



# RAM's Systematic Equity: A leading approach to ESG Integration

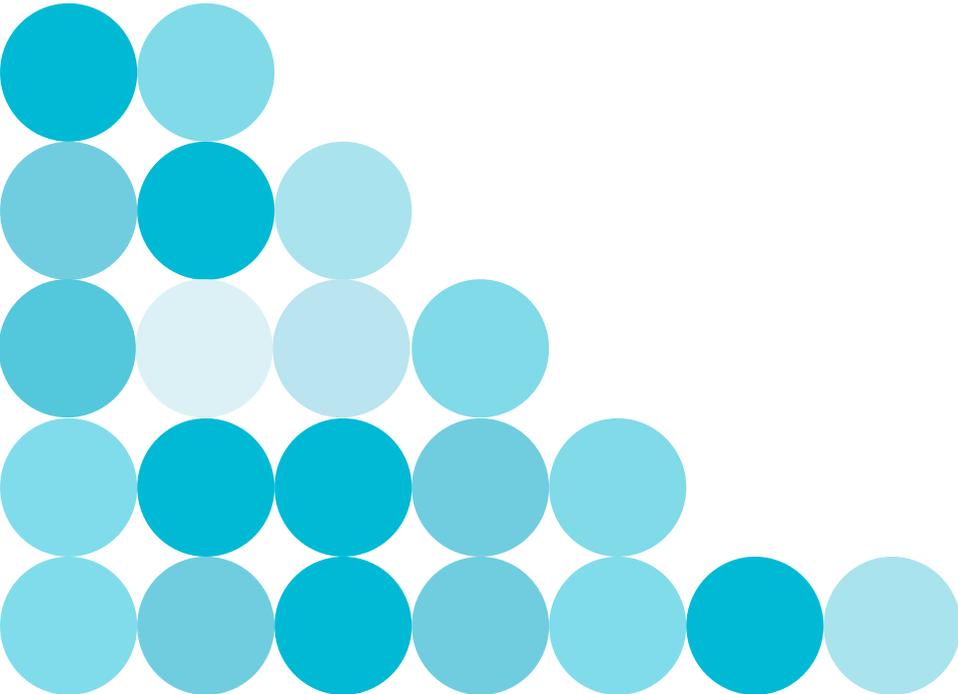
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**ram**  
ACTIVE INVESTMENTS

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## Overview

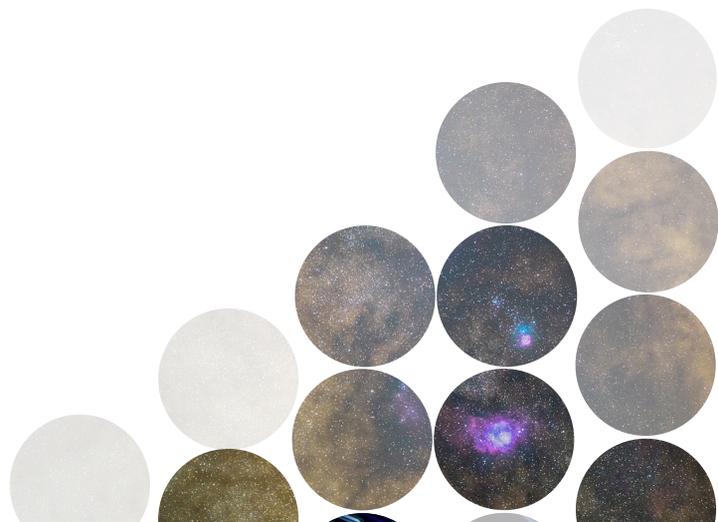
**As a UN PRI signatory & CDP Member, RAM has always considered the ethical impact which underpins its investments.**

Historically, as the availability of data was relatively scarce, the reflection of our Environmental, Social and Governance (ESG) philosophy was expressed through exclusionary screening. This consisted of avoiding stocks which failed to meet our moral and ethical values.

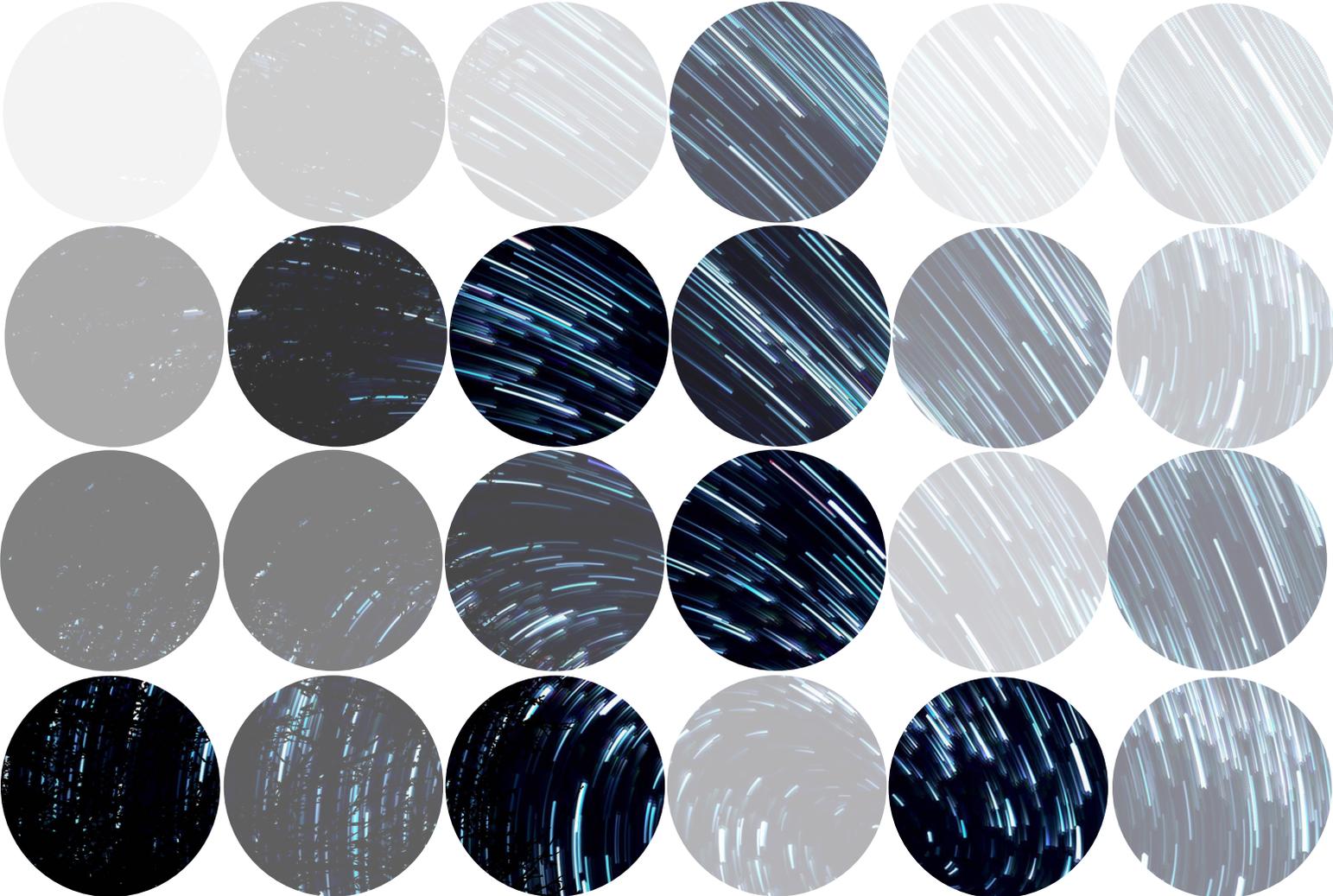
In recent years, the proliferation of ESG data reported by companies has enabled our Quantitative Research Team to build their expertise in systematic ESG investing, allowing them to develop a deep understanding of the fundamental mechanics behind best practices. We now target a full ESG integration in our Strategies; i.e. a systematic and explicit inclusion of ESG risks and opportunities across our quantitative engines.

Below, we have presented an overview of our data sources, methodology and results.

*Signatory of:*



# ESG data



## ESG data : A growing source of information

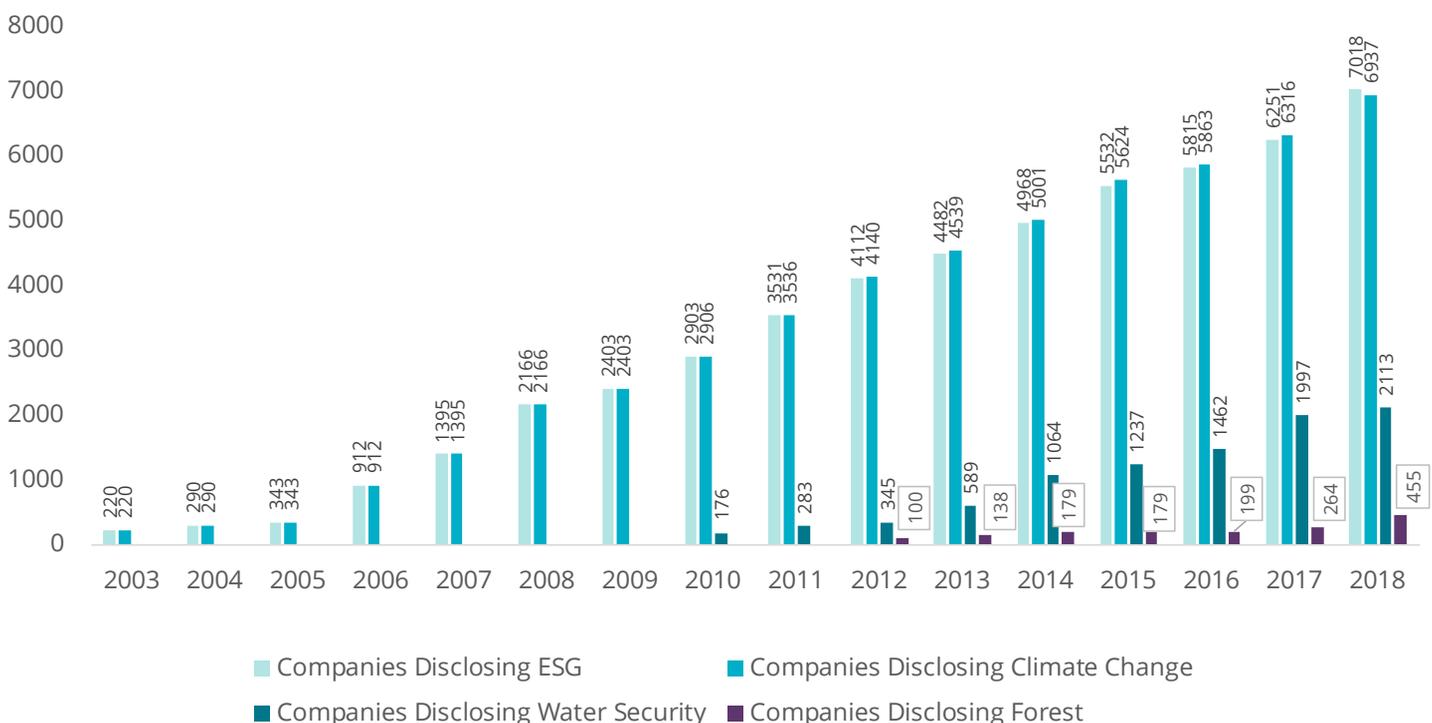
Over the last decade, awareness surrounding ESG issues has been growing rapidly, with investors increasingly incorporating non-financial information into their analysis. Companies and third party entities are responding to this demand by providing an ever-expanding range of data, both in terms of their coverage and diversity of fields. RAM's research approach is one of constant evolution; trying to ensure we never neglect any possible information source that could be integrated into our process and thus could enable us to better-capture the inefficiencies we seek to exploit . We view this new availability of data as a potential source of alpha, bringing a complementary profile to the existing information-set already captured by our factors. We have already explored several alternatives in accessing ESG data.

In 2011, fewer than 20% of S&P500 companies disclosed their ESG data. In 2016, the number of companies issuing

sustainability or integrated reports has increased to over 80% [1]. According to KPMG, circa 75% of the N100 companies (defined as the top 100 companies by revenue in 49 countries) released annual sustainability reports.[2] Bloomberg collects and publishes this data alongside financial reports, covering 9,000 stocks globally, and remains our preferred source for accessing reported data.

Our testing also includes major ESG data and ratings providers, covering either the full spectrum of criteria or a specific angle such as CDP (ex-Carbon Disclosure Project). CDP is a not-for-profit charity that collects, on behalf of investors, environmental data provided on a voluntary basis. We use this as one of our sources when measuring a company's Carbon Footprint. Below we can see the growth in the number of companies which provide CDP with Environmental data, with a 192% increase since 2009.

**The Expansion of ESG Data**



Source: CDP Worldwide as of 31 December 2018

## ESG data analysis: The common pitfalls

The struggle for many investors is incorporating those ESG factors which can enhance a portfolio's risk-adjusted performance. Countless academic papers which study the relationship between corporate & social responsibility and a stocks' performance reach contradictory conclusions on this point. In this section of the paper, we will examine the common pitfalls that befall investors in this space, below we've outlined the primary reasons that these can occur:

1

### The reliability of data

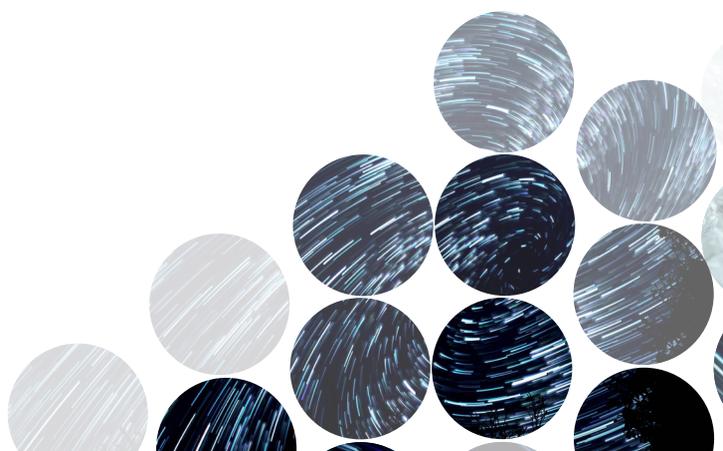
ESG performance is not reported in a universal format, thus a lack of robustness, comparability, reliability and timeliness can be prevalent. According to the CFA Institute, this remains the most restrictive factor for investors in effectively evaluating non-financial information (3). Various interest groups such as the Sustainability Accounting Standards Board (SASB) and the Investor Network on Climate Risk (INCR) are helping to drive consistency by standardizing the disclosure on specific ESG topics.

This problem can often be augmented when ratings agencies rely on this inconsistent data to calculate the metrics for their differing methodologies. Consequently, the same company can display disparity for the same metric emanating from two different agencies. The same problem can also occur via changes in methodology by these same agencies, making it tricky to interpret time series



### RAM's Approach:

RAM focuses on low level data that are consistent across both time series and platforms. Any metric we utilize is based on a simple, repeatable and transparent methodology. Additionally, because of timeliness/point in time issues, we adopt conservative data availability assumptions to avoid any look-ahead bias.



## 2

### Data mining & Reverse causality

Repeating the same thing often enough will occasionally yield successful results. Take a single ESG factor in isolation; sufficient research on a given ESG factor could unintentionally reveal an attractive correlation in relation to stock performance.

With hundreds of ESG fields and a relatively short data history, the risk of data mining is high and researchers can often uncover spurious relationships between ESG factors and stock performance. The frequency of data updates (often annual ratings) brings another risk of modeling; if causality is assumed when a correlation is observed. As described by Kruger (2015) [4], the pitfall for investors here, is using such a low-frequency measure to analyse the relationship between returns and trading strategies. The fundamental question here is; has the company performed well because they do good, or they do good, because they have performed well?



### RAM's Approach:

Our research effort is based on hypothesis testing; understanding how the ESG profile of a given company impacts, not only future stock performance, but also current/future fundamentals and ultimately financial returns. Various methodologies are able to adjust to relatively short data history, including geographical out samples and cross-validation on alternative databases. RAM believes that an openness in our flexibility based on rigorous testing and back testing is the way forward. Test, observe, implement, monitor and adapt form the basis of our ESG factor integration.

## 3

### Unintentional factor exposures

This pitfall can be two-fold: the inadvertent capturing of a factor via a sub-optimal approach, or an accidental exposure to a factor which the investor has no comprehension.

ESG factors considered on a standalone basis may identify characteristics that could be better captured with other fundamental factors. For example; the risk-adjusted performance of a ESG-tilted portfolio might exhibit an attractive profile, but in reality, it is actually exposed to Quality in a sub-optimal way (i.e. there are better ways to capture this Quality premium). Additionally, a naive ESG exposure could present an unwanted bias to factors such as Volatility, Market Capitalization or Sector, with the investor potentially and unwittingly exposed to these risks.

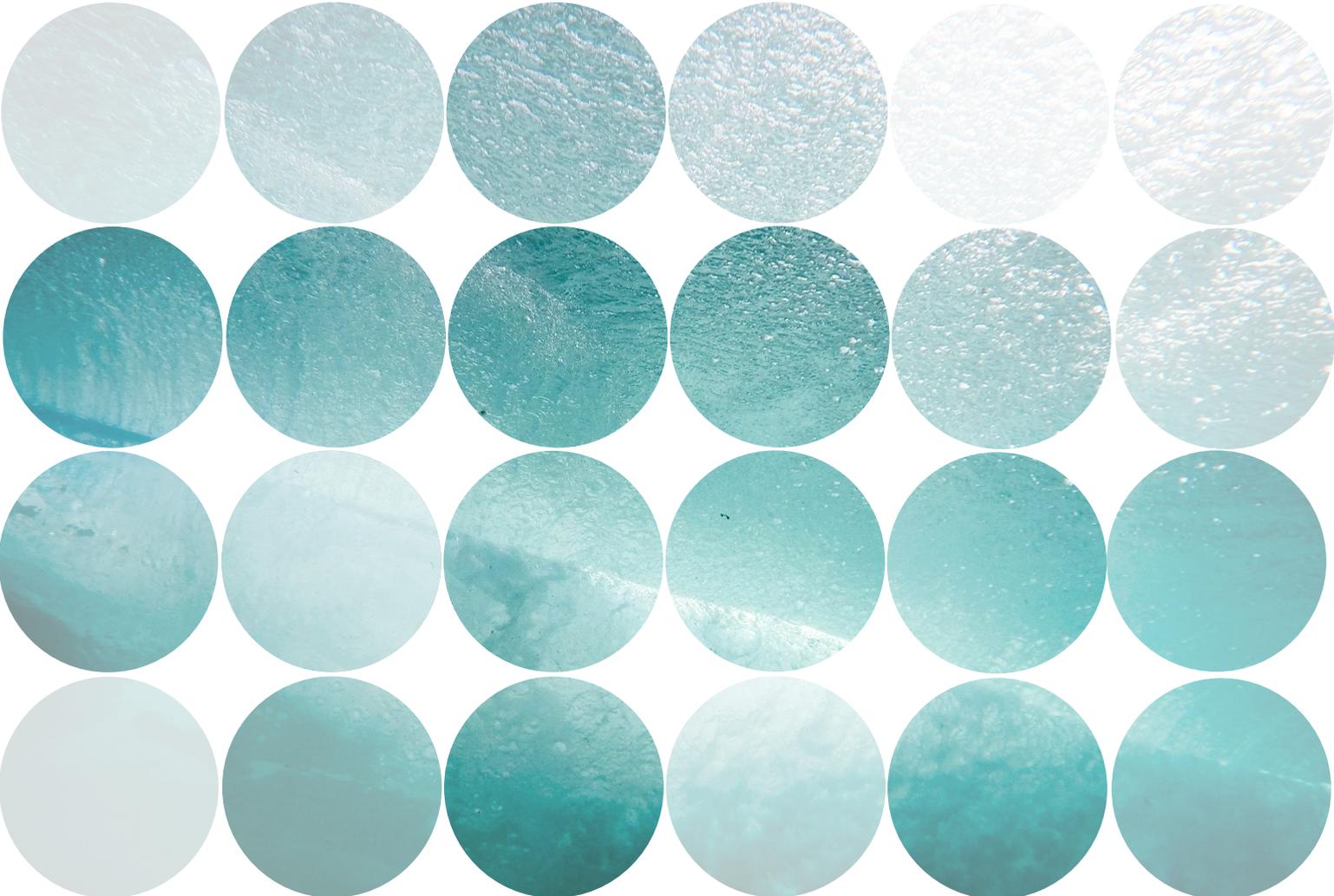


### RAM's Approach:

A large element of our research efforts consists of analysing how ESG metrics interact with common factors. This includes the more "traditional" measures which investors use to evaluate companies, providing us with a more complete picture of a company's financial and non-financial performance.



# RAM ESG Pillars



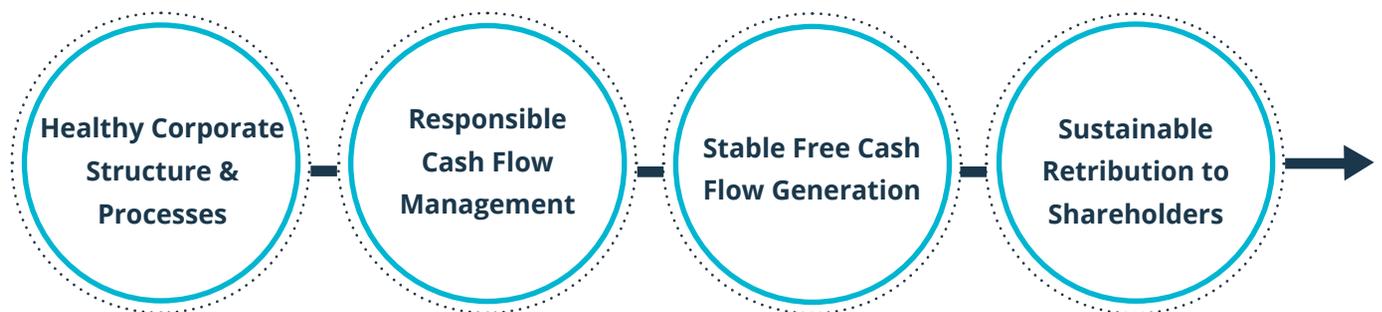
## RAM ESG Pillars

RAM's Quantitative Research Team has identified four Pillars that underpin our Systematic ESG investment process. These pillars are the result of the Team's proprietary research in this field. We propose an analysis on how ESG performance, captured through the spectrums of Governance, Transparency and Climate, leads to improve both company fundamentals and stock performance.



## Pillar 1: Governance

RAM defines corporate governance as the structures, rules and processes through which a company manages its business. A company embracing sound governance works to meet its current financial, operational and strategic objectives while targeting long-term sustainability. To avoid diluting strong governance characteristics, our approach focuses on individual items that will help us identify companies with the desired corporate structure.



One of our Governance metrics is the independency levels of the board. Consistent with the Free Cash flow Hypothesis (Jensen 1986) [5], our research indicates that firms' shareholders, where control lies mostly with managers, are less likely to receive free cash flow via dividend payouts.

Favoring stocks with an independent board structure will drive our selection towards companies with conservative levels of operational leverage and responsible cash flow management. This helps us to differentiate between firms that are spending capex (capital expenditure) only

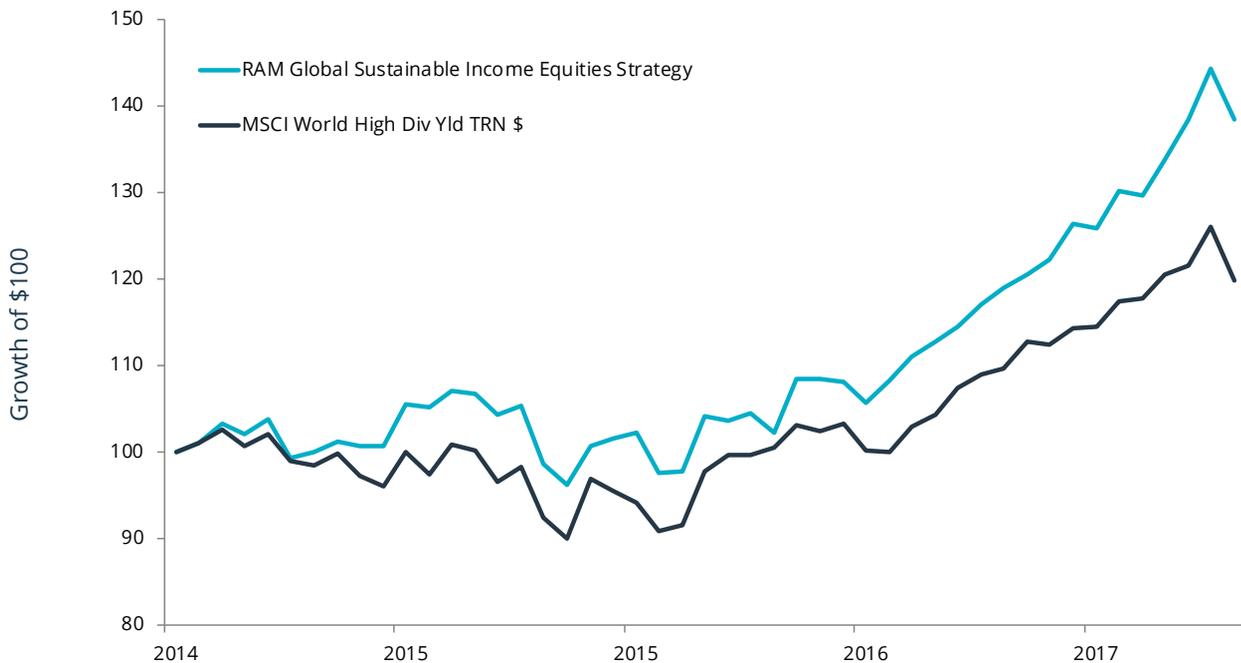
to engage in positive net value projects, and firms that are retaining earnings for buildings or safeguarding their empire. Managers' may be attempting to stave off "empire collapse" with high expenditure and acquisition activity, as described by Gompers, et al.(2003)[6]. Those firms are subsequently able to generate stable free cash flow (operating cash flow minus capex) and offer high, sustainable payouts to shareholders through dividends and share buybacks.



Due to important discrepancies in governance standards between countries, it seems reasonable to consider some factor adjustments. For instance, Japanese companies have historically tended to grow organically, retaining staff throughout their career and placing senior managers on the board. Even though they are starting to transform, independent directors held an average of only 23% of Nikkei 225-listed companies in 2014, compared with 84% in America's S&P500 [7].

The Governance Pillar was the first fully-integrated ESG component by RAM back in 2014 through the RAM (Lux) Systematic Global Sustainable Income Equities (previously named RAM (Lux) Shareholder Yield Equities). Below is the performance of the RAM Global Sustainable Income Equities strategy since inception until end of 2017 when other ESG metrics have been integrated in our stock selection process, together with its benchmark, the MSCI World High Dividend.

**Governance in Action**  
*Cumulative Performance\* Since Strategy Inception*



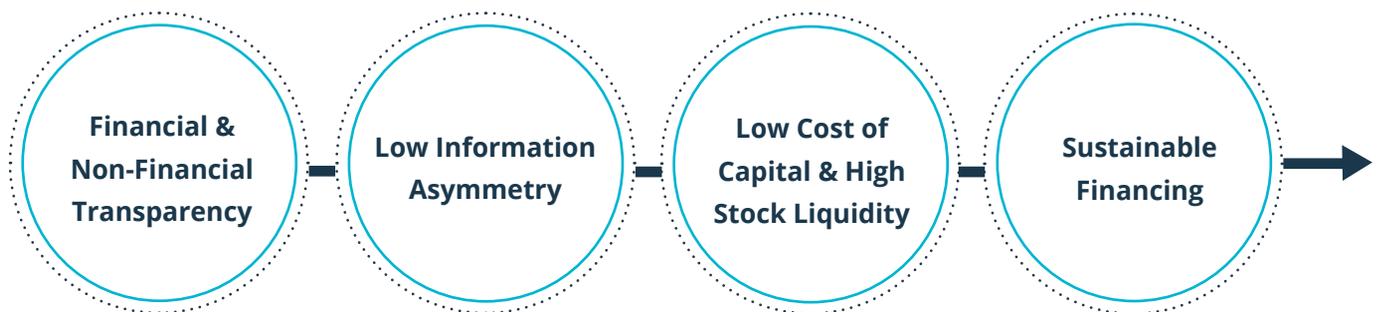
Source: RAM Active Investments, MSCI Indices (April 2014 – February 2018)  
 Actual realised track record, gross of investment management fees.  
 Past performance is not an indicative guidance of future results.

## Pillar 2: Transparency

Transparency and Governance are inextricably linked, and the relationship between these two ESG pillars have been well documented. Armstrong et al.(2014) [8], suggests that corporate transparency can be altered to suit the informational demands of a particular board's structure.

Despite all publicly traded firms being obligated to meet minimum disclosure requirements, financial transparency is impacted by the discretion concerning the disclosure of details to investors; such as

the information reported in footnotes, press releases and contact with analysts. Financial transparency may also be enhanced if the firm respects accounting best practices through clear revenue recognition and the sound use of accruals. Non-financial reporting are in most countries non-compulsory, meaning this area of transparency is at the discretion of the company's board.



The increased availability and quality of data on a given firm reduces the informational asymmetry between the firm and its investors. That information transfer is then optimized owing to the high accuracy of analyst forecasting. It is commonly accepted by academic literature that firms which provide greater financial informational disclosure have a larger

analyst following, and thus more accurate earnings forecasts which translates to less dispersion and lower volatility from analysts' forecasts revisions (for example Lang et al.(1996) [9]). Similar conclusions have been recently reached by Dal Maso (2016) [10] regarding the impact of non-financial disclosures on analyst forecasts.



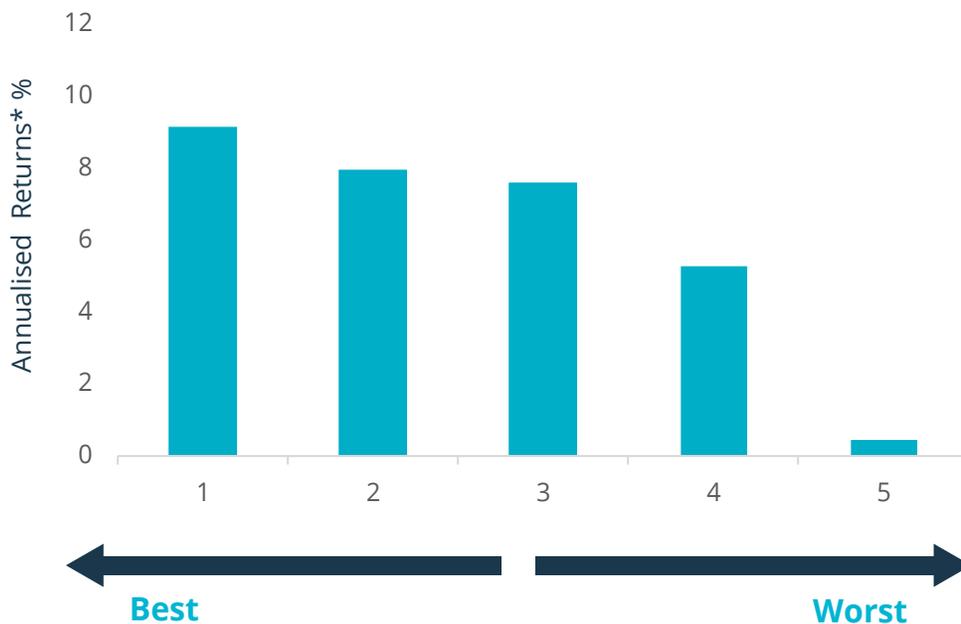
Low information asymmetry leads to positive company fundamentals and technical characteristics, which subsequently serve as a basis for sustainable financing. On the technical side, a more informed market will increase the number of participants to trade the stock, thus increasing the liquidity and reducing the bid-ask spread. Krueger (2015) [11] reached a similar conclusion on the London Stock Exchange following the introduction of mandatory carbon reporting for publicly-listed firms.

On the fundamental side, we have observed a negative correlation between the cost of capital and information asymmetry. Equity and debt investors alike require higher returns to compensate for any

information disadvantage and the difficulty in estimating downside risks. Cheng et al. (2011) [12] provides evidence that reduced informational asymmetry induced by increased transparency around ESG performance leads to better access to finance.

The below chart shows the backtest results of simulated equity portfolios over the last 11 years (December 2006 – February 2018) across a global developed universe. The universe is split into quintiles based on their financial transparency performance; the top quintile (best performers) yield an average annualised return of 10.3%, while the bottom quintile (worst performers) just 3.8%.

**Financial Transparency (2007 to 2019)**  
*Simulated Annualised Return Per Quintile*



Past performance is not a reliable indicator of future performance  
Source; RAM Active Investments (December 2007 to February 2019)

## Pillar 3: Climate

According to the Climate Change Report (2014) [13], “the continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems”. Carbon footprint metrics are the primary focus of climate concerns, subsequently we believe that they are the most important data source for environmental-related research.

A carbon footprint is the total set of greenhouse gases “GHG” (Carbon Dioxide, Methane etc.) a company directly or indirectly releases. To help delineate direct and indirect emissions sources, improve transparency, and provide utility for different types of organizations with different needs and purposes, three ‘scopes’ are defined for GHG accounting and reporting purposes:

### Scope 1

Direct emissions from sources that are owned or controlled by the firm

### Scope 2

Indirect emissions that are caused by the company through the consumption of imported heat, electricity, cooling, or steam

### Scope 3

Indirect emissions that do not fall into the previous Scope (e.g. transport-related activities in vehicles not owned or controlled by the company)



Most company's activities and inputs are either direct or indirect sources of carbon emission. We therefore consider carbon emissions as a production input, akin to the more traditional capital and labor, as discussed by Garvey et al.(2018) [14]. Coming from the management's commitment to lowering its carbon impact or its ability to optimize operational

processes, carbon emissions utilized in an efficient way can result in improved operational performance. In turn, production efficiency will translate into lower costs for the same level of top line revenues, which can lead directly to high/stable profit margins and high/sustainable bottom line earnings.



RAM's measure of GHG emissions includes only Scopes 1 and 2. Although adding Scope 3 would paint a more comprehensive picture of the operational side, the available data is currently based on many subjective inputs and rarely reported by these companies. We intend to update our models as the data becomes increasingly standardized and more commonly disclosed.

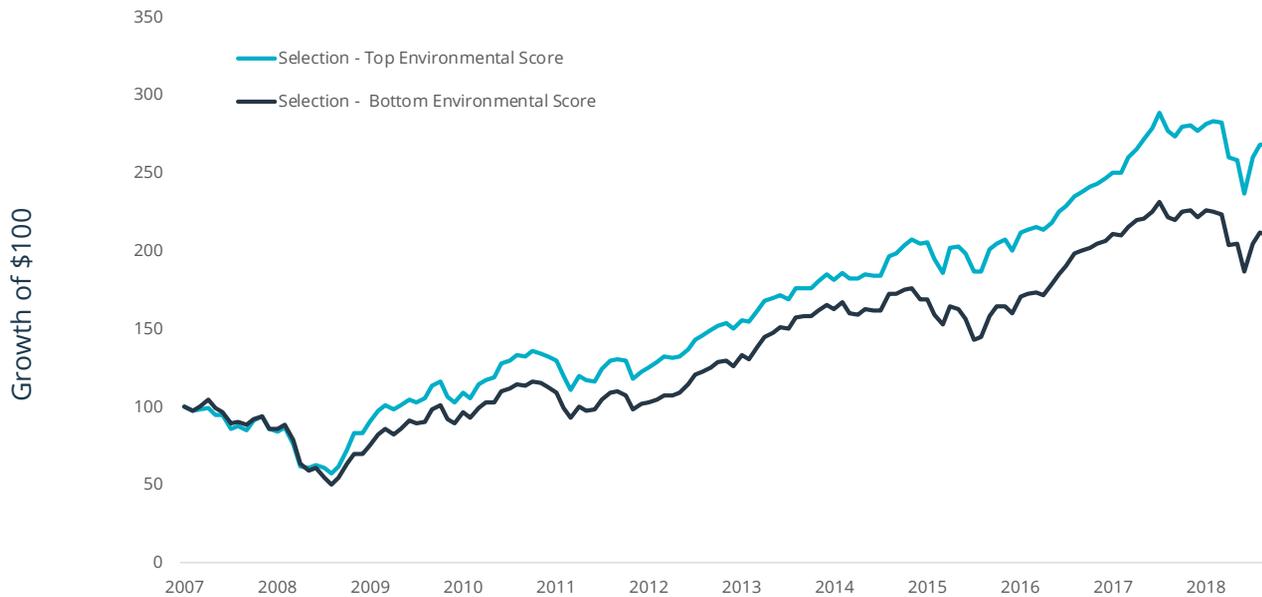
For us to differentiate between a palpably efficient use of resources from a structural low consumption coming from the activity

of the company, emissions level needs to be adjusted. First we control for the size of the company, dividing the total emissions by either their market cap (carbon efficiency ratio), or the company's revenue (carbon intensity ratio). We then make industry-based adjustments by modifying the ratios based on their peers' carbon performance.

Finally, in line with Koch and Bassen (2013) [15], we have observed that the distribution of those ratios is positively skewed with a small number of large emitters.

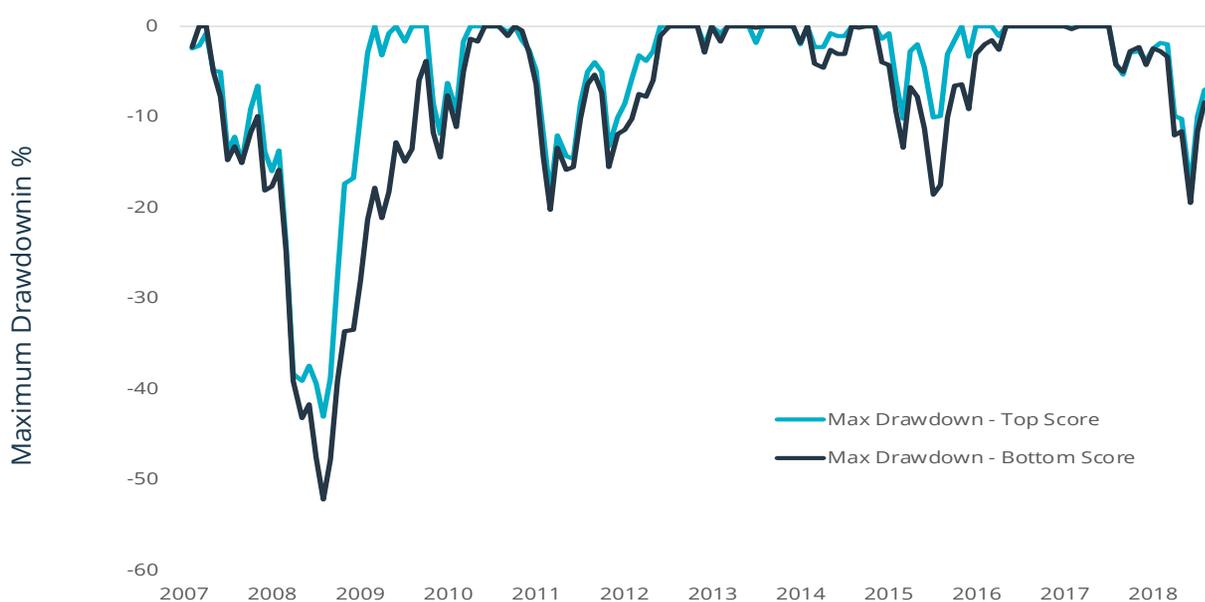
To illustrate the impact of Climate on equity performance, we charted below the cumulative backtested performance of the top deciles of stocks (in a global developed universe) ranked by carbon intensity ratio vs the bottom decile. It is also interesting to note that carbon efficiency may translate into reduced downside/tail risk for equity investors during periods of market stress.

**Top vs Bottom RAM Environmental Scores**  
*Gross Cumulative Simulated Performance*



Past performance is not a reliable indicator of future performance  
 Sources: RAM Active Investments (December 2007 to February 2019) & CDP

**Top vs Bottom RAM Environmental Scores**  
*Gross Simulated Drawdown Analysis*



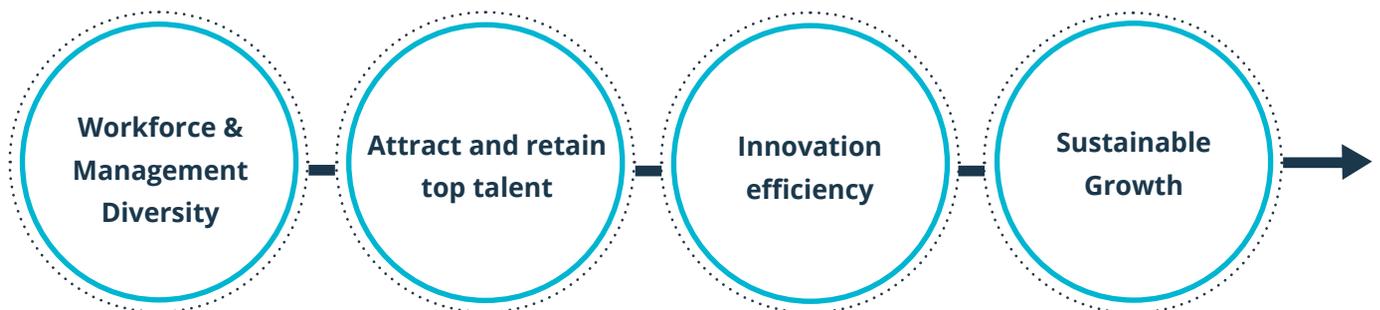
Source: RAM Active Investments (December 2007 to February 2019) and CDP

## Pillar 4: Diversity

Our fourth pillar focuses on the importance of workplace diversity and assessing whether this factor will favour a company's long-term growth. We can define this pillar through the following two dimensions [16]:

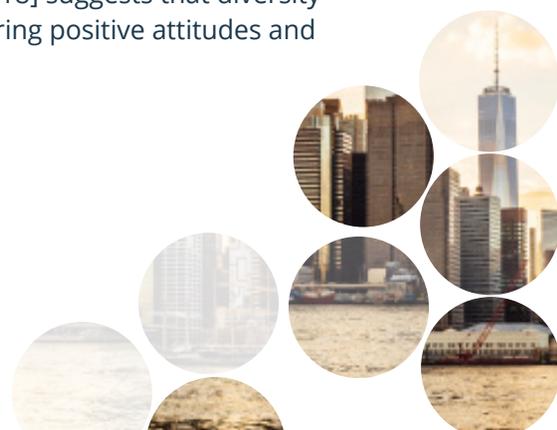
**Inherent diversity:** gender, ethnic origin & nationality, age, religious & socioeconomic background, sexual orientation, disability.

**Acquired diversity:** cultural fluency, generational savvy, gender smarts, social media skills, cross-functional knowledge, global mindset, military experience, language skills.



It has been widely discussed in financial and psychological literature that Workforce and Management diversity helps to improve a company's entire recruitment pipeline; by attracting, developing, mentoring, sponsoring, and retaining the next generation of employees at all levels across the company.

A survey by McKinsey in 2012 [17] outlined that the pool of skilled experts and leaders has not kept pace with demand, causing significant problems in terms of cost, quality, and time. Diversity management is one important means of addressing talent shortages by helping to increase the sourcing talent pool. Additionally, Enchautegui-de-Jesus et al. (2006) [18] suggests that diversity reduces staff turnover by increasing employee satisfaction and fostering positive attitudes and behaviours in the workplace.



By encouraging a proliferation of perspectives from the right employees, firms that develop a diverse workforce and an inclusionary culture tend to achieve a greater innovative efficiency, which can ultimately lead to greater innovation output [19] by:

1. Assembling diverse profiles to challenge one another enabling objections and alternatives to be explored more efficiently and solutions to emerge more readily. This serves to enhance problem solving capabilities and improves the quality of decision making.
2. As described by Hewlett et al. (2013) [20], diverse individuals can better understand and anticipate the needs of consumers or clients like themselves. Subsequently, their insight is critical in identifying and addressing new market opportunities.

Innovation is a prerequisite for sustainable long term growth of a company whether through the development of new products, services, systems, the improvement of competitive strengths, the gain of market share and the expansion into new markets.

Despite the clear upside to embracing workforce diversity, for many organizations there is a scarcity of inclusionary programs. Through biases and heuristics, behavioral economics and social psychology help to explain why.

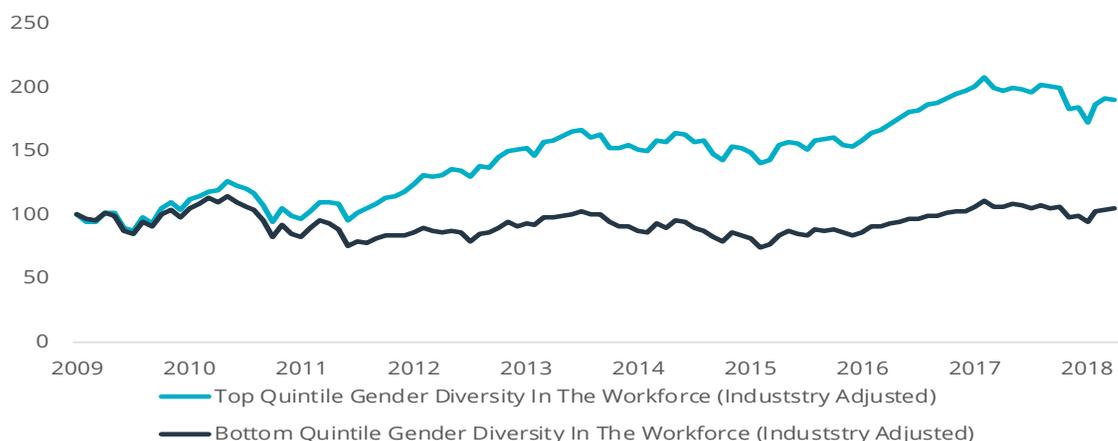
**Subconscious bias:** the association of groups of people with certain traits or activities, such as men with science and mathematics and women with arts and languages. Also Harvard Business School suggests that people unconsciously overestimate the amount of conflict that actually exists on diverse teams [21]

**Outgroup homogeneity bias:** the tendency for an individual to perceive the group of people they belong to (their "ingroup") as more diverse, while their "outgroup" appears more homogeneous.

**Fluency Heuristic:** Individuals prefer information that is processed more easily, or fluently, judging it to carry higher value. Equally, on a homogenous team, people readily understand each other and collaboration flows smoothly, giving an overestimation of the progress achieved. [22]

One of the components of RAM's proprietary diversity score is based on Gender Diversity in the Workforce, industry adjusted. We present hereunder the performance of the top quintile ranks vs bottom quintile ranks on a Global Equity Universe.

### Top vs Bottom Gender Diversity in the Workforce



Source: Bloomberg (December 2009 to February 2019)

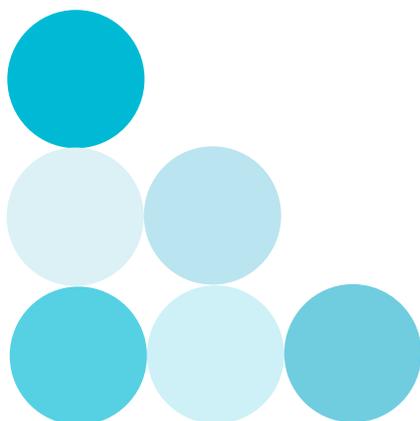
## Conclusion

### **The ever-expanding availability of ESG data offers RAM's Quantitative Research Team the capability to utilize a broad range of sustainability themes across a multitude of data sets.**

By avoiding the pitfalls we've demonstrated in this piece; such as analysis based on unreliable data, data mining, reverse causality and unintentional factor exposure, it is possible to extract the best out of ESG data. The goal of our research is to ultimately improve our portfolio's risk/return profile while favoring responsible companies with sustainable business models.

Indeed, our aim is not solely to identify stocks which have a material impact on future equity performance, but also evaluating the implications on company fundamentals. We've argued our views that a company embracing good governance tends to offer higher & more sustainable payout, financial and non-financial transparency favours sustainable financing and the efficient usage of carbon emission leads to sustainable earnings.

Our objective is to position RAM as a leading player within ESG systematic investing, not only through innovative product offerings, but also through knowledge transfer to the financial & academic communities. Our Research efforts continue to focus on ESG themes, with emphasis on the Social field which we haven't discussed in this paper. Here we are specifically interested in capturing the positive effect of gender diversity, which is important for the long term value of companies. This area could be the subject of a paper release in the coming months. As new databases become available, and as the data reporting becomes more standardized (for example on Scope 3 carbon emission), our research team will continue to refine the process which underpin our ESG offering.



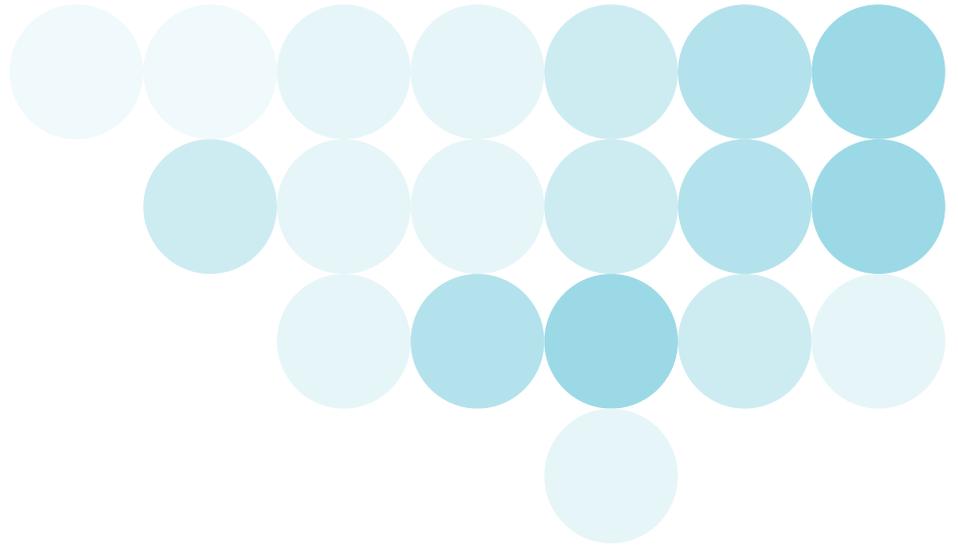
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