

The Devil is in the Details: The Divergence in ESG Data and Implications for Sustainable Investing

Michael J. LaBella, CFA, Lily Sullivan, Josh Russell, PhD and Dmitry Novikov, PhD¹

An estimated \$30 trillion of assets under management today consider some form of Environmental, Social or Governance (“ESG”) data², however, the question of whether sustainable investing delivers only perceived value or can really enhance overall risk/return remains. Much of the challenge in answering this question arises from a lack of standardization in terms of the definition of ESG and the approach to measuring it. In this paper we discuss the divergence in ESG ratings across different agencies as well as methods investors can use to solve for the unintended exposures this may lead to. Our analysis supports the hypothesis that by considering the key ESG factors relevant to each industry; you can potentially improve overall portfolio results by reducing risk.

Like Beauty, Sustainability May be in the Eye of the Beholder!

Increased demand for sustainable investing has yielded a proliferation of rating agencies offering sustainability data. An estimated \$30 trillion of assets under management today are invested considering some form of ESG data³, a figure that has grown by 34% since 2016. In contrast to the consensus regarding the importance of ESG investing, the divergence around what makes an investment sustainable is remarkable. Rating agencies differ in the identification of relevant factors, the level of granularity at which they assess the information, where the data is sourced, how the factors are measured, and how they are weighted. Rating agencies utilize proprietary scoring methods which break down the E, S and G pillars into various key indicators which they map across industry. Core ESG metrics can vary from as few as 12 performance indicators⁴ to as many as 1,000 for other rating agencies.⁵ Furthermore, the lack of both standardized rules for environmental and social disclosures and formal auditing processes to verify reported data adds to the subjective nature of ratings.

Robust data is essential to concrete investment analysis, therefore understanding how this data is generated is crucial. As explained in a 2017 McKinsey and Company article, “Among institutional investors who have embraced sustainable investing, some have room to improve their practices. Certain investors – even large, sophisticated ones- integrate ESG factors into their investment process using techniques that are less rigorous and systematic than those they use for other investment factors.”⁶ Investors glossing over these issues and blindly aligning their strategies to a single rating agency may end up with a portfolio of companies that is only “subjectively” sustainable, i.e., sustainable in the eyes of one rating agency but not others. In addition to these dramatically divergent views, sustainability data often carries important unintended exposures, typically a size and region bias, favoring large cap and European based companies. Separating noise from data is imperative for the construction of a truly sustainable portfolio.

¹ Michael LaBella is Head of Global Equity Strategy at QS Investors. Dmitry Novikov is Head of Equity Research at QS Investors, Josh Russell is Research Analyst at QS Investors and Lily Sullivan is Equity Strategist at QS Investors. This paper has benefited greatly from useful comments and from discussions with Juliana Bambaci, Janet Campagna, Joe Giroux, Steve Lanzendorf and Russell Shtern.

² GSIA 2018

³ GSIA 2018

⁴ 2016 Global 100 Methodology, Corporate Knights (January 2015)

⁵ MSCI ESG Rating Methodologies (May 2019)

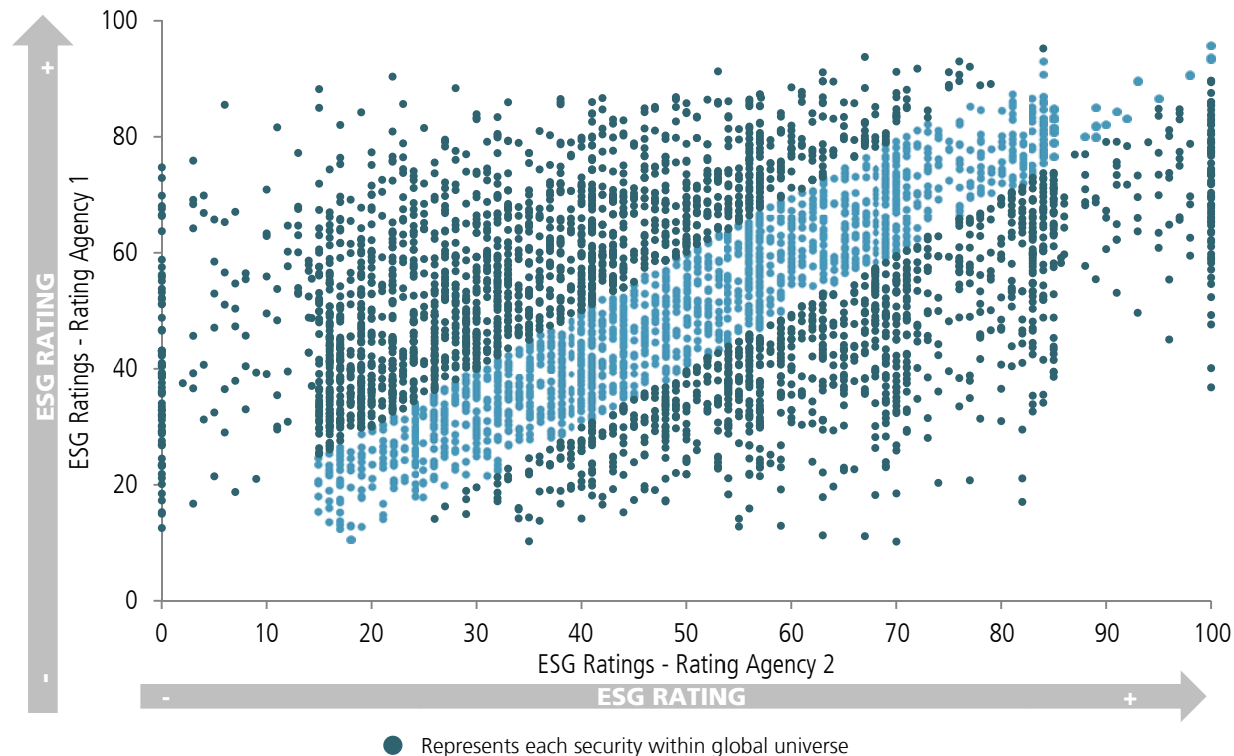
⁶ Sara Bernow ‘Why’ to ‘Why Not’: Sustainable Investing as the New Normal, McKinsey & Company. (October 2017)

Dramatic Divergence in Sustainability Ratings

Unlike financial information where the development of reporting standards has led to some degree of investor consensus, sustainability information is still lacking in terms of standardization and formalization, and in many instances assessing sustainability invites more than a fair dose of subjectivity. While the data is still evolving, organizations such as the Global Reporting Initiative (GRI), Sustainable Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD) have encouraged company level transparency and continue to help drive a framework towards increased standardization in reporting.

The sources of these discrepancies are multiple. For example, how does an agency rate factors for which there is no information available? Some rating agencies assume that lack of public information implies that the company is hiding negative data and therefore penalizes companies without sufficient information available. Other agencies assume that when there is no information, companies will generally follow the practice in their industry and therefore use the industry average as a proxy. Overall, ESG rating schemes tend to reward companies with more disclosures. It is possible for companies with historically weak ESG practices and robust disclosures to score in-line with or above peers despite realizing greater ESG risk. In addition, purely disclosure based rating methodologies allow companies to manipulate the process. Self-reported and unaudited sustainability reports tend to showcase companies in the best light and may draw less attention to material risks. According to SASB roughly 75% of the information reported in sustainability reports is already addressed by issuers in their SEC filings; however 90% of known negative events are not disclosed in either the SEC filings or sustainability reports.⁷ The below illustrates the divergence in composite ESG ratings across two large rating agencies (**Exhibit 1**).

EXHIBIT 1: DIVERGENCE OF TWO ESG DATA RATING AGENCIES ACROSS GLOBAL UNIVERSE OF SECURITIES

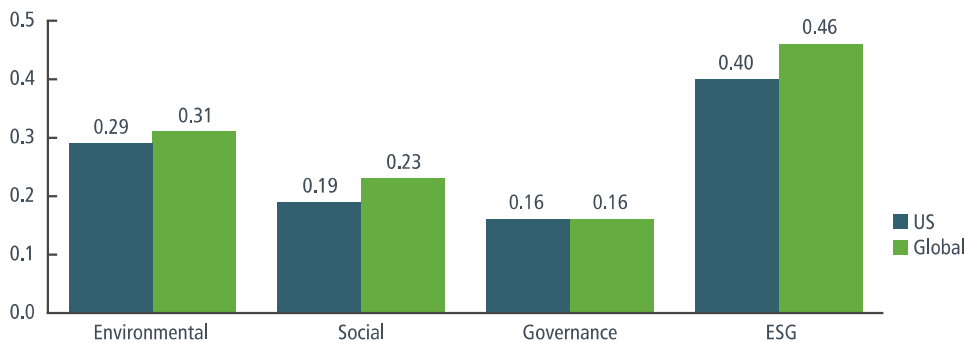


Source: Refinitiv and MSCI and QS Investors Research. Rating Agency 1 represents MSCI ESG ratings; Rating Agency 2 represents Thomson Reuters ESG ratings. Universe: MSCI World. Data as of December 31, 2018.

⁷ Established in 2011, the Sustainability Accounting Standards Board (SASB) is an independent private-sector standards setting organization dedicated to enhancing disclosure of material sustainability information.

This divergence stems from discrepancies in views, and thus weightings, on the importance of key E,S and G indicators for various industries as well as the methods and factors used to measure those indicators. For example, ESG data rating agencies may all have a varying view on how important Health and Safety is as a risk to manage for various industries, and within Health and Safety differences in how they measure whether a company is effectively managing it. The disparity in views among rating agencies is equally dramatic at both the aggregate as well as underlying ESG level. This implies that the source of the discrepancy is not only the weighting of the factors but also in the variation of factor definitions and metrics. **Exhibit 2** shows the correlation of E, S, G and aggregate ESG ratings between two large rating agencies across US and Global universes.

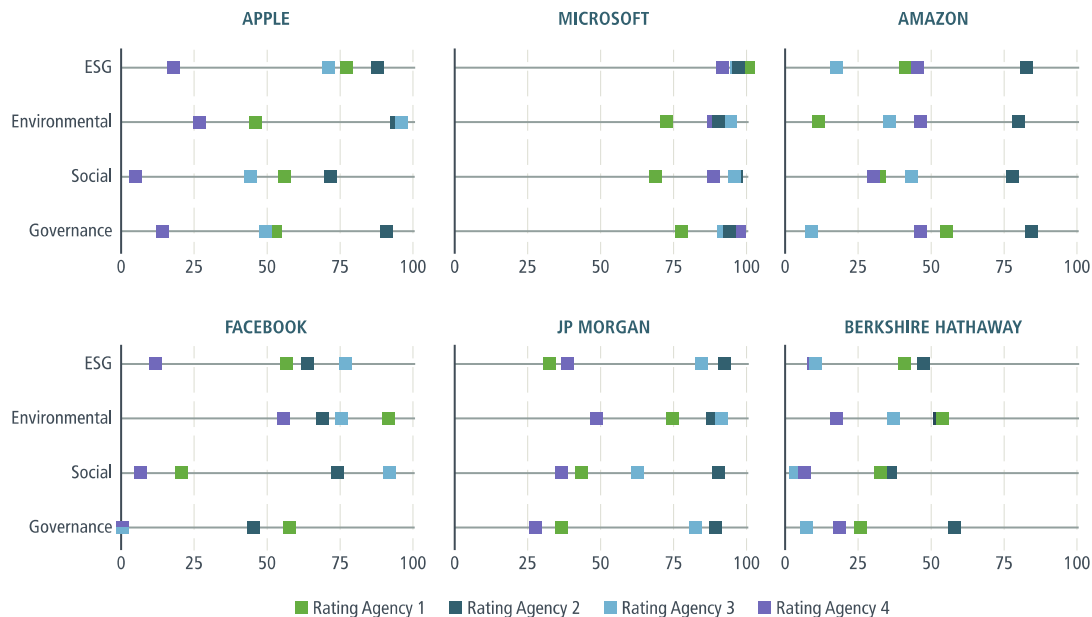
EXHIBIT 2: HISTORIC CORRELATION OF ESG RATINGS ACROSS UNIVERSE



Source: MSCI and Refinitiv, From December 2012 to December 2018 period. US data is based off MSCI US Index and Global data is based off MSCI ACWI IMI.

Exhibit 3 shows the ratings for the six largest global companies (by market capitalization) across four ESG rating providers.

EXHIBIT 3: DIVERGENCE IN ESG RATINGS ACROSS LARGE, GLOBAL COMPANIES



Source: MSCI, Sustainalytics, Robeco and Refinitiv. Ratings as of February 2019. Rating Agency 1 represents MSCI ESG ratings; Rating Agency 2 represents Thomson Reuters ESG ratings; Rating Agency 3 represents Sustainalytics ESG ratings; Rating Agency 4 represents Robeco ESG ratings.

Many investors and analysts are tempted to treat ESG ratings like corporate credit ratings. In the purest sense, ESG ratings attempt to quantify a company's exposure to certain business risks. As more capital is allocated within an ESG framework, these ratings will start to impact a companies' cost of capital. However, the correlation of ESG rating agencies is quite weak, 0.40 in contrast to the correlation of credit ratings which is quite strong at 0.90.⁸ This impacts ESG's ability to be properly reflected in corporate stock prices, as investors face challenges when trying to identify out-performers versus laggards. Even if a large fraction of investors have a preference to invest in strongly rated ESG companies, the divergence of ratings disperses the effect of these preferences on asset prices.⁹ Considering this, it seems more appropriate to compare ESG ratings with sell-side stock analyst recommendations, where some may recommend "buy" and others "sell" based on the same or similar financial information.

Unintended Exposures

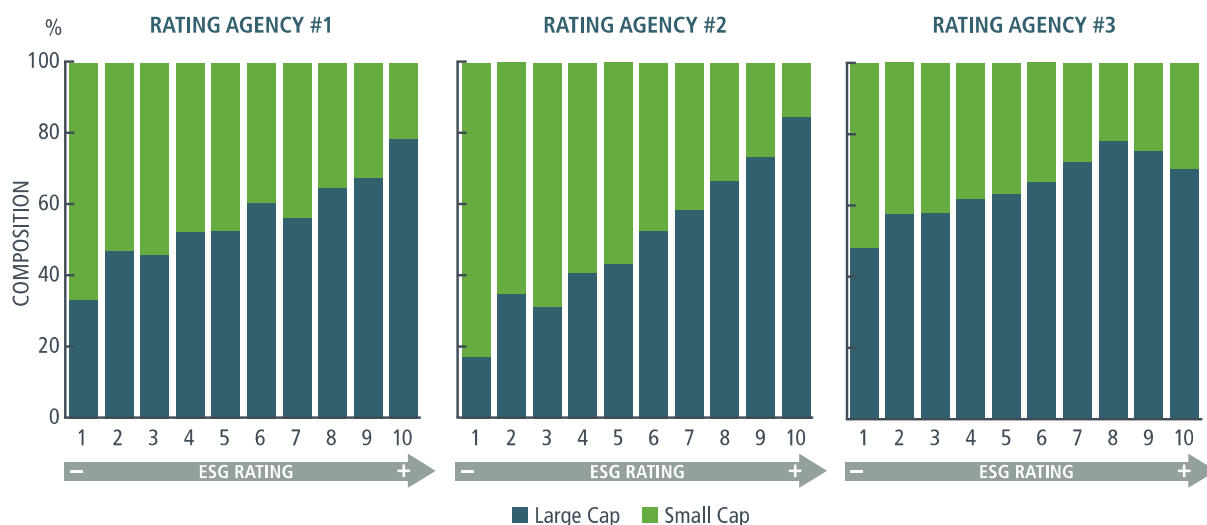
Despite the discrepancy in ratings, there are certain biases that affect data from all agencies and which will decidedly have an impact on the overall portfolio. Two of the most notable unintended exposures are in company size and geography. Rating agencies' reliance on survey and policy disclosure data has led to consistent skew favoring large and multi-national companies. Many companies have started documenting their policies in publicly available sustainability disclosures; however, producing such disclosures is resource intensive and financially burdensome. As a result, larger companies rate better as they generally have increased transparency and resources to dedicate to such initiatives.

To examine company size bias, **Exhibit 4** shows the distribution of ESG scores across deciles for a global portfolio. The result of this bias is that a simple portfolio built from companies with the highest ESG scores will typically contain a higher proportion of large cap companies than the benchmark. The magnitude of this bias will also be determined by the data agency used, as some agencies rely more heavily on survey data compared to others which look to consider alternative data sources. The bias will be further pronounced for investors using more stringent ESG criteria (stocks in the top decile), constructing concentrated portfolios, and utilizing size as a factor, via market cap weighting, as these will tilt the portfolio even further away from small cap companies.

⁸ Kerber, and Flaherty, "Investing with 'green' ratings? It's a gray area" 2017 <https://www.reuters.com/article/us-climate-ratings-analysis-idUSKBN19HODM>

⁹ Fama French 2007

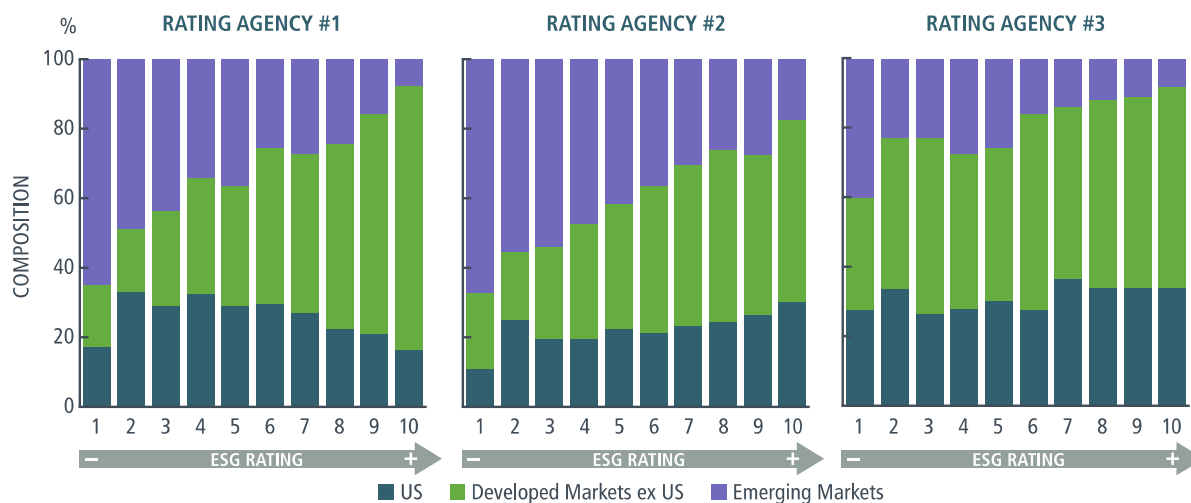
EXHIBIT 4: LARGE CAP BIAS EMBEDDED WITHIN ESG RATINGS



Source: MSCI, Refinitiv, Sustainalytics and QS Investor. Universe is ACWI IMI. Data is average for December 2012-2018 period. Global universe is ranked by ESG and divided into deciles, where decile 10 is comprised of the stocks with highest ESG rating. Rating Agency 1 represents MSCI ESG ratings; Rating Agency 2 represents Thomson Reuters ESG ratings; Rating Agency 3 represents Sustainalytics ESG ratings.

Additionally, rating agencies show a clear bias favoring developed markets outside of the US, particularly European companies over North American, Emerging Markets and Developed Asian counterparts. The source of this bias may not fully reflect the quality of ESG practices, but rather the existence and quality of formal reporting requirements in various jurisdictions. Regulatory requirements vary widely by region, therefore two companies in the same industry with similar characteristics but different jurisdictions may receive different ratings. **Exhibit 5** illustrates this effect, across agencies.

EXHIBIT 5: GEOGRAPHIC BIAS EMBEDDED WITHIN ESG RATINGS



Source: MSCI, Refinitiv, Sustainalytics and QS Investors. Universe is ACWI IMI. Data is average for December 2012-2018 period. Global universe is ranked by ESG and divided into deciles, where decile 10 is comprised of the stocks with highest ESG rating. Rating Agency 1 represents MSCI ESG ratings; Rating Agency 2 represents Thomson Reuters ESG ratings; Rating Agency 3 represents Sustainalytics ESG ratings.

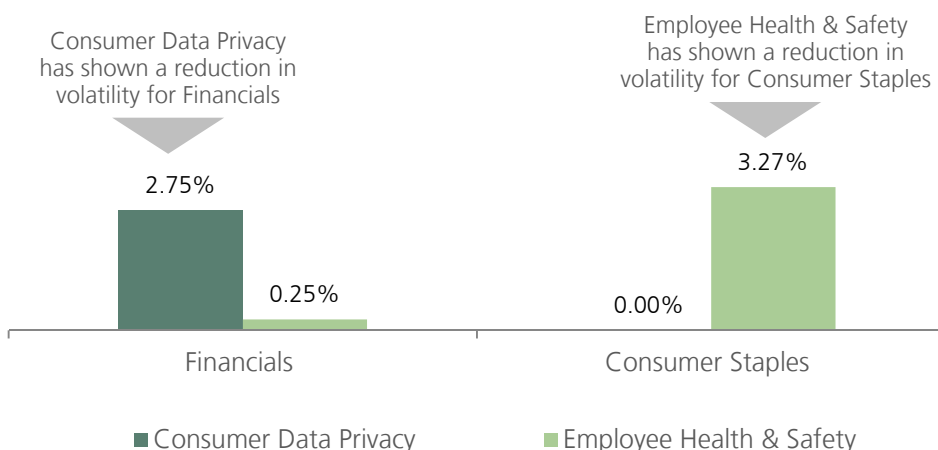
These unintended exposures may not result in the desired ESG impact or risk and return profile. This underscores the importance of thorough data analysis and a robust investment process that truly distinguishes information from noise and controls for unintended bets during the portfolio construction process.

Not all ESG Issues Matter Equally

In accounting, something is deemed to be material if its omission would have an impact on financial outcomes. In a similar vein, we define an ESG indicator to be material if it affects the risk and/or return characteristics of a company. For example, companies that protect employee health and safety are generally at lower risk of litigation and work stoppages which affect their ability to produce profits.

We determine materiality of key ESG indicators on an industry basis, given that companies within a sector are likely to share, to some extent, business models and confront similar sustainability challenges. For instance, customers' data privacy is vitally important for financial institutions. But does customers' data privacy have a material impact on Consumer Staples companies? Our research shows that financial institutions better able to protect consumer data average 2.75% lower volatility while consumer staples companies with strong data privacy policies see no volatility reduction, on average. Conversely, Consumer Staples companies that focus on worker health and safety are 3.27% less volatile on average while financial companies with similar policies are only about 0.25% less volatile (**Exhibit 6**). Furthermore, we find that a company's carbon emission levels have a significant impact on its risk-adjusted return if the company is in a material-intensive industry, while it has no bearing on its risk-adjusted returns if the company is in the Commercial and Professional Services industry. Thus, a one-size-fits-all approach to sustainable investing will likely fall short, as it obscures some of these important distinctions.

EXHIBIT 6: CONSIDERING ESG INDUSTRY MATERIALITY HAS RESULTED IN VOLATILITY REDUCTION



Source: QS Investors. Universe: S&P Global BMI. Average forecasted volatility from January 1, 2013 to December 31, 2018.

Investment Implications

In order to assess the impact of sustainability on a stock's risk and return we must first address ESG rating dispersion across agencies, unintended geography and size exposures, and relevant industry materiality. In accounting for these considerations, we construct proprietary ESG ratings utilizing material factors from multiple rating agencies to build a comprehensive assessment. In selecting ESG factors we first assess the historical impact on realized risk and return to determine if they are pertinent in the evaluation of a particular industry. For this analysis, we utilized a global universe of large and mid-cap sized companies. On an annual basis, we ranked companies relative to their sector and region peers (US, emerging markets, and developed

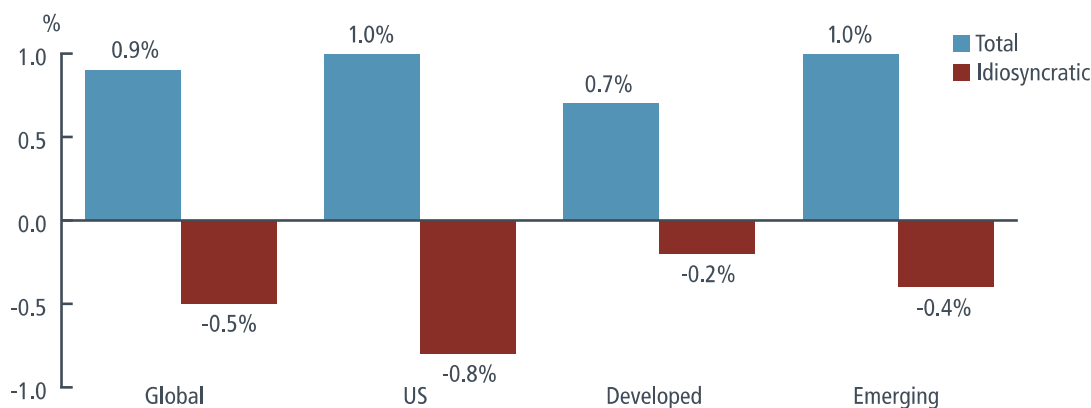
markets ex-US) to mitigate unintended exposures driven by varying regulation and reporting requirements. From these ranks, we organized the universe into quintile groups spanning low- to high- scoring ESG companies.

We explored expected risk and return for the global universe and for regional subsets of this universe from 2012 to 2018. The results of our analysis were mixed in respect to returns, showing a small, however statistically insignificant increase in expected returns for companies that scored higher on our ESG ratings. This return premium was further obscured when accounting for common factor exposures. From a risk perspective however, we observed that these higher rated ESG companies provided a substantial and statistically significant risk reduction before and after accounting for common factor exposures. Based on the overall characteristics of the ESG quintiles, high scoring ESG companies appear to offer traditionally defensive characteristics such as high dividend yield, larger market cap and higher ROE.

Returns

Exhibit 7 shows the spread across 12-month average expected total return and idiosyncratic return, defined as the return not attributable to traditional factors such as size, value and growth. While the excess return results were mixed, neither was considered to be statistically significant.

EXHIBIT 7: AVERAGE EXPECTED RETURNS, HIGH- MINUS LOW-ESG QUINTILES

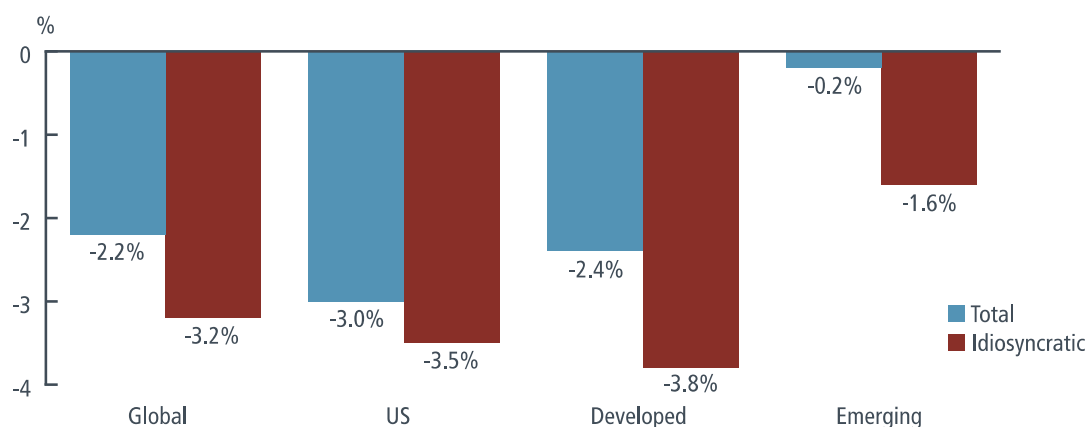


Source: Refinitiv and QS Investors. High ESG is equivalent to the top quintile scoring ESG names based on QSI ESG ratings. Low ESG is equivalent to the bottom quintile scoring ESG names based on QSI ESG ratings. Return and risk considered on a 12-month forward looking basis. Bars represent the difference in average forward 1-year risk/return for a High ESG company minus a Low ESG company. Difference in absolute and idiosyncratic risk between High and Low ESG companies was statistically significant, defined by a p-stat of 0. ESG data baskets as of December 2012 through December 2018.

Risk

Exhibit 8 shows the average 12-month average expected volatility for companies in the high- and low- ESG grouping. Across all regions, there are reductions in the forecasted volatility of higher scoring ESG companies relative to lower scoring ESG companies. Most interestingly, these results not only persist but grow in magnitude when considering idiosyncratic risk (taking into account common risk factors). This implies that the reduction in risk is truly attributable to ESG factors, rather than explained by common risk factors. These results are substantial and statistically significant for all regions, except Emerging Markets where statistical significance is weaker.

EXHIBIT 8: AVERAGE EXPECTED RISK, HIGH-MINUS LOW-ESG QUINTILES



Source: Refinitiv and QS Investors. High ESG is equivalent to the top quintile scoring ESG names based on QSI ESG ratings. Low ESG is equivalent to the bottom quintile scoring ESG names based on QSI ESG ratings. Return and risk considered on a 12-month forward looking basis. Bars represent the difference in average forward 1-year risk/return for a High ESG company minus a Low ESG company. Difference in absolute and idiosyncratic risk between High and Low ESG companies was statistically significant, defined by a p-stat of 0. ESG data baskets as of December 2012 through December 2018.

Exhibits 9A and 9B show average characteristics of high- and low- ESG quintiles. There is generally a slight difference in beta between the two groups. Valuations are mixed with the high-ESG group realizing slightly higher price-to-book and lower price-to-earnings ratios. For all regions, companies with higher ESG ratings show a sizable improvement in dividend yield and ROE.

EXHIBIT 9A: PORTFOLIO CHARACTERISTICS, HIGH ESG QUINTILE

	BETA	PRICE/BOOK	PRICE/EARNINGS	DIVIDEND YIELD (%)	RETURN ON EQUITY (%)
Global	1.06	3.52	18.51	3.00%	19.50%
US	1.08	3.99	19.38	2.20%	21.40%
Developed Markets	1.09	3.03	18.01	3.50%	17.20%
Emerging Markets	0.95	3.67	17.9	3.30%	20.40%

Source: Refinitiv and QS Investors. US is represented by the MSCI USA Index; Developed Markets is represented by the MSCI EAFE Index; Emerging Markets is represented by the MSCI EM Index; Global is represented by the combination of the MSCI USA Index, MSCI EAFE Index, and MSCI EM Index.

EXHIBIT 9B: PORTFOLIO CHARACTERISTICS, LOW ESG QUINTILE

	BETA	PRICE/BOOK	PRICE/EARNINGS	DIVIDEND YIELD (%)	RETURN ON EQUITY (%)
Global	0.92	3.10	20.18	2.10%	13.70%
US	1.09	3.77	20.46	1.60%	13.90%
Developed Markets	0.79	2.52	20.98	2.20%	12.50%
Emerging Markets	0.88	2.99	18.05	2.90%	16.00%

Source: Refinitiv and QS Investors. US is represented by the MSCI USA Index; Developed Markets is represented by the MSCI EAFE Index; Emerging Markets is represented by the MSCI EM Index; Global is represented by the combination of the MSCI USA Index, MSCI EAFE Index, and MSCI EM Index.

This indicates that even after accounting for sector bias, positive ESG signals are picking defensively oriented companies with quality characteristics represented by the lower volatility, higher ROE and stronger dividend yielding profile of the high-ESG quintile.

After accounting for rating agency dispersion, unintended exposures, and factor materiality, our proprietary ESG ratings show that higher rated ESG companies realize returns in-line with lower scoring ESG companies with less risk. These risk reducing benefits provide a significant opportunity to complement traditional financial metrics in the evaluation of both fundamental and quantitative investment processes. Given the orthogonal

nature of ESG information, we believe integrating material non-financial factors alongside financial factors provides investors an additional lens to develop a complete understanding of the opportunities and risks faced by companies.

Conclusion

With trillions of dollars pledged to sustainable practices, shifting demographic trends, and a new revolution in non-financial data, sustainable investing will likely avoid the grave yard of financial fads. The space will continue to evolve and provide opportunities to better understand specific risks, performance potential, and company reputation. Our analysis shows that there is less risk among companies that scored higher on ESG metrics. As it becomes evident that the market is starting to price in company specific ESG risks, we expect to see further integration of ESG considerations alongside traditional financial analysis. However, as always, the devil is in the details. Therefore, it is critical for investors interested in sustainable data to educate themselves on the vast amount of data available, the varying methodologies and nuanced processes used by ratings agencies, as well as on the best way of embedding these considerations within the investment process.

BIBLIOGRAPHY

- A Quantitative Perspective of how ESG can Enhance your Portfolio 2016 <https://yoursri.com/media-new/download/jpm-esg-how-esg-can-enhance-your-portfolio.pdf>
- Accenture. The “Greater” Wealth Transfer – Capitalizing on the Intergenerational Shift in Wealth, 2012: <https://www.accenture.com/us-en/insight-capitalizing-intergenerational-shift-wealth-capital-markets-summary>
- Bernow ‘Why’ to ‘Why Not’: Sustainable Investing as the New Normal, McKinsey & Company. (October 2017)
- CFA Institute, “CFA Institute ESG Survey”
- Chen, and Mussalli, “Integrated Alpha: The Future of ESG Investing”, April 2018 <http://www.panagora.com/assets/PanAgora-Investment-Insight-April-2018-Integrated-Alpha-The-Future-of-ESG-Investing.pdf>
- Douglas, Elyse, Tracy Van Holt and Tensie Whelan, “Responsible Investing: Guide to ESG. Data Providers and Relevant Trends”, Journal of Environmental Investing 8, no 1, (2017)
- Doyle, “Ratings that Don’t Rate, The Subjective World of ESG Rating Agencies” 2018 http://accfcorgov.org/wp-content/uploads/2018/07/ACCF_RatingsESGReport.pdf
- FactSet’s HNWIs’ Vision for the Wealth Management Industry in the Information Age <http://solutions.factset.com/smart-wealth-ebook>
- Fama and French. Disagreement, tastes, and asset prices. Journal of Financial Economics, 83(3):667–689, 2007.
- Fink, “Purpose and Profits” 2019 <https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>
- Giese, Lee, Melas, Nagy, Nishikawa “Foundations of ESG Investing Part 1: How ESG Affects Equity Valuations, Risk and Performance.” <https://www.msci.com/esg-foundations>
- 2016 Global 100 Methodology, Corporate Knights (January 2015)
- Gordon L. Clark, Andreas Feiner and Michael Viehs, “From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance,” Arabesque Partners (March 2015)
- GSIA 2018
- Harvard Business Review “The Investor Revolution” <https://hbr.org/2019/05/the-investor-revolution>
- Hawley, Jim “ESG Ratings and Rankings. All over the Map. What Does it Mean?“, TruValue Labs.
- Kerber, and Flaherty, “Investing with ‘green’ ratings? It’s a gray area” 2017 <https://www.reuters.com/article/us-climate-ratings-analysis-idUSKBN19H0DM>
- Khan, Serafeim, and Yoon, “Corporate Sustainability: First Evidence on Materiality”, The Accounting Review 91, 1697-1724, 2016
- Dunn, Fitzgibbons and Pomorski, “Assessing Risk through Environment, Social, and Governance Exposures.” 2016
- Morgan Stanley Institute for Sustainable Investing. Sustainable Signals: The Individual Investor Perspective (February 2015)
- MSCI ESG Rating Methodologies (May 2019)

Societe Generale “ESG rating and momentum” 2019 https://corpgov.law.harvard.edu/wp-content/uploads/2019/03/esg-momentum_SGCIB.pdf

The Deloitte Millennial Survey 2018

United Nations Global Compact Value Driver Model (PRI-UN Global Compact, 2013). “Why ESG Ratings Will Never Agree And Some Of The Problems Of Ratings”, Then Do Better, September 21, 2018, <https://www.thendobetter.com/investing/2018/9/21/why-esg-ratings-will-never-agree-and-some-of-the-problems-of-ratings>

WSJ, “Is Tesla or Exxon More Sustainable? It Depends Whom You Ask”, September 17, 2018, <https://www.wsj.com/articles/is-tesla-or-exxon-more-sustainable-it-depends-whom-you-ask-1537199931>

IMPORTANT INFORMATION

The strategy outlined is not currently offered and as such, no clients are invested in this strategy. It is purely hypothetical and the performance returns and other statistics were calculated by QS Investors using published data sources, which have been noted throughout this paper.

This material is intended for informational purposes only and it is not intended that it be relied on to make any investment decision. It was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. It does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or QS Investors, LLC to enter into or arrange any type of transaction as a consequence of any information contained herein. QS Investors, LLC does not give any warranty as to the accuracy, reliability or completeness of information which is contained in this document. Except insofar as liability under any statute cannot be excluded, no member of QS Investors, LLC, the Issuer or any officer, employee or associate of them accepts any liability (whether arising in contract, in tort or negligence or otherwise) for any error or omission in this document or for any resulting loss or damage whether direct, indirect, consequential or otherwise suffered by the recipient of this document or any other person.

The views expressed in this document constitute QS Investors’ judgment at the time of issue and are subject to change. Past performance or any prediction or forecast is not indicative of future results. Investments are subject to risks, including possible loss of principal amount invested.

QSCR 18884 (September 2019)