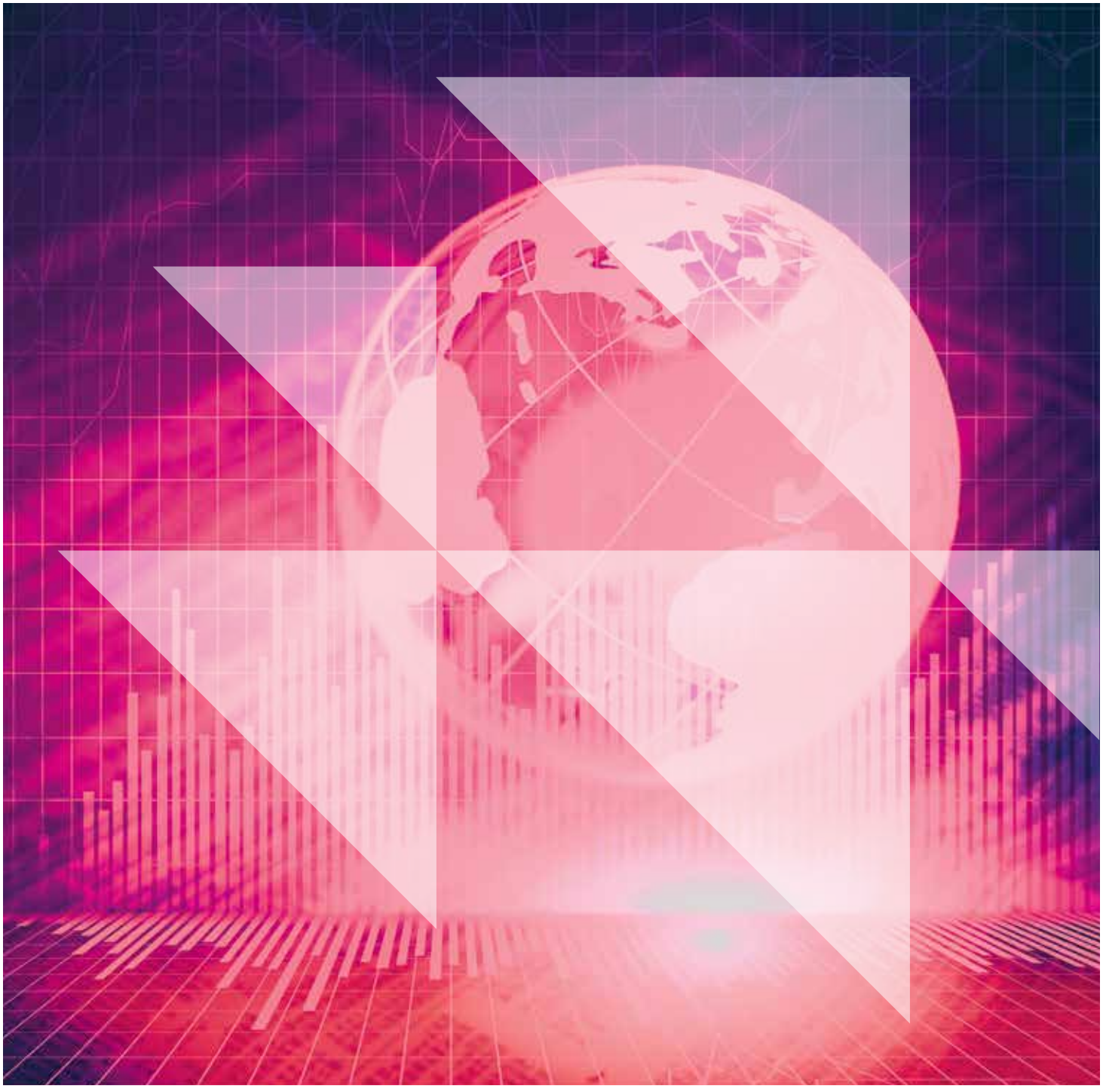
Sustainable Insight
CAPITAL MANAGEMENT

CDP
DRIVING SUSTAINABLE ECONOMIES

Linking Climate Engagement to Financial Performance: An Investor's Perspective

Sustainable Insight Capital Management and CDP

September 2013



About Sustainable Insight Capital Management

Sustainable Insight Capital Management (SICM) is an investment management firm that combines a disciplined alpha-generating process with environmental, social and governance (ESG) principles. Founded by a recognized management team in the sustainable and climate change space, SICM is striving to create the leading sustainable asset management platform.

SICM believes that today's most forward-thinking companies are responding to challenges and opportunities created by population growth, natural resource scarcity, climate change, urbanization and globalization. SICM's research suggests that markets are inefficient and not accurately pricing securities to reflect these macro trends.

Sustainable investing involves identifying the most enlightened managed companies that promote corporate environmental stewardship, waste reduction, consumer protection, human rights, and diversity. Leaders who manage these sustainability risks have historically demonstrated superior performance, stable cash flow and higher dividend growth over time.

Our beliefs:

1. Active portfolio management today demands a modern and integrated investment approach.
2. Sustainability risk factors can no longer be ignored.
3. Portfolio construction requires the use of contemporary tools.
4. Security selection demands harnessing the collective brainpower of the world's fundamental analysts and sources of potential alpha.
5. Managing intended and unintended portfolio risk requires leading-edge thinking.
6. Minimizing transaction costs demands exacting pre- and post-trade analytics.
7. Our clients are entitled to fully transparent attribution reporting and adherence to their investment mandates.

About CDP

CDP is an international, not-for-profit organization providing the only global system for companies and cities to measure, disclose, manage and share vital environmental information. CDP works with market forces, including 722 institutional investors with assets of US $87 trillion, to motivate companies to disclose their impacts on the environment and natural resources and take action to reduce them. CDP now holds the largest collection globally of primary climate change, water and forest-risk information and puts these insights at the heart of strategic business, investment and policy decisions. Please visit www.cdp.net to find out more.

CDP is a UK Registered Charity (no. 1122330). In the United States, CDP's sponsor liaison is Rockefeller Philanthropy Advisors, which provides CDP with 501(c)3 charitable status.

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Foreward By Kevin Parker, CEO of SICM

Sustainable Insight Capital Management (SICM) is pleased to present our findings in collaboration with CDP.

SICM is an investment management firm that combines a disciplined alpha-generating process with sustainable environmental, social and governance (ESG) principles. We believe that we can take sustainable investing into the mainstream by providing superior returns. To date, the field has wrestled with skepticism regarding performance and has struggled with a complex set of acronyms that often leaves investors confused.

Our philosophy is based on the belief that markets are inefficient and not accurately pricing securities to reflect the drastic changes society and business are experiencing.

We believe that companies that innovate to manage these risks and capitalize on the opportunities created by ESG factors, including climate change, natural resource scarcity, poverty, and a rapidly growing body of educated and conscientious citizens worldwide, will outperform over the long term. This is also a reflection of good management practice overall. Investors who systematically and rigorously incorporate ESG factors into their analytical process, in order to identify these trends and the companies that will benefit, will position their portfolios accordingly and should expect to outperform their peers.

We believe a robust analytical process drives performance, and integrating ESG data into our investment process helps to provide a holistic view of the world's complex systems, contributing an important dimension to our investment approach.

One example of ESG integration is our partnership with CDP, the world's largest repository of corporate environmental data.

We believe that the robust corporate climate change data collected by CDP provides fertile ground for exploring the relationship between corporate financial performance with respect to one of the most critical issues of our time - climate change.

Our analysis demonstrates that industry leaders are not only taking critical steps to establish the requisite governance, management systems and environmental efficiencies to engage on climate, but that they are also generating superior profitability, cash flow stability and dividend growth for investors.

We hope that this collaboration between SICM and CDP provides investors with further evidence of the link between climate change engagement and financial performance, providing corporations with clear incentives to take action to reduce emissions while improving the transparency of their sustainability reporting.

Introduction By CDP

In this report, SICM and CDP have collaborated to analyze the relationship between corporate engagement and action on climate change and financial performance of the world's largest corporations. Our analysis of the CDP Global 500[1] universe of companies finds that corporate leaders on climate change engagement, as measured by industry-relative CDP disclosure scores, generate a superior return on equity, more resilient cash flow generation, and stronger dividend growth than peers.

We analyzed the last five years of corporate reporting to CDP from 2008 to 2012. Our universe comprised 702 companies totaling $25 trillion in market capitalization that have been featured in the flagship CDP Global 500 reports since 2008. This sample represents the majority of the market capitalization of global equities as represented by commonly used benchmark indices.

Our analysis of company CDP disclosure scores focused on peer relative comparisons. First, we calculated the three-year rolling disclosure scores on an absolute basis for each company over the time period. Second, we percentile ranked each three-year rolling average score on an industry-relative basis and sorted into quintiles by GICS Level II Industry Group (where quintile 1 = highest CDP disclosure score and quintile 5 = lowest score).

Finally, we examined the relationship between the resulting industry quintile of CDP disclosure score to various metrics of financial profitability such as return on equity, cash flow, earnings and dividends, as well as valuation measures including book-to-market ratios and earnings, dividend and cash flow yields.

We found that industry leadership on climate engagement is linked to higher performance on three key financial metrics that reflect overall corporate quality:

- return on equity;
- cash flow stability; and
- dividend growth.

Specifically, we found that superior climate engagement, as measured by the difference between Q1 industry leaders and Q5 industry laggards on CDP disclosure scores, portends a "quality premium" equivalent to +5.2% return on equity; +18.1% cash flow stability and +1.6% dividend growth. Further, there is no observable valuation premium for Q1 industry leaders, presenting an attractive opportunity for investors: superior climate change engagement and superior profitability with negligible valuation premium.

Our analysis provides investors with further evidence on the link between sustainability and financial performance while providing corporations with additional incentives to take action on climate. Given that improved profitability, cash flow stability and dividend growth reflect strong financial operating performance, we conclude that strong corporate engagement on climate change is mirrored by stronger corporate financial performance.

1. The CDP Global 500 universe represents the world's 500 largest companies by market capitalization based on the FTSE Global Equity Series on January 1st of each year.

Why We Chose To Focus On Climate Change

Although SICM's ESG analysis covers a wide breadth of subjects, we recognize climate change as a defining issue. Given the robust corporate data set disclosed via the CDP platform over the past decade, climate change is one starting point for our analysis of the impact of sustainability upon financial performance. Therefore, we analyze a wide range of data sets for shareholder return significance, and evaluate climate change disclosure as an indicator of management's engagement on the issue and their preparedness for risk.

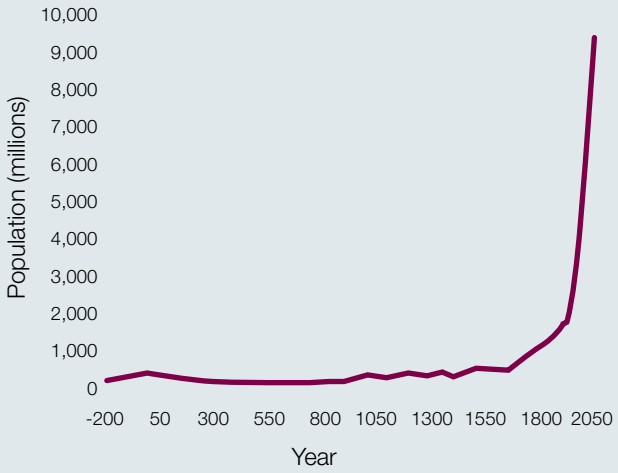
There are several macro trends that support our belief that climate change will grow in importance to both corporations and investors in the years ahead:

Demographics. The global population is growing by 78 million people net per year and by 2050 is expected to reach 9 billion. Over 70% of the world will live in urban areas.[2] Economic development will further stimulate demand for natural resources as consumption levels in emerging economies approach those of Western nations (see Figure 1).

Resource-Scarcity. Shifting demographics, a growing global population and stresses from climactic disruptions, also bolster the rising demand for natural resources including energy, water, and cropland. As natural resources are extracted, cultivated, modified, and used—and not renewed—they become increasingly scarce. Current trends point to increased price volatility of commodities, closer linkages between resources, and environmental constraints that begin to make resource scarcity an economic reality[3]. Therefore, meeting current and future demand requires corporations to not only expand and find new sources of supply but to significantly improve resource efficiency (see Figure 2).

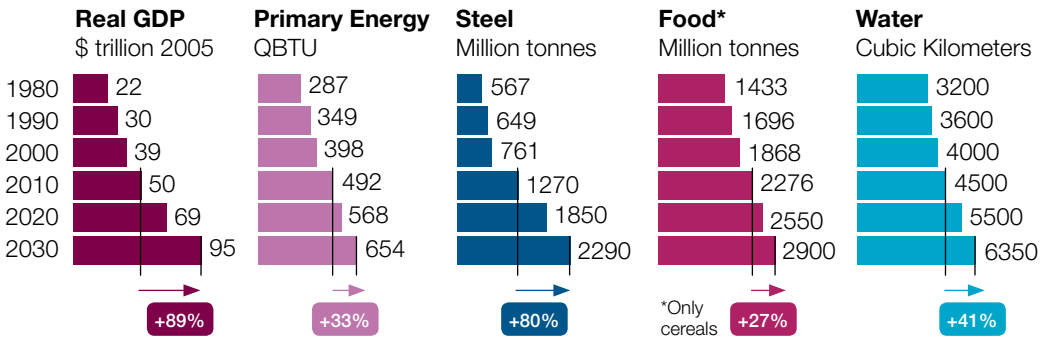
1. Population to reach 9 billion by 2050

Source: U.S. Census Bureau, International Database.



2. Demand for most resources has grown strongly since 2000, a trend that is likely to continue to 2030

Source: Global Insight; IEA; UN Environmental Program (UNEP); FAO; World Steel Association; McKinsey Global Institute. Resource Revolution: Meeting the world's energy, food and water needs. 2011. SICM Analysis.



2. UN Population Division.

3. McKinsey Global Institute, 2011. Resource Revolution: Meeting the world's energy, materials, food and water needs.

The impacts of increased concentration of CO_2e in the atmosphere are already becoming severe, not only the number of weather related catastrophes, but the economic consequences of those events.

Climate Change. There is increasing recognition that mankind is contributing to climate change. Climate change is exceeding Intergovernmental Panel on Climate Change (IPCC) estimates, accelerating the risk that temperature changes will lead to extreme environmental conditions, affecting not only where we live, but the productivity of our agricultural and forestry sectors.

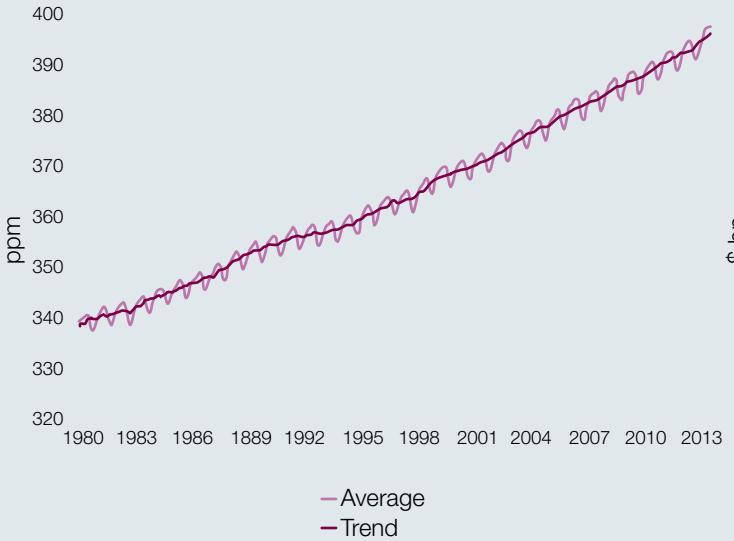
Population growth and consumption of energy to feed the industrialization of emerging markets result in increased CO_2e levels in the atmosphere, and lead to increased volatility in the world's climate. Figure 3 illustrates the alarming trend in the concentration of CO_2e since 1980, which passed 400 parts per million in June 2013.

The impacts of increased concentration of CO_2e in the atmosphere are already becoming severe, not only the number of weather related catastrophes, but the economic consequences of those events.

Insured losses from weather catastrophes have increased an astounding 1,831% from $3.7 billion in 1980 to $68 billion in 2012, registering a cumulative $860 billion in insured losses during the period. These insured losses are just 30% of the overall cumulative losses of $2.8 trillion which have grown 454% during the period (See Figure 4, Munich Re, 2012).

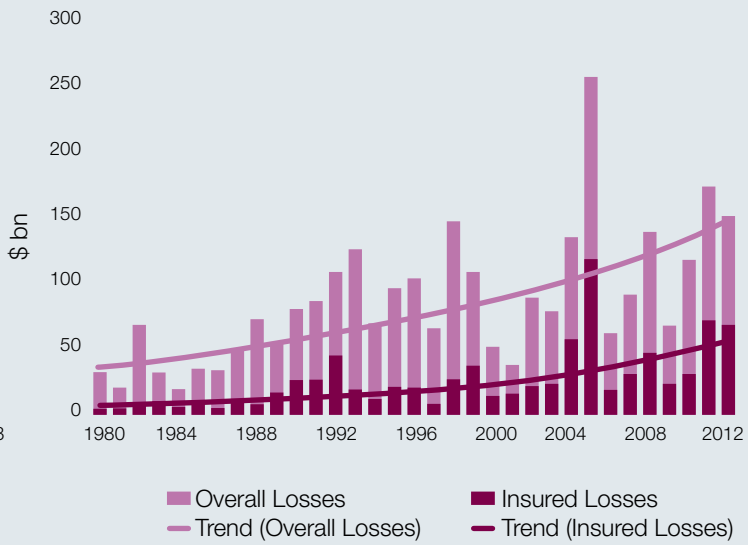
3. The concentration of CO_2e in the atmosphere continues to rise

Source: NOAA.



4. Overall and insured losses from weather catastrophes worldwide, 1980-2012

Source: Munich Reinsurance Company, Geo Risks Research, NatCatSERVICE.



Climate Requires A Global Perspective

CO_2e emissions vary across the globe, with China the world's largest emitter having surpassed the US in 2006. While policies enacted locally are critical for regional emissions reductions, a global view of emissions reductions is necessary for investors. Figure 5 illustrates CO_2e emitted in 2011 by geographic region. The CO_2e emissions estimates are calculated from three primary CO_2e emitting human activities: fossil fuel burning, cement production, and gas flaring. While there is regional differentiation of carbon emissions, it is a global issue for investors.

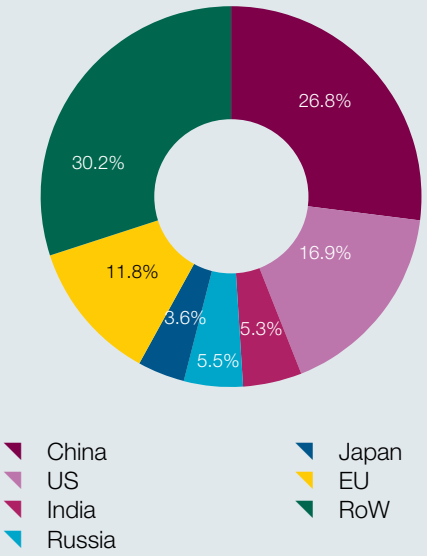
Climate Change Is Financially Material

Furthermore, numerous studies by leading economists, non-governmental organizations and financial institutions have repeatedly demonstrated that the impacts of climate change will have not only significant and potentially devastating social impacts but also significant financial consequences.

For example, a recent study by Mercer Investment Consulting demonstrated that the cost of climate change adaptation, which in 2012 was five times residual climate damages, will come down considerably compared to estimated residual climate damages in 2030 and 2050. The cost of waiting could exceed $900 billion by 2050 (see Figure 6).

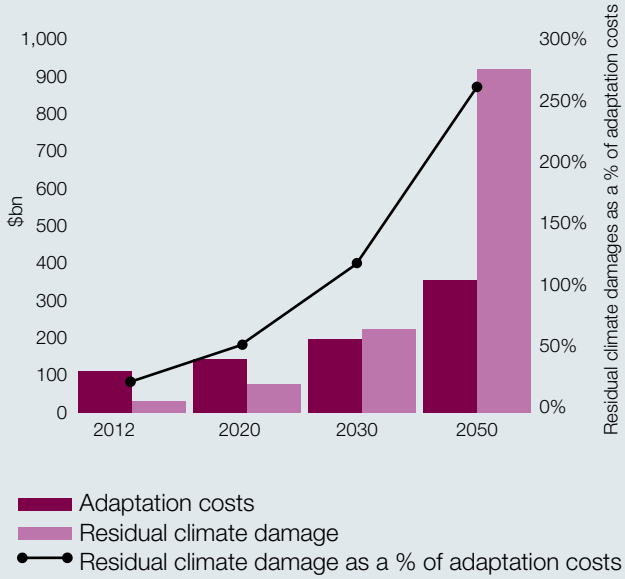
5. Emissions by geography, 2011

Source: U.S. Energy Information Administration (EIA).



6. Adaptation costs versus residual climate damages, 2012-2030

Source: Mercer Climate Change Scenarios - Implications for Strategic Asset Allocation: Grantham LSE/Vivid Economics calculations, based on World Bank (2009).



CDP Questionnaire

CDP requests disclosure from over **5,000** companies

Each year, thousands of companies disseminate information detailing their impact on climate change to investors via CDP.

As secretariat to **722 investor signatories** to its climate change program, CDP has operated on an annual cycle since 2003. At the beginning of each year, **CDP requests disclosure from over 5,000 companies,** inviting the CEO, Chairman, Investor Relations and Corporate Sustainability officers to respond to the information request. Companies respond via the CDP online response system and are provided with detailed reporting guidance. **Over 2,400 publicly traded companies responded to CDP in 2012.** Nearly 1,700 additional companies disclose to CDP through a parallel program focused on company supply chains.

The content of the CDP climate change questionnaire has evolved over time while maintaining a consistent focus on the (1) governance, (2) risks & opportunities, and (3) environmental accounting of emissions.[4] (see Figure 7)

- **Governance** and management includes questions that ask companies to detail how climate change is managed internally, with respect to Board and senior executive responsibility, compensation incentives, risk management procedures, business strategy, engagement with policy makers, targets for emissions reductions and investment in such projects.
- **Risks & Opportunities** asks companies to describe how regulatory, physical and other risks from climate change may impact business operations and to quantify substantive changes in operations, revenue or expenditure.
- **Emissions** are accounted for based on the metric tonnes of carbon dioxide equivalent (CO_2e) of scope 1 (direct), scope 2 (indirect), scope 3 (such as supply chain) emissions. In addition, information on emissions intensity, energy consumption, emissions trading, and breakdowns by geography are requested. Critically for investors who rely upon the consistency and comparability of company information to inform their analysis, companies are also asked to detail external third-party verification and assurance of reporting.

7. Summary of CDP climate change questionnaire
Source: CDP.

	Climate Change
I. Governance	◥ Board and management ◥ Compensation incentives ◥ Targets
II. Risks & Opportunities	◥ Regulatory risk ◥ Physical risk from climate change ◥ Revenue and business opportinities
III. Environmental Accounting	◥ Tonnes of emissions - Scope 1, 2 and 3 ◥ Energy consumption by fuel type ◥ External verification and assurance

4. For full details of the CDP climate change information request for 2013, please visit https://www.cdproject.net/CDP%20Questionaire%20Documents/Investor-CDP-2013-Information-Request.pdf

CDP Disclosure Scores

CDP began scoring company responses to its annual climate change questionnaire on behalf of investor signatories in 2007. The CDP disclosure score serves two purposes. For companies, disclosure scores provide a benchmark of the transparency of climate change related information disseminated to the market. For investors, disclosure scores provide a gauge of corporate engagement on climate change that can be used to differentiate between companies as part of their investment process. This may take place in the pre-investment stage of research that feeds into security selection and/or in post-investment corporate governance activities such as proxy voting and engaging company management.

The disclosure score reflects the comprehensiveness of a company's response in terms of the depth and breadth of its answers. The score is normalized to a 100-point scale on an absolute basis and covers the transparency of information provided on emissions measurement; climate-related initiatives; risks & opportunities to the business; and external verification and assurance.

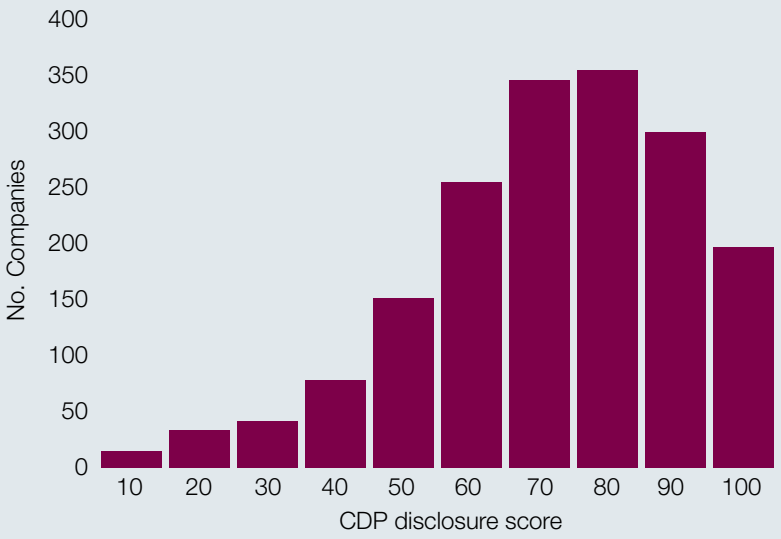
It is important to note that **the climate disclosure score is not a metric of a company's performance in relation to climate change management, as the disclosure score does not reflect mitigation actions.** A company's disclosure score is based solely on the information disclosed in the CDP response.[5]

Generally, companies scoring within a particular range suggest levels of commitment to, and experience with, climate disclosure. Higher absolute scores indicate that senior management is building climate related risks and opportunities into core business. Mid-range scores reflect satisfactory disclosure, but room for improvement, while lower scores suggest limited disclosure of climate related risks, opportunities and overall carbon emissions (see Figure 8).

Each year, CDP highlights leading Global 500 companies based on their CDP disclosure scores in the Climate Disclosure Leadership Index (CDLI). The CDLI is an index of the disclosure scores of top decile of companies. **Since 2008, the CDP Global 500 CDLI minimum score has risen 47% from 66.0 to 97.0 in 2013; the average score has risen 18% from 83.1 to 98.3; and the range of scores has narrowed from 32 to just 3 points (see Figure 9).** The clear trend of improvement from the world's largest companies is an encouraging sign that climate change is now becoming a boardroom priority.

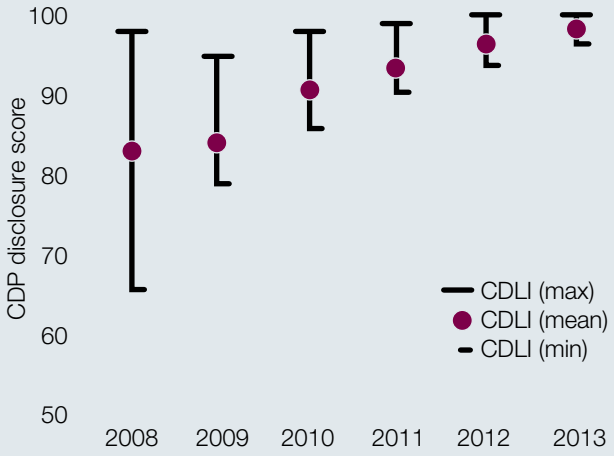
8. Distribution of CDP disclosure scores, 2008-2012

Source: CDP.



9. The range of Global 500 CDLI scores has tightened as company responses have improved

Source: CDP.



5. For further details on the 2013 CDP scoring methodology, please visit https://www.cdproject.net/Documents/Guidance/CDP-2013-Scoring-Methodology.pdf

Carbon Intensity Of Global Industries

In this study, we have recalibrated CDP disclosure scores on an industry-relative basis rather than directly analyze the scores published by CDP each year that are calculated consistently across all sectors on an absolute basis from zero to 100. Therefore, the companies scoring in the Q1 by industry do not directly overlap with those highlighted in the CDLI.

Industries with high emissions intensity are typically more than

twenty times

more carbon intensive than the global median of 53 tonnes CO_2e per million dollars of capital.

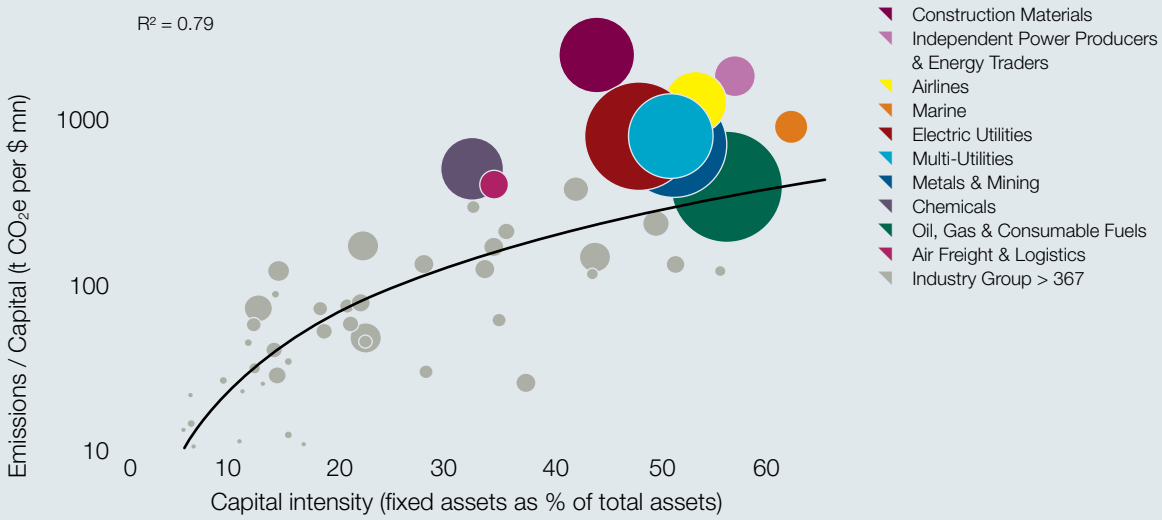
The primary reason we chose to evaluate the industry-relative performance of CDP disclosure is the significant gap between the emissions profile across industries which is best measured on a logarithmic scale. The difference is not merely a matter of degree, but an order of magnitude with respect to emissions intensity[6] as a proportion of overall capital deployment. This should come as no surprise given fixed asset investment in plant, property and equipment directly corresponds to physical operating assets such as power plants, refineries, factories and machinery. **Industries with high emissions intensity are typically more than twenty-times more carbon intensive than the global median** of 53 tonnes CO_2e per million dollars of capital.

Industries with high emissions intensity include the obvious (Airlines, Electric Utilities, Marine Transportation) as well as less apparent such as Metals & Mining and Construction Materials (due primarily to the intensity of the cement industry).

In Figure 10, the size of each industry bubble illustrates the total emissions reported to CDP in 2012 and shows that emissions intensity of each industry corresponds to proportion of fixed assets on the balance sheet.

10. Capital intensity vs. emissions intensity across global industries, 2012

Source: CDP, Bloomberg.



6. The intensity of emissions is calculated based on the total scope 1 and 2 greenhouse gas emissions reported to CDP relative to capital employed on the balance sheet.

Engagement On Climate Reflects Higher Quality

Our analysis of corporate carbon disclosure supports the view that high-quality companies provide investors with transparent information on sustainability and climate change. It provides a window for management practices. We analyzed the last five years of corporate reporting to CDP from 2008 to 2012. Our universe comprised 702 companies totaling $25 trillion in market capitalization that have been featured in the flagship CDP Global 500 reports since 2008. This sample represents the majority of the market capitalization of global equities as represented by commonly used benchmark indices.

Our analysis of company CDP disclosure scores focused on peer relative comparisons. First, we calculated the three-year rolling disclosure scores on an absolute basis for each company over the time period. Second, we percentile ranked each three-year rolling average score on an industry-relative basis and sorted into quintiles by GICS Level II Industry Group (where quintile 1 = highest CDP disclosure score and quintile 5 = lowest score).

Finally, we examined the relationship between the resulting industry quintile of CDP disclosure score to various metrics of financial profitability such as return on equity, cash flow, earnings and dividends, as well as valuation measures including book-to-market ratio and earnings, dividend and cash flow yields.

We found that industry leadership on climate engagement is linked to higher performance on three financial metrics that reflect overall corporate quality:

return on equity, cash flow stability, and dividend growth.

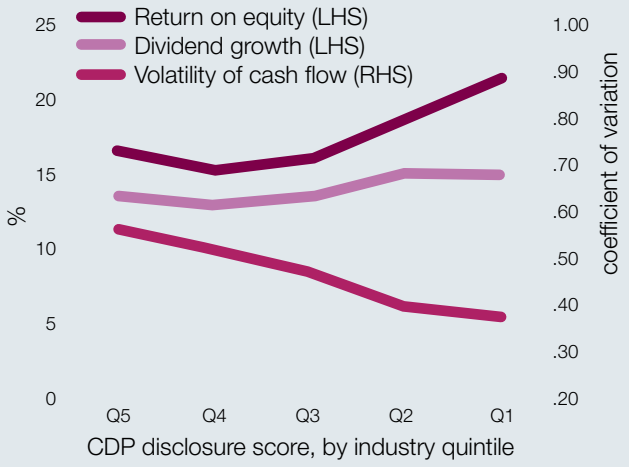
We found that industry leadership on climate engagement is linked to higher performance on three financial metrics that reflect overall corporate quality: return on equity,[7] cash flow stability,[8] and dividend growth.[9]

Specifically, we find that superior climate engagement, as measured by the difference between Q1 industry leaders and Q5 industry laggards on CDP disclosure scores, portends a "quality premium" equivalent to +5.2% return on equity (ROE); +18.1% cash flow stability and +1.6% dividend growth. Given CDP disclosure scores are calculated solely based on company responses to the CDP climate change questionnaire without reference to financial performance, one might not expect the thoroughness and completeness of a company's response to bear any statistical relationship to financial metrics. However, our analysis of the CDP Global 500 suggests otherwise.

Figure 11 illustrates the progression of companies whose CDP disclosure scores rank in the bottom quintile in their industry group, up to first quintile industry leaders.

11. Industry-relative CDP disclosure scores versus return on equity, dividend growth, and volatility of cash flow

Source: CDP, Bloomberg.



7. Return on equity (ROE) = net income less preferred dividends, divided by average total common equity (three-year average, 2010-2012).

8. Volatility of cash flow refers to the coefficient of variation of annual cash flow from operations calculated as the ratio of the standard deviation relative to the mean (ten-year stdev and mean, 2003-2012).

9. Dividend growth calculated as the compound annual growth rate in dividend per share (three-year CAGR, 2009-2012).

Exhibit A: Higher Return On Equity

Companies demonstrating a firm commitment to engage on climate change issues on the basis of higher CDP disclosure scores generated higher profitability than their industry peers over the three-year time period from 2010 to 2012. **Q1 industry leaders generated average ROE of 21.4% - a profitability premium of 5.2% points versus Q5 companies (16.2%) (see Figure 12).**

This profitability premium during the period strongly suggests that companies are engaging on climate change to sustain competitive advantage versus industry peers and can be regarded as higher quality, as measured by industry leading return on equity.

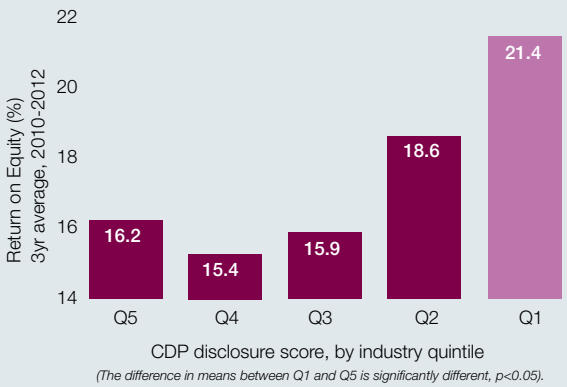
When we disaggregate the data by sector, we note that the correlation between CDP disclosure scores and ROE is highest in defensive sectors that are characterized by predictable cash flow generation and low market Betas below 0.8 (where 1 = Beta of the market). As illustrated in Figure 13, the correlation coefficient between CDP disclosure scores and ROE exceeds 25% in Consumer Staples (r=0.54), Utilities (r=0.29), Telecommunication Services (r=0.29), and Health Care (r=0.26). Conversely, negative correlations are observed in more cyclical sectors, including Consumer Discretionary (r=-0.07), Financials (r=-0.11) and Energy (r=-0.18).

If one associates a high CDP disclosure score with long term planning and risk management capability, it is possible that the stability of the defensive sectors makes them more conducive to, and rewarding of, what we typically think of as "good management practice". On the other hand, management teams in cyclical sectors may need to be more attuned to the short-term business risks and opportunities, and are more likely to be rewarded for optimizing performance over the cycle. We would therefore expect them to allocate resources to activities that maximize ROE in the short term, and less likely to focus on projects that take a long-term view, such as reporting to CDP.

Figure 13 illustrates that the lower the sector Beta, the higher relationship between CDP disclosure scores and ROE.

12. CDP disclosure scores by industry quintile versus ROE, 2010-2012

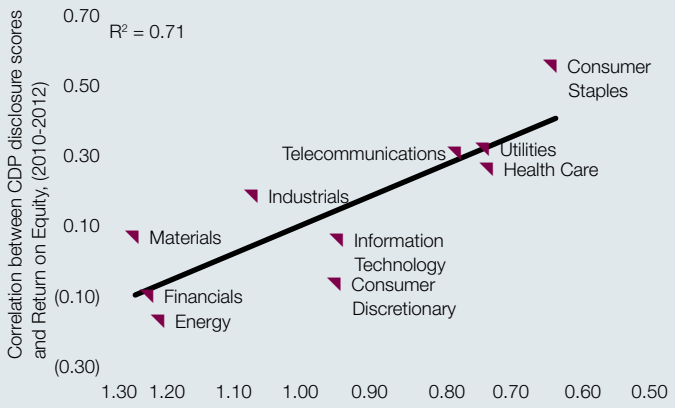
Source: CDP, Bloomberg.



(The difference in means between Q1 and Q5 is significantly different, p<0.05).

13. Correlation between CDP disclosure scores and ROE is highest in low Beta sectors

Source: CDP, Bloomberg.



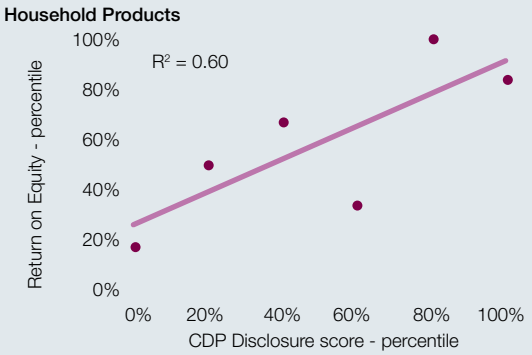
(Beta is the MSCI Sector Beta relative to the MSCI World.)

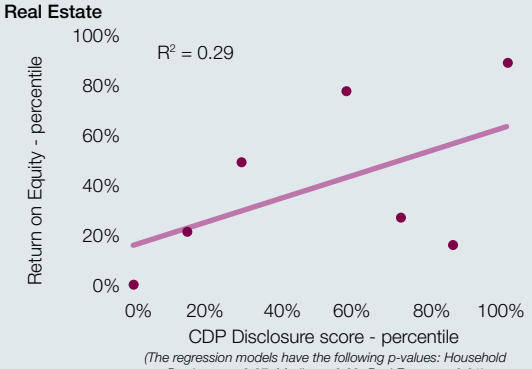
Further, Figures 14 and 15 reveal that there are identifiable relationships between CDP disclosure scores and ROE at the company level industry by industry. This is surprising because we would not have expected an observable relationship between voluntary corporate climate change disclosure and financial profitability at this level of granularity.

Consistent with the broader sector correlations, the Household Products industry (R^2=0.60) shows a strong relationship between CDP disclosure and ROE. We also note moderate relationships in cyclical industries such as Media (R^2=0.40), and Real Estate (R^2=0.29) (Figure 14), which conflicts with the inverse correlations observed at the sector level for the Consumer Discretionary and Financial sectors (Figure 15). We also note industries where higher CDP disclosure scores are inversely correlated to ROE including, Consumer Durables & Apparel, Diversified Financials and Consumer Services as illustrated below in Figure 15. Note that at the sector level, the sample size may be too small to draw sector level conclusions, but the results could be explained by sector characteristics that differ from the broader industry. This suggests that further sector by sector analyses would benefit from larger samples.

14. Industry groups with positive correlations between CDP disclosure scores and ROE

Source: CDP, Bloomberg.

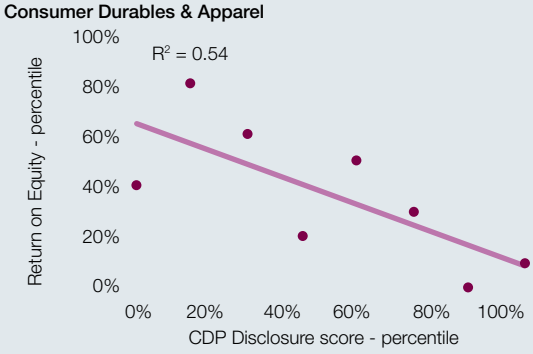


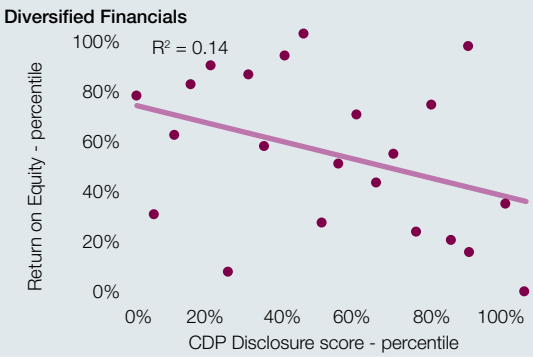


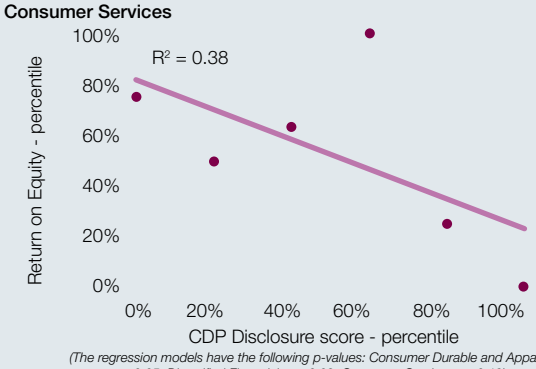
(The regression models have the following p-values: Household Products, p=0.07, Media, p=0.09, Real Estate, p=0.21)

15. Industry groups with negative correlations between CDP disclosure scores and ROE

Source: CDP, Bloomberg.







(The regression models have the following p-values: Consumer Durable and Apparel, p =0.05, Diversified Financials, p=0.08, Consumer Services, p=0.19).

Exhibit B: More Resilient Cash Flow Generation

High-quality companies are more likely to generate more resilient and stable cash flows over time. Consistent with our observation of higher return on equity generated by companies with Q1 industry leading CDP disclosure scores, we also observe a higher degree of cash flow stability over the past decade. Between 2003 and 2012, both Q1 and Q2 industry leaders on CDP disclosure scores measured a lower coefficient of variation of annual cash flow from operations suggesting stable profitability. We extended this analysis to a ten-year period as the global universe of companies reports cash flow from operations on an annual basis versus quarterly financial reporting.

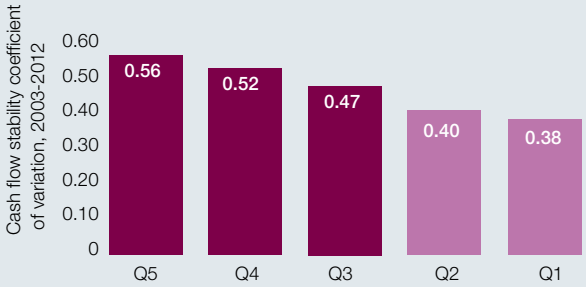
We calculated the coefficient of variation based on the last ten years of cash flow from operations. This measures the ratio of the standard deviation relative to the mean for each company over the time period and provides a statistical measure of annual cash flow volatility where the figures to the right indicate more stable profitability. We excluded Banks and Diversified Financials in this piece of analysis due to the extreme volatility and negative cash flows during the 2008 financial crisis and subsequent recovery.

Figure 16 illustrates the declining cash flow volatility of each quintile of climate engagement disclosure scores by industry. In short, Q1 industry leaders on climate engagement have generated more resilient cash flow from operations over the past decade.

In addition, we note that both Q1 and Q2 companies average higher ratios of cash flow to capital expenditure, indicating that leaders on climate change engagement have financial flexibility to redeploy capital to upgrade property, plant and equipment from the cash flow generated from existing business operations (see Figure 17).

16. Coefficient of variation of cash flows by industry quintile of CDP disclosure score, 2003-2012

Source: CDP, Bloomberg. Excludes Banks and Diversified Financials.



(The difference in means between Q1 and Q5 is significantly different, p<0.05).

17. Cash flow from operations relative to capital expenditure, 2010-2012

Source: CDP, Bloomberg.

(The difference in means between Q1 and Q5 is significantly different, p=0.06).

Exhibit C: Higher Dividend Growth

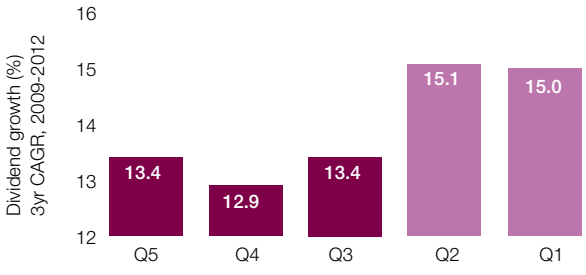
We also observe that both Q1 and Q2 industry leaders on CDP disclosure scores tended to deliver higher dividend growth to investors over the last three years.

We found that over the three-year period from 2009-2012, although not statistically different, Q1 and Q2 industry leaders on CDP disclosures tend to generate higher compound annual growth in dividends per share than their peers in Q3, Q4 and Q5.

While earnings growth is often volatile and difficult for participants in the capital markets to forecast consistently over time, the ability of companies to grow dividends to shareholders can be viewed as another strong reflection of corporate quality (see Figure 18).

18. Dividend per share growth by industry quintile of CDP disclosure score, 2009-2012

Source: CDP, Bloomberg.

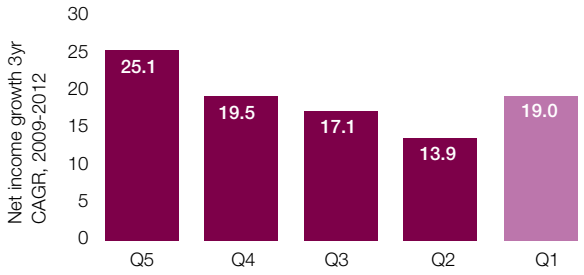


(The difference in means between Q1 and Q5 is not significantly different, p>0.10).

Additional Financial Metrics

We also analyzed additional financial metrics not detailed in this report including measures of earnings growth that proved inconclusive given the volatility during the period analyzed (2008-2012), and 2009 as the base year for three-year compound annual growth rate calculations through 2012 (see Figure 19).

19. Industry-relative CDP disclosure scores versus net income growth



(The difference in means between Q1 and Q5 was not significantly different, p>0.10).

The Opportunity: No Discernible Valuation Premium Ascribed By The Market

Given the superior profile of return on equity, cash flow stability and dividend growth generated by companies with Q1 industry-relative CDP disclosure scores, one might expect a valuation premium to follow. However, we observe no discernible valuation premium ascribed by the market to Q1 industry leaders as a group on the basis of common metrics of stock valuation including earnings yield, book-to-market ratio, dividend yield or cash flow yield[10] (see Figure 20).

Moreover, over the past three years Q1 CDP companies as a group had the highest earnings and dividend yields as compared to Q2, Q3, Q4 and Q5. On both a book-to-market and cash flow yield basis, Q2 CDP companies had the highest average ratios. Q1 CDP companies traded at a small premium on a book-to-market basis over the period. At best, one might conclude that Q1 CDP companies traded at a discount to industry peers based on earnings and dividend yields. At worst, the observed difference in the average valuation metrics for each CDP quintile is negligible, implying no additional valuation premium (see Figure 21 and 22).

In short, Q1 CDP companies offer higher ROE, cash flow stability and dividend growth with no observable valuation premium to be paid by investors.

20. CDP disclosure scores by industry quintile versus valuation metrics, %, 2010-2012

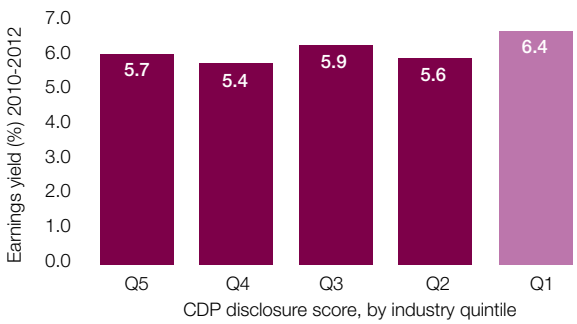
Source: CDP, Bloomberg.

CDP quintile by industry	Earnings yield	Book to market	Dividend yield	Cash flow yield
Q1	6.4	39.9	3.3	11.4
Q2	5.6	43.1	3.1	12.0
Q3	5.9	41.6	3.0	11.1
Q4	5.4	41.5	3.0	11.7
Q5	5.7	40.8	2.8	10.4

(For each valuation metric, the difference in means between Q1 and Q5 was not significantly different, p>0.10, except for Dividend yield, where p <0.05).

21. CDP disclosure scores by industry quintile versus average earnings yield, 2010-2012

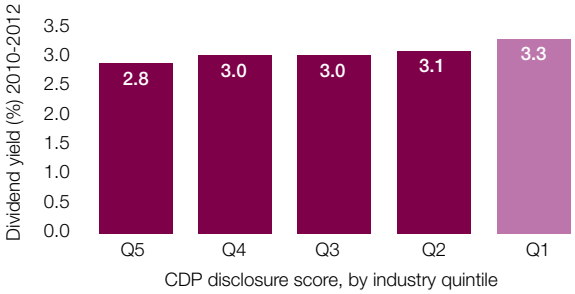
Source: CDP, Bloomberg.



(The difference in means between Q1 and Q5 was not significantly different, p>0.10).

22. CDP disclosure scores by industry quintile versus average dividend yield, 2010-2012

Source: CDP, Bloomberg.



(The difference in means between Q1 and Q5 was significantly different, p<0.05).

10. Earnings yield calculated as earnings per share divided by price per share, 2010-2012 (inverse of P/E ratio). Book-to-market ratio calculated as book value of total common equity per share divided by price per share, 2010-2012 (inverse of P/B ratio). Dividend yield calculated as dividend per share divided by price per share, 2010-2012. Cash flow yield calculated as cash flow per share divided by price per share, 2010-2012 (inverse of Cash P/E).

Industry Example: Agriculture

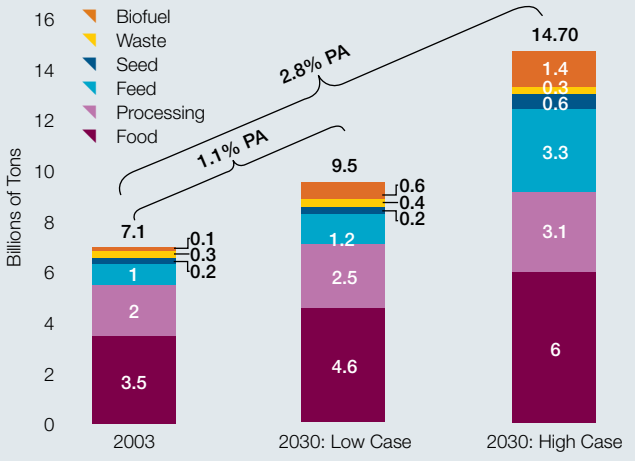
The study in this paper was conducted at the aggregate level, clustering companies into quintiles of climate engagement and relating that scoring to financial performance. At a company level, we look at specific activities reported to CDP on emissions reductions and water conservation. Here we explore the Agricultural theme, made up of several sectors, in order to understand how individual companies are taking action. And while the relationship to financial performance is varied at the aggregate level for this theme, many of these activities are already showing significant financial savings at the company level.

As we have discussed, population growth, urbanization, and increased consumption in developing markets are driving demand for energy, water and other natural resources. This demand, particularly for fossil fuels, is greatly contributing to climate change. Many believe the impacts of climate change—as well as the increasing scarcity of freshwater—will have a disproportionate impact on the agricultural industry's ability to meet future demand. Food production will need to increase by 70% by 2050 to feed the world's growing population. Water demand will grow five-fold, the limits to cropland productivity will be tested, and demand for arable land area will increase. At the same time, emerging economies are undergoing a shift in dietary preferences to more protein-based diets, and developed countries continue their quest for more biofuels resulting in a 30-50% increase in the total demand for maize and oilseeds over the next decade.[11] And while agricultural production is projected to grow over the coming decades, it may not meet projected demand.[12]

Corporate responses to climate change and water scarcity in the agriculture sectors are critical to finding a sustainable and profitable path forwards in the provision of food, feed, fuel and fiber for the populations to come. Investors in the agribusiness sector are keen to discern the leaders in climate change innovation, and CDP reports are a rich source of data for investors performing this analysis. Corporations that are engaging in activities to reduce carbon emissions are in effect using their energy resources more efficiently. Many of these companies are also using their water resources more efficiently. Addressing climate change through "resource productivity", the increasingly efficient use of energy and water, is a strong indicator that a company integrates efficiencies into its business operations along the entire value chain.

23. Agriculture production must double to meet future needs

Sources: McKinsey & Company, FAOSTAT; U.N. Population Prospects; Unica, SICM Analysis.



11 Thomas W. Hertel. The Global Supply and Demand for Agricultural Land in 2050. American Journal of Agricultural Economics. January 2011.

12 Godfray HCJ, Beddington JR, Crute IR, Haddad L, Lawrence D, et al. (2010) Food security: The challenge of feeding 9 billion people. Science 327: 812–818. Tilman D, Balzer C, Hill J, Befort BL (2011) Global food demand and the sustainable intensification of agriculture. Proc Natl Acad Sci USA 108: 20260–20264. Foley JA, Ramankutty N, Brauman KA, Cassidy ES, Gerber JS, et al. (2011) Solutions for a cultivated planet. Nature 478: 337–342. United Nations, Department of Economic and Social Affairs. Population Division, Population Estimates and Projections Section. FAO (2009)Global agriculture towards 2050. Rome, FAO. OECD/FAO (2013), OECD-FAO Agricultural Outlook 2013–2022, OECD Publishing and FAO.

In the following tables, we present examples of agribusinesses that are taking a leading role in reducing their own carbon emissions and increasing their water use efficiencies (see Figures 24 and 25). Companies ranging from the fertilizer industry to seed producers and food and grain traders have sought out savings in water usage. These advances help push water savings through the value chain and can represent substantial economic value. Further financial savings for agribusiness firms come from CO_2 emissions reductions.

24. Agriculture company examples of emissions reduction projects

Source: CDP Climate Change Disclosure 2012
£1 = US $1.5715, June 15, 2012. Bloomberg.

Company	Selected emission reduction projects	CO_2e saved (tonnes / year)	Cost saving ($ / year)	Average Payback
Mosaic Company	Savings made almost entirely from process efficiency investments. Driven by ROICWorks! (Return on Capital Invested). Multiple measures across multiple sites including installation of thermostat controlled automatic shut-offs on cooling tower fans, installing efficient lighting in plants, installing variable frequency drives on slurry pumps, eliminating the use of compressed air for cooling equipment and upgrading a DAP2 scrubber pump.	135,893	13,822,549	1 - 3 years
Incitec Pivot	Disclosed savings entirely through building process efficiency investments. The measures have included replacement of an underperforming superheater coil, alterations to brickwork to increase heat transfer to coil, application of CETEK coating to reformer walls to improve heat transfer to catalyst tubes, installation of additional control instrumentation, upgrading their utilities feedwater pump, repairing leaking blowdown valves, adjusting air conditioning timers on buildings & improved use of site KPIs.	81,244	Not Disclosed	1 - 3 years
Deere & Company	Savings have been made through a combination of building service efficiency upgrades (43%) and low carbon installations (57%). Investments include conversion of 2 coal boilers to high efficiency natural gas boilers and sunlight harvesting for office daylighting; multiple lighting and heating, ventilation, and air conditioning (HVAC) efficiency upgrades; and switching from a higher carbon electricity provider to a lower carbon electricity provider in Europe whilst incorporating renewables into electricity supply mix in India.	47,000	Not Disclosed	1 - 3 years
Tate & Lyle	Tate & Lyle have reduced the CO_2 footprint through energy effiency investments in building services and their processes. Examples of investments include investment in heavy steep water pump upgrades, new rotors for steam turbines, use of waste heat to heat wash water, mositure reduction and evaporation efficiency improvements, the installation of variable frequency drives and the installation of more efficient lighting.	25,996	1,706,214	1 - 3 years

25. Agriculture company examples of water projects

Source: CDP, 2012 Water Disclosure.

Company	Selected Water Efficiency projects	Disclosed Water Saved (ML / year)
Mosaic Company	79% of Mosaic's water savings are from recycling, followed by savings in surface water (16%), groundwater (3.5%) and municipal water (1.5%).	1,277,491
Potash Corporation of Saskatchewan Inc.	Almost 92% of Potash's (CoS) water savings have come from recycling initiatives. The balance from groundwater, surface and municipal savings.	1,101,694
Bunge	63% of Bunge's water savings have come from surface water savings, followed by recycling (14%), groundwater (12.5%) and municipal water savings (10.5%).	81,780
Syngenta International AG	Syngenta have undertaken actions to save water use from groundwater, municipal and surface areas including recycling which accounted for the greatest savings at 72% of the total.	31,031
Monsanto Company	Monsanto have undertaken actions to reduce their use of groundwater (72% of savings), municipal and surface water.	19,928

Conclusion

Our analysis demonstrates that companies that manage against the impact climate change has on their business, as measured by the CDP disclosure score, also reflect superior financial qualities: higher return on equity, greater cash flow stability and stronger dividend growth. This realization points toward the beliefs CDP and SICM share: as the impact of climate change on global businesses increases, the differentiation between the corporate leaders and laggards will be reflected in financial terms as well.

Climate change and the impacts of resource scarcity have become material issues affecting corporations' ability to compete and since investors seek out superior risk-adjusted returns. It is therefore our responsibility as investors to discover which companies are leading the way and which are at risk of falling behind. Through this process the market is beginning to evaluate corporate behavior through a new lens and will ultimately re-price environmental, social and governance (ESG) risk. Investors who have incorporated these principles into their investment processes and decisions will benefit.

With that in mind, we maintain that the integration of climate change and financial analysis is only just beginning. The world's leading investment managers will consider the impact companies have on the environment and vice-versa as they make investment decisions. As SICM, as well as others, 'mainstream' such analyses, the financial markets will re-price risk accordingly.

Glossary

Benchmark index – A composite of like securities used as a standard measure of performance for that group (e.g., S&P 500).

Beta (β) – Is a measure of a stock or portfolio that describes the correlated volatility of an asset in relation to the volatility of the benchmark that the asset is being compared to.

Book-to-market – Book value of equity per share / stock price (or market value per share). The inverse of the P/B ratio, an alternative method of looking at a company's valuation.

Capital expenditure – Funds used by a company to purchase, maintain or upgrade physical assets such as real property (land), plant (buildings) or equipment.

Cash flow from operations – The funds generated by a company's normal business activities (e.g., excludes sales of assets or investments and financing efforts), reflecting actual cash inflows and outflows related to revenue generation.

Cash flow stability – Volatility of cash flow refers to the coefficient of variation of annual cash flow from operations calculated as the ratio of the standard deviation relative to the mean (ten-year stdev and mean, 2003-2012).

Cash flow yield – Cash flow from operations per share / stock price (or market value per share). The inverse of the P/CF ratio allows comparison of companies that have negative cash flow which would normally make the P/CF ratio insignificant.

CDP disclosure score – Reflects the comprehensiveness of a company's response in terms of the depth and breadth of its answers. The score is normalized to a 100-point scale on an absolute basis and covers the transparency of information provided on emissions measurement; climate-related initiatives; risks & opportunities to the business; and external verification and assurance. The climate disclosure score is not a metric of a company's performance in relation to climate change management, as the disclosure score does not reflect mitigation actions. A company's disclosure score is based solely on the information disclosed in the CDP response. For further details on the 2013 CDP scoring methodology, please visit https://www.cdproject.net/Documents/Guidance/CDP-2013-Scoring-Methodology.pdf

CDP Global 500 – The world's 500 largest companies by market capitalization based on the FTSE Global Equity Series on January 1st of each year.

Climate Disclosure Leadership Index ("CDLI") – An index of the disclosure scores of the top decile companies in the CDP Global 500.

CO_2e – Carbon dioxide equivalent.

Coefficient of variation – Measures the dispersion of data points around the mean and is used to standardize sets of data to make them comparable despite differences in their absolute values – the higher the coefficient of variation, the more variation there is in the data. The coefficient of variation is calculated by dividing the standard deviation of the data set by the mean.

Correlation – A relationship between variables which implies they are associated in some manner – this does not equate to cause and effect. Positive correlation means that when one variable increases the other one tends to increase. Negative (inverse) correlation means that when one variable increases the other tends to fall.

Correlation coefficient (r) – Measure of the strength and direction of a linear relationship. The value of r is always between negative one and positive one ($-1 \leq r \leq +1$).

Cyclical industry – An industry whose revenue generation is more closely tied to the business cycle and whose earnings and cash flow are therefore more volatile, including energy, materials, industrials, consumer discretionary, financials and information technology.

Defensive industry – An industry whose revenue generation is less exposed to business cycles and is therefore seen as more stable, or defensive, by investors, including health care, utilities, telecoms, and consumer staples.

Dividend growth – Dividends are payments made by a company to its shareholders, generally on a quarterly basis, but they can be paid annually or randomly as well. Dividend growth is the year-over-year change in the total annual dividend paid to shareholders.

Dividend yield – Annual dividend per share / stock price (or market value per share). If dividends are paid quarterly, the annual dividend amount is based on the most recent quarterly dividend annualized.

Earnings yield – EPS (i.e. earnings per share) / stock price (or market value per share). The inverse of the P/E ratio allows comparison of companies that have negative earnings which would normally make the P/E ratio insignificant.

GICS Level II Industry Group – The Global Industry Classification Standard (GICS) is a standardized industry classification system used by the financial community. It has four levels of detail: 10 sectors, 24 industry groups, 68 industries, and 154 sub-industries.

Market capitalization – Total market value of a company's equity.

Price-to-book value (P/B) – Stock price (or market value per share) / book value of equity per share.

Price-to-cash flow (P/CF) – Stock price (or market value per share) / cash flow per share.

Price-to-earnings (P/E) – Stock price (or market value per share) / EPS (i.e. earnings per share).

Quality premium – Refers to the amount of outperformance of a company relative to its peers on various financial metrics (e.g., margins, growth rates, return on assets, return on equity).

Return on equity (ROE) – (Net income – preferred dividends) / average total common equity.

R-squared (R^2) – Also known as the coefficient of determination, measures the overall accuracy of a regression line. It shows the proportion of the variation in one variable that can be explained by the regression. The value of R^2 is always between zero and one ($0 \leq R^2 \leq 1$).

Scope 1 emissions – All greenhouse gas (GHG) emissions that are directly from sources that are owned or controlled by the reporting entity.

Scope 2 emissions – All indirect greenhouse gas (GHG) emissions from the consumption of purchased electricity, heat or steam. Indirect GHG emissions are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.

Scope 3 emissions – Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.[13]

Sustainability reporting – Reporting of environmental, social and governance (ESG) factors and metrics, the risks and opportunities they create for a business, the company's strategic plan for managing the risks and capitalizing on the opportunities, and its successes and failures in the execution of that strategy.

Sustainable investing – Integration of environmental, social and governance (ESG) factors into standard investment analysis.

Third-party verification and assurance – Audit and verification by a competent and independent organization that uses a standardized set of terms and methods.

Valuation premium – Refers to the excess value that investors assign to a company relative to its peer group, reflected in higher multiples (e.g., P/E, P/B, EV/EBITDA, etc.).

13. Greenhouse Gas Protocol.

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