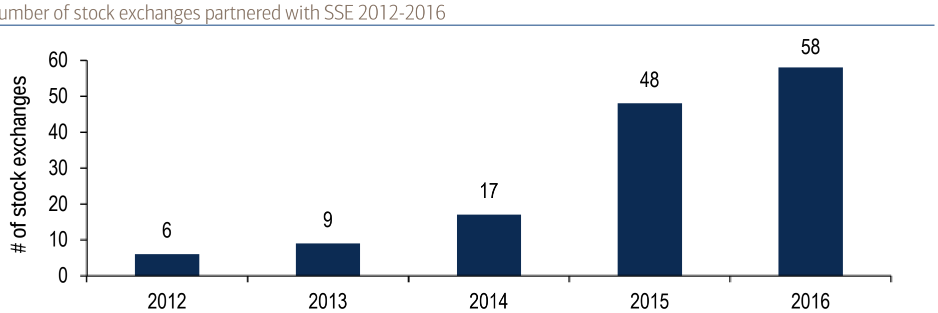


Source: Carrots and Sticks. (2016) KPMG, GRI, UNEP and Centre for Corporate Governance in Africa.

The UN's Sustainable Stock Exchange (SSE) Initiative's global partners include 15 stock exchanges that provide written guidance on ESG reporting and 12 that require companies to make ESG disclosures. Not one is in the United States.

Chart 9: Increasingly more exchanges are partnering with the SSE

Number of stock exchanges partnered with SSE 2012-2016



Source: SSE Report on Progress (2016).
http://www.sseinitiative.org/wp-content/uploads/2012/03/SSE-Report-on-Progress-2016.pdf

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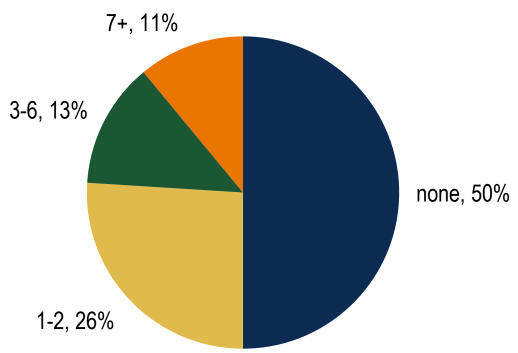
[2] Carrots and Sticks: Global trends in sustainability reporting regulation and policy. (2016) KPMG, GRI, UNEP and The Centre for Corporate Governance in Africa. https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/carrots-and-sticks-may-2016.pdf. Defined in the report as regulation and policy, self-regulation, guidance, guidelines and standards for sustainability reporting, and standards on sustainability assurance.

Q: How are US companies thinking about ESG?

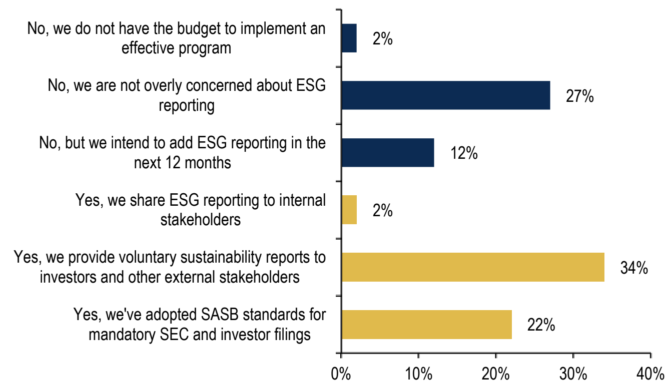
We found a surprising disconnect between US corporations' and investors' views of ESG investing. Of the corporates included in BofAML's 2018 Investor Relations conference survey, encouragingly, 58% are now incorporating ESG reporting into their corporate practices (vs. 48% in last year's survey). But 50% of respondents indicated that they have no dedicated resources to ESG initiatives, an increase from 42% last year. And corporates grossly underestimate investor interest in ESG.

Chart 10: How many employees are dedicated to your ESG initiatives?



Source: Audience polling conducted during the BofA Merrill Lynch IR Insights Conference on March 22, 2018. A total of 110 respondents

Chart 11: Do you currently incorporate ESG reporting into your corporate practices?

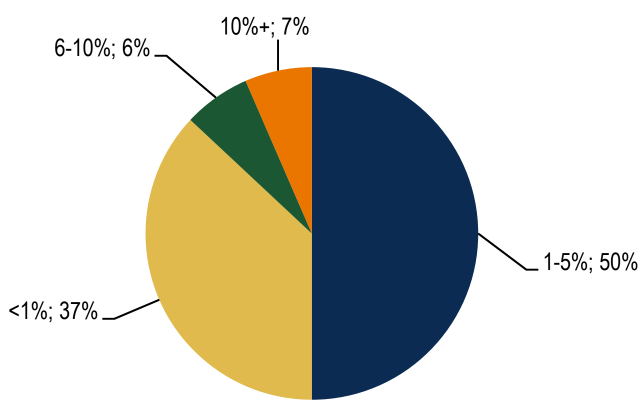


Source: Audience polling conducted during the BofA Merrill Lynch IR Insights Conference on March 22, 2018. A total of 110 respondents

According to our surveys, US companies estimate that **less than 5%** of their shares outstanding are managed by ESG-aware investors (Chart 12).

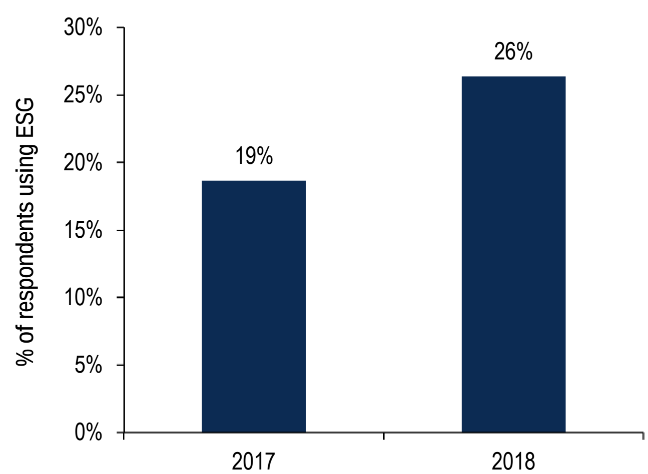
But **more than 25%** of institutional investors in our 2018 Institutional Factor Survey claim to formally use ESG in their security selection process, and 18% of individual investors (based on our 2018 GWIM survey).

Chart 12: What percent of your market cap is held by ESG-focused investors?



Source: Audience polling conducted during the BofA Merrill Lynch IR Insights Conference on March 22, 2018. A total of 110 respondents

Chart 13: % of respondents using ESG in their investment process: 2018 vs. 2017



Source: BofA Merrill Lynch US Equity & US Quant Strategy
Based on the 2018 Institutional Factor Survey

A 2016 PwC report[3] revealed that 100% of corporates polled felt confident in the quality of ESG information reported, but just 29% of investors polled were confident in the quality of ESG information they were receiving. Similarly, 60% of corporates but just 8% of investors polled thought that existing ESG disclosures allow for comparison across companies/peers.

Q: What will induce US companies to care more about ESG?

A: First and foremost, shareholders will drive corporations to care about ESG, and already doing so via activist campaigns. Regulators, index providers, exchanges and other institutional forces are driving corporations to care as well.

Shareholders care about ESG

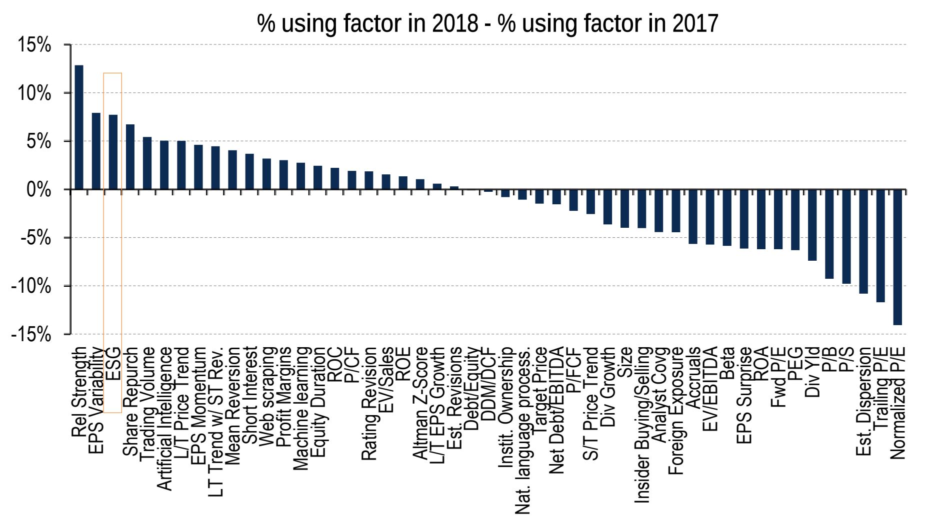
66% of investors are worried about sustainability disclosures

In April 2016, the SEC issued a "Concept Release" soliciting investor feedback on financial disclosure requirements. According to SASB[4], of the feedback the SEC received, 66% pertained to sustainability disclosures, even though only 11 of the 341 pages of the Concept Release discussed disclosure. 85% of sustainability-related letters called for improved disclosure in SEC filings.

Additionally, in our 2018 survey of institutional investors, ESG factors saw the third-biggest increase in usage. Whereas last year, ESG was more popular with long-term investors, this year, use broadened out to clients with shorter time horizons this year.

> ESG saw a surge in popularity among our institutional clients over the past year.

Chart 14: Change in factor popularity: 2018 vs. 2017



Source: BofA Merrill Lynch US Equity & US Quant Strategy
Based on the 2018 Institutional Factor Survey

For those using ESG factors, our 2018 Institutional Factor Survey showed that more are using exclusion (screening out "sin" stocks/sectors or stocks with poor ESG scores) than inclusion (selecting stocks based on attractive ESG ranks), though both increased relative

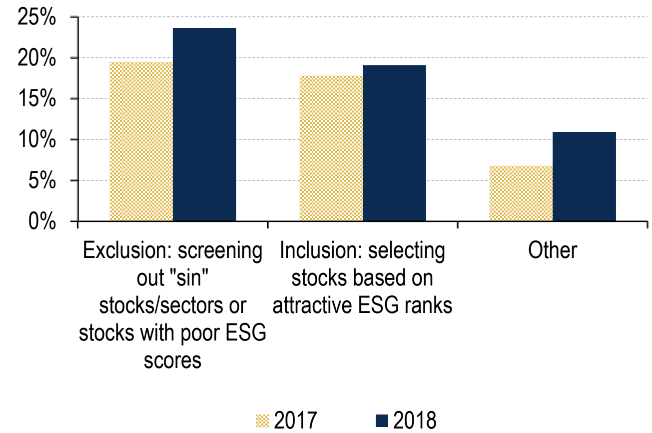
[3] PwC, *ESG Pulse 2016*, October 2016. https://www.pwc.com/us/en/governance-insights-center/publications/esg-environmental-social-governance-reporting.html. Findings were based on a Spring 2016 survey of 28 institutional investors, pension funds and companies.

[4] Investors Ask SEC for Better sustainability Disclosure. SASB. https://www.sasb.org/investors-sec-sustainability-disclosure/

to a year ago (24% vs. 19% for exclusion and 19% vs. 18% for inclusion). "Other" uses of ESG included the general evaluation/monitoring of ESG scores (but not explicitly used in stock selection) or use of ESG as a risk control.

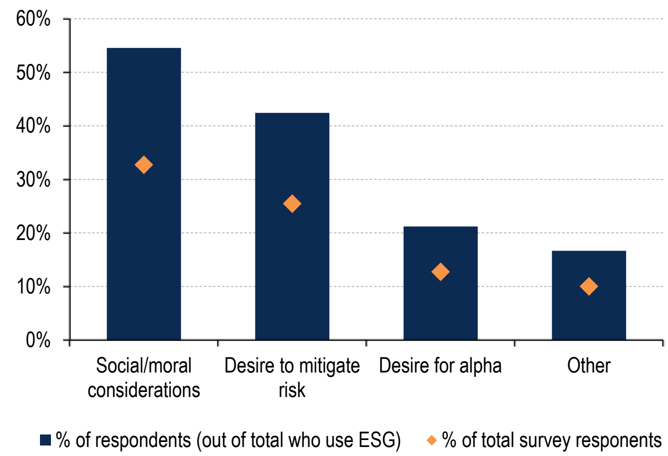
Social/moral considerations were the top driver, followed by desire to mitigate risk and lastly desire for alpha for institutional respondents, similar results to in our 2018 survey of Merrill Lynch Financial Advisors (more details below). But investors may be able to have it all: according to our analysis, ESG factors have been strong signals of future volatility, earnings risk, price declines and bankruptcies, and have also been a signal of future alpha across some sectors.

Chart 15: How do you use ESG factors in your investor process? (Multiple answers allowed), 2018 vs. 2017 (% of total survey respondents)



Source: BofA Merrill Lynch US Equity & US Quant Strategy
Based on the 2018 Institutional Factor Survey

Chart 16: If you use ESG, what is the primary driver? (Multiple answers allowed), 2018 (% of respondents answering question who use ESG)



Note: most popular "Other" response was client desire/request
Source: BofA Merrill Lynch US Equity & US Quant Strategy
Based on the 2018 Institutional Factor Survey

Regulators care about ESG

Incorporated in 2011, the Sustainability Accounting Standards Board, or SASB, is a US-based organization that develops and disseminates sustainability accounting standards. What sets SASB apart from other ESG-oriented bodies is its focus on encouraging stock exchanges to require ESG integration into company filings. SASB standards are designed to be compatible with SEC filings, including 10-K and 20-F, and to serve as a metric that investors can easily use to gauge the implications of sustainability issues on the companies' performance. Through their Materiality Map,[5] SASB identifies and ranks 30 sustainability issues that can have material impacts on the performance of companies in each industry. Provided that regulations require listed companies to make sustainability disclosures, SASB standards can help guide them to report on sustainability issues that are most relevant to what the investors are seeking in their quarterly and annual reports.

Index providers care about ESG

In 2017, FTSE Russell began to exclude zero voting rights stocks from their indices. The index provider raised the bar in 2018 to exclude stocks with less than 5% of voting rights in the hands of public shareholders (float shares), and existing constituents would be given a five-year grandfathering period to comply. S&P has similarly announced that stocks with multiple share classes will no longer be eligible for inclusion in their indices, while current constituents are permanently grandfathered in. This serves as a reminder to corporates and investors that poor governance, among other ESG factors, can have real investment consequences. In our Russell Rebalance report, we identified a list of companies that did not meet the voting rights requirement and have subsequently been excluded from their indices in the 2018 reconstitution.

[5] SASB Materiality Map. SASB. https://www.sasb.org/materiality/sasb-materiality-map/

Q: How do I best incorporate ESG into my investment process?

A: In our view, a sector-specific framework is critical. The factors that have been historically been the most effective signals of future return on equity and earnings risk for companies within each sector are highlighted below, where we assessed both the magnitude of difference in future fundamental attributes between above- and below-median companies, as well as the consistency of the signal in yielding stronger and weaker results over time.

Table 1: ESG sector implementation cheat sheet

Sector	Return on Equity	Earnings Risk
Consumer Discretionary	Governance	Social
Consumer Staples	Social	Environmental, Social
Energy	Environmental, Social	Environmental
Financials	Social	Governance
Health Care	Governance	Social, Governance
Industrials	Environmental, Social	Environmental, Social
Information Technology	Governance	Social, Governance
Materials	Environmental	Environmental
Real Estate	Environmental, Social	Environmental
Utilities	Environmental, Governance	Environmental, Social

Source: BofA Merrill Lynch US Equity & US Quant Strategy

Disclosures

Important Disclosures

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofA Merrill Lynch Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

***INCOME RATINGS*, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend.** *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Merrill Lynch report referencing the stock.

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