WHITE PAPER

from AXA Investment Managers

Piloting **ESG** Integration

INVESTMENT MANAGERS

redefining / investment solutions

Contents

Introduction 5
The future starts today 6
This is material 7
Defining ESG integration 8
An ESG-integrated equity investment process 9
Findings 13
Conclusion 19

by

Vivienne Blackwell
Head of UK Equity Research, AXA Investment Managers

Matt Christensen
Global Head of Responsible Investment, AXA Investment Managers

Jim Stride
Head of UK Equity, AXA Investment Managers

Executive Summary

Full integration of environmental, social and governance, or ESG, factors into the mainstream investment process offers asset owners an enhanced way to understand key drivers and risks that can impact long-term investment performance.

A multi-year ongoing pilot effort by AXA IM to introduce ESG factors into investment and stewardship practices included the development of a scoring process for key ESG metrics.

Analysis of these scores reveals a number of insights, namely that:
- Cheap (lowest market price to intrinsic value) companies with the best board scores returned 40%, whereas cheap companies with the worst board scores returned -0.3% on an annualised basis.
- Issues concerning employee health, safety and turnover can impact shareholder value.
- For UK companies that were scored for ESG performance, the companies performed least well overall on board and remuneration issues.

> "It isn't enough that managers are signatories to the PRI [United Nations-backed Principles for Responsible Investment]. Managers have to demonstrate to us, and our stakeholders, that they apply ESG principles in their day-to-day management of our money."

Michael Taylor, Chief Executive, London Pensions Fund Authority – UK

Introduction

Ever greater attention is being paid by investors, consultants, regulators and asset managers to the importance of environmental, social and governance, or ESG, factors in decision-making.

According to Towers Watson, a leading investment consultant, it is investors' focus on short-term returns and tracking of benchmark indices which hinder ESG integration[1]. This is understandable. Investment committees are faced with time constraints and governance responsibilities – leading them to rely on fund managers to demonstrate how ESG factors add value to investment strategies.

In response to growing client demand, AXA Investment Managers launched an ongoing multi-year pilot effort to systematically embed ESG factors into its investment and stewardship practices. In this white paper, we introduce a framework for ESG integration and provide some initial findings as to how ESG can add value for long-term investors.

The future starts today

"In future we suspect that the ESG debate will stop being a separate discussion and become just another element of long-term investing, in the same way that market and liquidity risk would not be separated out from the overall investment process."

Paul Todd, Head of Investment Policy, National Employment Savings Trust Corp. (NEST) – UK

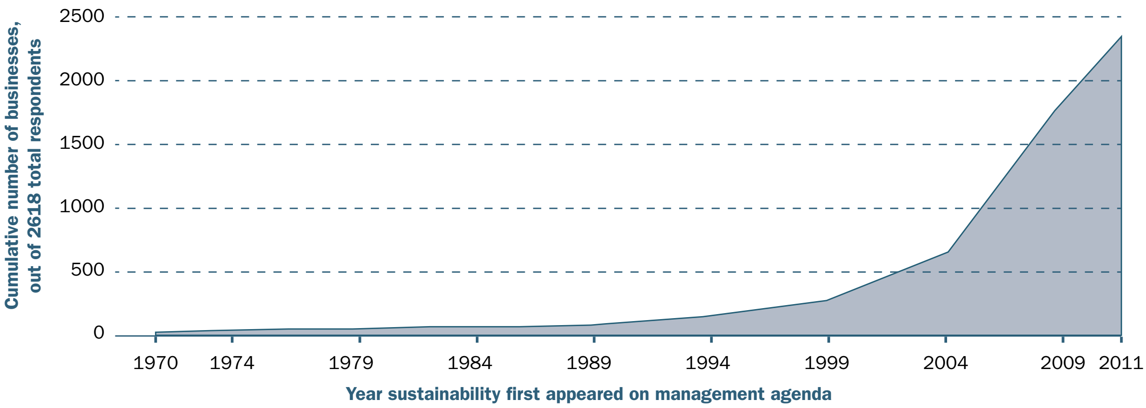
The convergence of interest amongst corporate management and asset owners provides good reason to think that ESG considerations will *go mainstream* – they will become a regular component of investment decision-making in the future.

Public companies now devote greater attention to ESG issues with regards to their own activities as well as those of their supply chains. According to MIT Sloan's 2011 Sustainability and Innovation Global Executive Study, two-thirds of companies surveyed said that sustainability was critically important to being competitive in today's marketplace[2]. Some 70% of firms that have put sustainability on the management agenda have done so in the past six years, as shown in Figure 1 below.

According to Novethic's – a leading research centre – recent study of European asset owners' ESG perceptions and integration practices, 60% of European institutional investors surveyed applied ESG analysis to some or all of their equity holdings[3]. Asset owners cite numerous motivations for ESG integration, including risk management, financial performance, protection of reputation and contribution to sustainable development[4].

Another leading investment consultant, Mercer, recently announced the intention to systematically include ESG ratings in client reports related to manager searches and performance by the end of 2012.[5]

Figure 1: Past the tipping point?



Source: MIT Sloan Management Review, 2012

This is material

"Whilst we prioritise investment returns, the Fund considers the responsibilities of stewardship to be part of its fiduciary duty to its stakeholders. The Fund also believes that ESG issues can impact value and therefore we would be failing in our fiduciary duty if we did not actively pursue an ESG policy."

Richard Keery, Investment Manager, Strathclyde Pension Fund – UK

Growing consensus indicates that ESG analysis adds value to investments: recent research from DB Climate Change Advisors cites "overwhelming academic evidence […] that firms with high ratings for CSR [corporate social responsibility] and ESG factors have a lower (ex ante) cost of capital in terms of debt (loans and bonds) and equity. In effect they are lower risk in a fundamental (not necessarily short term volatility) sense." [6]

One explanation why ESG factors can impact a company's financial performance is that a company's handling of these issues may say something about the quality and risk-taking profile of the company management.

The foot of the mountain

"There continues to be a good deal of doubt in the industry as a whole as to how ESG adds value. We think that the early signs are promising, and, as we continue our efforts over time, we will be able to tell more conclusively."

Jim Stride, Head of UK Equity, AXA Investment Managers

Through our research we found that – to be most effective – ESG integration should be embedded within the organisational setup and be part of each team member's responsibility throughout the entire investment process.

The pilot ESG integration project's scope centred on AXA IM's UK Equity Team, which manages over GBP 10 billion of UK Equity assets. This was due in part to client interest, the team's long-term focus and its track record of managing insurance assets.

In addition, there is also a long history of collaborating with the Responsible Investment (RI) Team on corporate governance issues. The two teams set out to integrate key ESG investment factors into the investment process for the UK Equity Team's research coverage universe of over 200 companies within the FTSE 350 index excluding: banks, investment companies (former investment trusts); and Lloyds brokers.

As a multi-expert asset manager, we put forward this example of ESG integration to demonstrate one way to embed ESG considerations in an investment process. Context plays an important role. Organisational setup, investment strategy, asset class, geographic scope and client needs all shape the way that an investment team embeds ESG factors. It is our ambition to leverage this analysis across other asset classes.

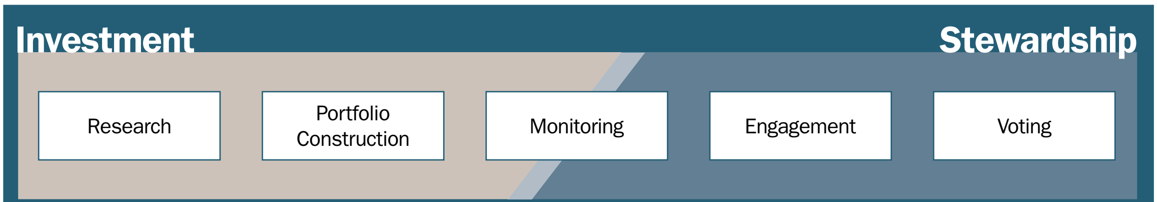
Whilst it is too early in the project to draw statistically meaningful conclusions, the initial findings of this work are promising.

Defining ESG integration

> "Investors benefit most when their managers connect investment and stewardship functions – research, engagement and voting – in order to create tangible value."
>
> **Matt Christensen,** Global Head of Responsible Investment, AXA Investment Managers

ESG integration is a framework that carries financial and non-financial information seamlessly through the investment and stewardship processes. Research and engagement, taken together, form the basis of mutually beneficial long-term relationships between shareholders and companies. Hence, ESG integration can be seen as a natural step in the evolution of long-term investment.

Figure 2: A framework for ESG integration



Source: AXA IM, 2012

- **Research:** ESG and financial analysis contribute to a broader understanding of a company, its activities, valuation, opportunities and risks.
- **Portfolio construction:** This more comprehensive view informs selection and assembly of a portfolio of securities designed to meet investment objectives.
- **Monitoring:** Ongoing reviews are conducted at the security and portfolio level including; risk control, exposure monitoring, analysis of ESG and financial performance.
- **Engagement:** Regular meetings with company management provide the opportunity for dialogue about issues that may influence long-term performance.
- **Voting:** Casting proxy vote ballots at company meetings on behalf of clients serves to promote good corporate governance and to protect/ enhance shareholder value.

An ESG-integrated equity investment process

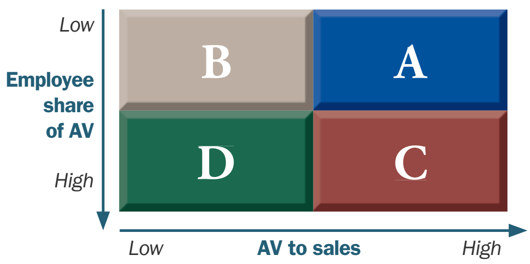
"Essentially, what we are doing is capturing more signals about a company. We need to determine whether or not each signal has value. Why would you ignore something that could give you a fuller picture of the company in which you are investing?"

Vivienne Blackwell, Head of UK Equity Research, AXA Investment Managers

Long-term added value (LTAV) screen

The first step in our UK Equity Team's longstanding strategy is to identify companies which produce high enterprise added value and at the same time control employee costs. Specifically, we identify those firms with high added value to sales and where employee costs form a relatively low proportion of added value[7]. Figure 3 illustrates the classification of companies according to the proportion of added value to sales (horizontal axis) and the proportion of employee costs to added value, or employee share (vertical axis).

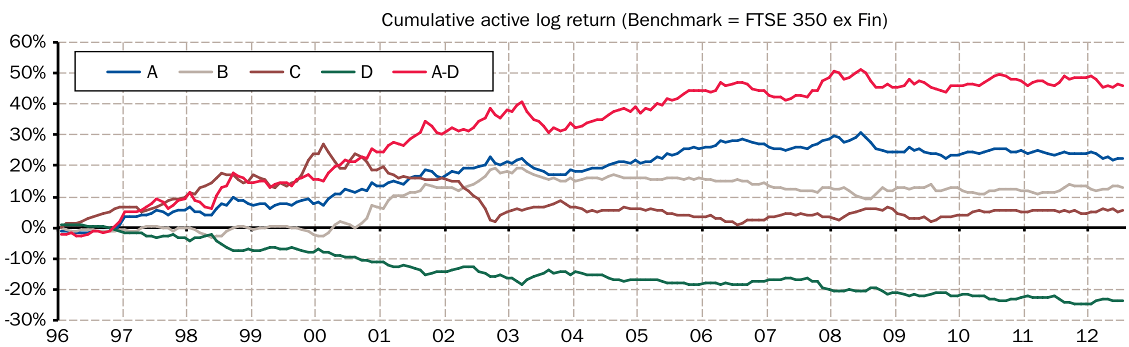
Figure 3: Added value screen places companies in 1 of 4 quadrants



Source: AXA IM, 2012

Quadrant A contains companies with high added value to sales and low employee share of added value. Quadrant D contains companies with low added value to sales and high employee share. Historically companies have delivered good shareholder returns when the added value to sales ratio was high and employee costs were low, as shown in Figure 4.

Figure 4: Shareholders benefit from high added value over time



Note: Share price performance of companies in the FTSE 350 index excluding Financials, categorised by quadrant according to the long-term added value screen. Source: AXA IM, 2012

Figure 4 shows cumulative returns to each of the quadrants A through D over the period (1996 to 2012) using monthly rebalancing and equally weighting the constituents to calculate a portfolio return. The Quadrant A portfolio of companies with high added value to sales and low employee share of added value consistently outperforms, whereas the Quadrant D portfolio of companies with low added value to sales and high employee share consistently underperforms. The A-D spread line represents the net difference between Quadrants A and D, highlighting the merit of the long-term added value approach.

Fundamental company research

The analysts within the UK Equity Team are responsible for company research. Fundamental valuation techniques are employed in order to calculate a company's intrinsic value. This intrinsic value is then compared with the current share price level to determine the relative attractiveness of the investment opportunity.

For the pilot effort, an ESG questionnaire was developed as a tool to help the Research Team score companies on six main criteria based upon responsible investment principles: performance, remuneration, control, employees, environment, and board. The analysts score the companies from 1 to 5 on these individual criteria drawing from an array of information sources, including company accounts and specialist ESG reports.

Meetings with the company provide a forum for analysts and portfolio managers to discuss these topics with management. Initial scoring was reviewed carefully to ensure consistency. Subsequently, the UK Equity Research Team considers both financial and ESG analysis when evaluating companies as part of its fundamental company research. A consistent and comparable scoring system permits investors to gain an overall view on the ESG activities across an industry sector or the entire investment universe. In addition, granularity of scoring allows for analysis by individual category.

Six questions used to score companies for ESG

Performance
How well does a company set itself up to be managed?

Remuneration
Is management compensation structured properly and is it of the right magnitude?

Control
Does the company demonstrate in practice that it is well-governed?

Employees
Are they looked after and do they tend to stay with the business?

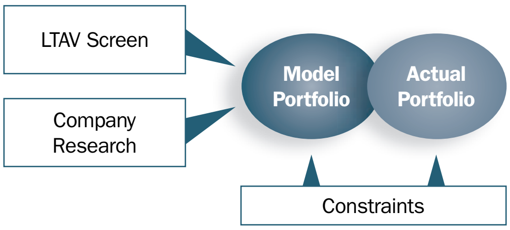
Environment
Does a company take its environmental responsibilities sufficiently seriously?

Board
Is its structure appropriate and are the non-executive members suitably skilled?

Portfolio construction

Drawing from the output of the value added screening and fundamental company research the Investment Process and Quant Team constructs model portfolios that embody the core investment strategy (Figure 5). The portfolio manager has discretion to make adjustments to the relevant model portfolio within an agreed tolerance band, which results in the actual investment portfolio.

Figure 5: Portfolio construction process



Source: AXA IM, 2012

Ongoing monitoring

Risk control, exposure monitoring and performance analysis are conducted on an ongoing basis. Having the ESG scores recorded over time allows for measurement of aggregate portfolio exposures to each of the ESG factors, alongside monitoring of the correlation of ESG dimensions with underlying stock performance.

Engagement and voting

Engagement involves regular discussions with the management of companies on a range of topics including; the company's strategy, operational performance, acquisition and disposal strategy, executive/board performance and management of ESG drivers of risk and reward.

Having analysts incorporate ESG factors into fundamental company research allows the UK Equity and RI teams to identify issues of concern that could have an impact on the long-term performance of clients' portfolios. These are discussed on an ongoing basis and through our Corporate Governance Committee, which includes representatives from risk, compliance, investment and RI functions (Figure 6).

Figure 6: Structured to integrate ESG throughout interactions with UK companies

> "Our fund managers are [also] expected to assess the impact of any financially material social and ethical issues, in relation to future prospects of investee companies, and to take this into account in their decision-making processes. When appropriate, such issues should also be addressed in our managers' regular contact and engagement with the senior executives of companies in which the Fund's assets are invested."

Howard Pearce, Head of Environmental Finance and Pension Fund Management, Environment Agency UK

Cooperation ensures consistency in dialogues with target companies. The issues of concern identified are company-specific and related to the firm's long-term performance.

Material issues are captured in the framework which supports our engagement and voting efforts that aim to protect/enhance shareholder value – as seen in Figure 7.

Figure 7: Engagement Priorities and Possible Actions

Source: AXA IM, 2012

As a result, the investment and RI teams are able to direct their engagement efforts to areas that merit the most attention.

> "Our conversations have begun to shift from broad notions of good governance in general to specific aspects of a company's real performance against defined objectives."
>
> **Shade Duffy,** Senior Responsible Investment Analyst, AXA Investment Managers

Findings

Wide dispersion in ESG practices

We found that the divergence in terms of how companies address ESG issues is significant. Figure 8 depicts the breakdown of UK companies' overall ESG scores for the entire investment universe, which mimics a bell curve. Companies rated on par with their peers receive a score of 3. A score of 1 signals that a company is significantly behind its peers whereas a score of 5 signals that a company is significantly ahead of the curve.

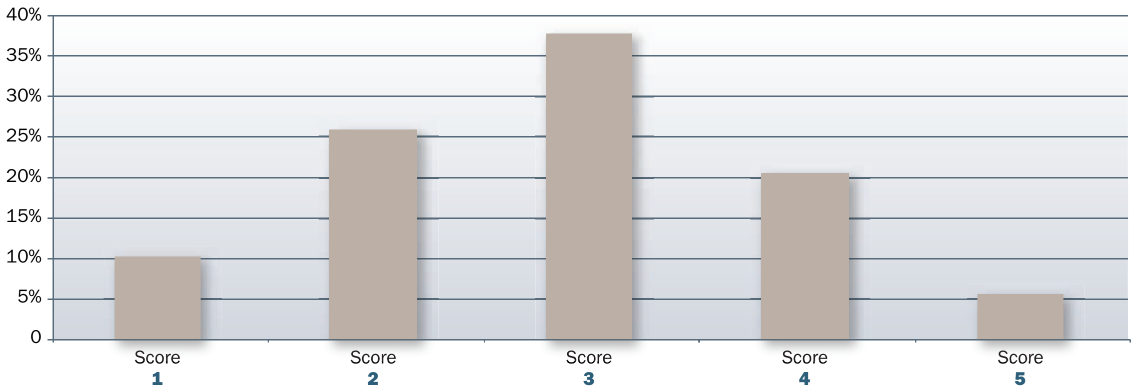
Whilst this clearly illustrates the divergence in ESG scores, we believe that the real value of ESG integration resides at the company level, where firm-specific elements of a company's ESG scores can be evaluated in relation to its strategy, management and financial long-term performance.

In conducting the research and ESG scoring of these firms, it became apparent that looking at a company's ESG record broadens an investor's perspective on the business, potentially uncovering wider issues that would not have necessarily attracted attention from a purely financial viewpoint.

Companies that are ahead of the pack on management of ESG factors tend to include non-financial metrics – such as employee turnover, carbon emissions, water usage and accident rates – alongside financial metrics in their key performance indicators (KPIs).

A select few go above and beyond this by making management's remuneration partly dependent on it. Figure 9 provides an overview of key characteristics that we tend to observe amongst best-in-class companies – those that score 5 for a given factor.

Figure 8: Overall ESG scores for UK companies in the research coverage universe



1 Worst | **2** Below average | **3** Average | **4** Above average | **5** Best

Source: AXA IM, 2012

Figure 9: Similarities observed amongst top-rated companies

Criteria for ESG company score	Characteristics of best-in-class companies (score = 5)
Performance	▪ Hard KPIs that are appropriate to the nature of the business and aligned with strategy ▪ KPIs that include financial, operational and ESG factors ▪ Management rewards that are underpinned by a balanced scorecard
Remuneration	▪ A long-term orientation ▪ Rewards for operational excellence rather than stock market performance ▪ Appropriate and challenging metrics ▪ Minimum shareholding requirements representing several times annual salary
Control	▪ Effective oversight of the CEO and senior management ▪ Non-executive directors who provide effective challenge in the execution of the company's strategy
Employees	▪ A relatively stable workforce, including top management ▪ A good health and safety record
Environment	▪ Identified environmental impacts and risks relevant to their specific activities ▪ Improvement targets in place and performance monitoring
Board	▪ An appropriate mix of directors with the right skill sets that evolve in line with company strategy ▪ Healthy turnover and proper succession planning ▪ A board composition that reflects workforce diversity and the firm's geographic footprint

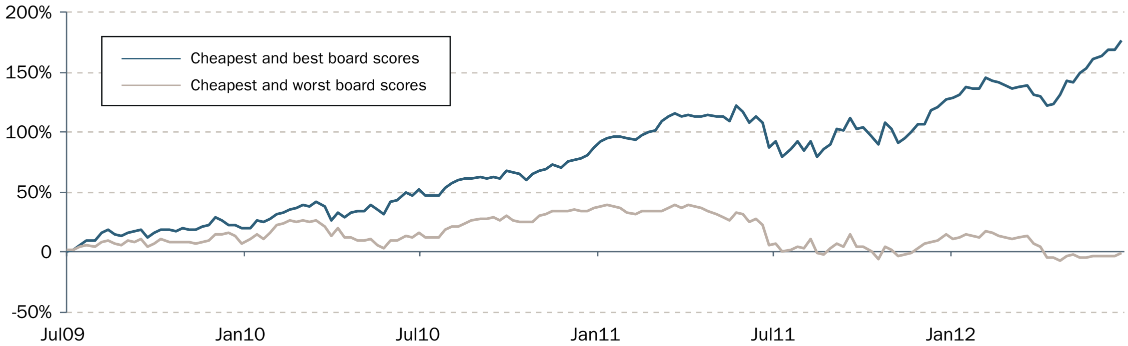
Source: AXA IM, 2012

> "Companies at the forefront on ESG issues incorporate these factors into the day-to-day running of the business. You tend to get a pretty good idea when you ask management in meetings about what they are doing to address these issues. A CEO's enthusiasm for and detailed knowledge of the company's efforts to manage ESG factors can tell you a lot."
>
> **Matthew Fosterjohn,** Equity Research Analyst, AXA Investment Managers

Identifying real laggards

Combining ESG analysis with fundamental valuation techniques can provide investors with additional insight about companies. One of the six key areas of ESG questioning relates to board effectiveness—whether the structure of a company's board is appropriate and the non-executive members are suitably skilled. We examined the cheapest companies in the investment universe, defined as those shares with the lowest current market price compared with our assessment of their intrinsic value. Figure 10 shows the performance of the companies with the best current board scores (4s and 5s) compared with the performance of the companies with the worst current board scores (1s). Each strategy was equally weighted and rebalanced weekly.

Figure 10: Board scores and cheap company performance



Source: AXA IM, 2012

Cheap companies with the best board scores returned 40% on an annualised basis, whereas cheap companies with the worst board scores returned -0.3%. This assumes that current board scores have remained constant over time–our view is that this is a reasonable assumption based upon our in-depth knowledge of these companies. An inference that could be drawn from this analysis is that change in board composition could be a material driver of share price upside for undervalued companies with very low current board scores.

Employees in the resources sector

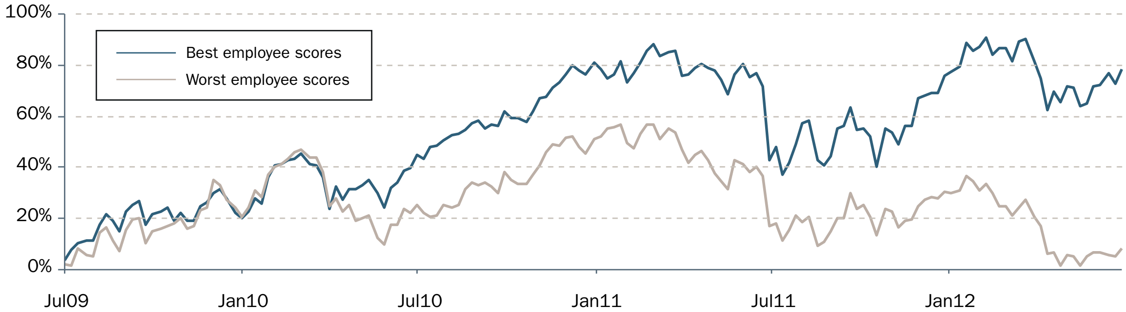
Two further questions used to score companies for ESG purposes cover employees (are employees well looked after and do they tend to stay with the business?) and environment (does the company take its environmental responsibilities seriously?).

When scoring companies on these criteria it is important to avoid a generic one-size-fits-all approach. Whilst it is clear that a mining and an IT firm, for example, have significantly different carbon footprints, this tells us little about the relationship to a firm's management or overall performance. The more relevant issue is how well each company is addressing its specific environmental issues compared with its peers.

In this context and building on previous AXA IM research[8], we compared the share price performance of the companies in the Oil & Gas and Mining sectors with the best employee scores (4s and 5s) with the share price performance of those companies with the worst employee scores (1s). Each strategy was equally weighted and rebalanced weekly.

> "As an oil, mining and utilities analyst for more than two decades, I was initially dismissive of the need to integrate ESG into mainstream equity investment strategies. But having experienced first hand how ESG issues directly affect stock performance in the sectors I follow, I now strongly believe in it."
>
> **Maurizio Carulli,** Resources and Utilities Analyst, AXA Investment Managers

Figure 11: Best/worst employee scores for UK oil & gas, mining companies



Source: AXA IM, 2012

In the Oil & Gas and Mining industries, companies with the best current employee scores returned 21% on an annualised basis, whereas companies with the worst current employee scores returned 3% as shown in Figure 11. This observation is consistent with the notion that issues concerning employee health, safety and turnover can impact shareholder value.

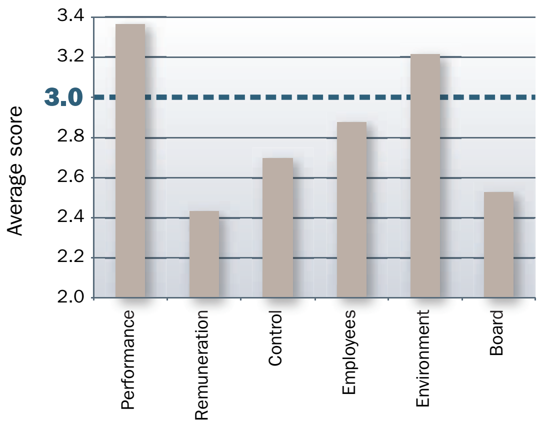
Concern about remuneration and board issues

Figure 12 depicts the aggregate company scores for each of the six categories. We can see that the UK companies in our universe score most poorly on remuneration (management compensation structured properly and of the right magnitude) and board (structure appropriate and non-executive directors suitably skilled) issues.

These results are consistent with current corporate governance discussions and our proxy voting efforts conducted on behalf of clients.

Over the past year, board and remuneration issues accounted for 86% of our votes against management resolutions at UK company meetings. These concerns are also reflected in the recent debate regarding a package of measures announced by the UK's Secretary of State for Business, Innovation and Skills, Vince Cable, to address executive remuneration as well as the diversity of boards and remuneration committees.

Figure 12: Average category scores for UK companies in the research coverage universe



Source: AXA IM, 2012

Environmental stewardship – a leading indicator?

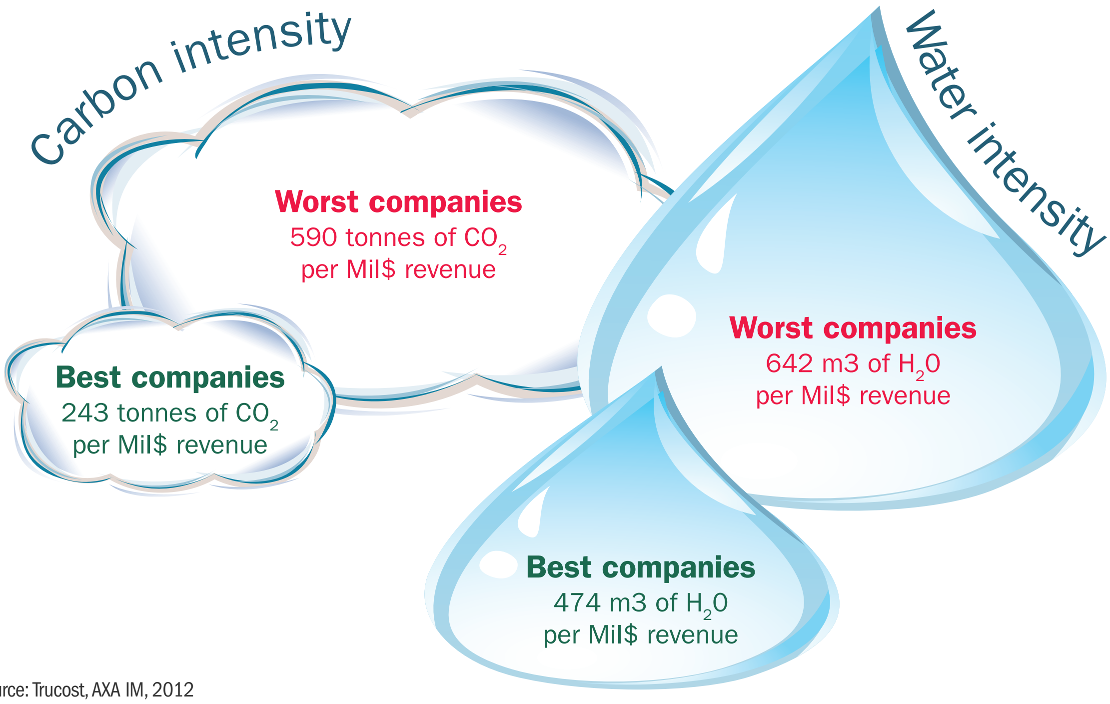
As we have noted in previous research, low carbon investment strategies can offer investors higher risk-adjusted returns compared to traditional investment strategies[9]. In addition, these indicators are closely linked to externalities such as pollution and climate change.

The results of this study demonstrate that companies' performance on environmental measures varies significantly. Using RI Search©, AXA IM's proprietary ESG platform, we compared the environmental performance of UK companies with the best environmental scores (4s and 5s) with the environmental performance of those UK companies with the worst environmental scores (1s and 2s).

Figure 13 shows a clear difference between the two groups on measures of water intensity (water that is bought by the company from water utility companies used in processing or cooling operations in cubic meters per million dollars of revenue) and carbon intensity (CO_2 emissions in tonnes per million dollars of revenue).

Firms that are best-rated on management of environmental criteria demonstrate more efficient water usage and lower CO_2 emissions per million dollars of revenue, as shown in Figure 13.

Figure 13: Best/worst environmental scores and intensity measures for UK companies in the research coverage universe



Source: Trucost, AXA IM, 2012

Sources

1. "Investors' short-term focus hinders ESG integration – Towers Watson." Environmental Finance; 11 September 2012.
2. "Sustainability Nears a Tipping Point." Haanaes, Knut. Reeves, Martin. von Streng Velken, Ingrid. Audretsch, Michael. Kiron, David. Kruschwitz, Nina. MIT Sloan Management Review. Vol 53. No. 2. Winter 2012.
3. European Asset Owners' ESG Perceptions and Integration Practices. Novethic, 2011.
4. Novethic, 2011.
5. Mercer press release, 8 August 2012.
6. "Sustainable Investing: Establishing Long-Term Value and Performance." DB Climate Change Advisors, June 2012.
7. Added value equals operating profit (ex financial income) plus depreciation and amortisation of tangible and intangible assets plus employee costs.
8. Mind the Gap: Experienced Engineers Wanted. Pascale Sagnier and Maxime Le Floch. AXA Investment Managers, 2012.
9. Taking Carbon Risk into account. Lise Moret and Pauline Llandric. AXA Investment Managers, 2012.

Conclusion

Growing consensus indicates that ESG analysis adds value to investments. For asset owners, ESG integration may soon reach a tipping point: there is good reason to think that ESG considerations will become a regular component of investment decision-making in the future.

The process we have described is one way to integrate ESG that we find promising, although it will take time to have the full results and conclusions of this ESG integration work.

Nevertheless, it is our ambition to leverage this analysis in order to embed ESG across other asset classes. We are committed to assisting clients with the adoption of responsible investment strategies that enhance long-term investment performance.

Design and Production AXA Investment Managers London 09/2012

www.axa-im.com

AXA Investment Managers Paris : « Coeur Défense » Tour B – La Défense 4
100, Esplanade du Général de Gaulle 92400 Courbevoie
Société de gestion de portefeuille titulaire de l'agrément AMF n°GP 92-08 en date du 7 avril 1992
S.A. au capital de 1 384 380 euros, 353 534 506 RCS Nanterre.

AXA INVESTMENT MANAGERS
redefining / investment solutions