2014 ESG Trends to Watch

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As we close out a year in which investors have turned cautious on some Emerging Market economies, when the share price of coal producers has tumbled due to weakening demand, and as political fights over the government's fiscal position shut down the US government for the first time in 17 years, which ESG themes will intersect with key market trends next year?

In this annual edition of our ESG Trends to Watch, we explore some of the most pressing questions that our clients are asking, heading into 2014.

1. **To Divest or Not to Divest?**

   Options for Reducing Fossil Fuel Exposure

2. **How are Emerging Markets Economies Turning Income into Wealth?**

   Improvements in Human Capital Infrastructure

3. **What's Green about "Green Bonds"?**

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To Divest or Not to Divest?

Options for Reducing Fossil Fuel Exposure

The debate around climate change shifted dramatically in tone this past year. No longer is the focus primarily on lobbying policy makers around the world to regulate carbon emissions. Rather, there appears to be a social movement in the making, and its targets are the investment committees of the world's major pension funds and endowments. Not since the apartheid era in South Africa have college campuses in the US and elsewhere teemed with the call for divestment. For this generation of students, the moral imperative today is to stop all fossil fuel extraction. Spurred by the nonprofit organization, 350.org, the movement is calling for divestment from approximately 200 companies that hold the vast majority of the world's carbon reserves.[i]

For most investors, outright divestment seems drastic to say the least. Yet, the main thesis of the divestment movement has raised some uncomfortable questions. While there is a range of opinions about the rise in global temperatures, the scientific consensus is that the atmospheric CO_2 level needs to be kept under 450 parts per million (ppm). The world's fossil fuel producers have carbon reserves up to five times higher than this limit would allow. ***Purely from a financial perspective, even the outside chance that some reserves could become 'stranded assets' if a red line is breached should prompt a hard look at the assumptions underlying the valuation of fossil fuel producers.***

Thus, there has been a lot of 'peeking under the hood' among the world's major pension funds: How much exposure does a portfolio have to potential 'stranded assets'? What kind of response is reasonable in the face of stakeholder pressure, in the face of an ethical quandary, or in the face of a potential 'carbon bubble'? What are the financial implications of reducing carbon exposure?

With over 75 asset owners as clients, we at MSCI ESG Research have seen an escalation in investor interest in measuring portfolio exposure and in formulating an appropriate policy. ***In 2014, we expect to see investors explore four major approaches to address this issue that range on a continuum from fully excluding carbon reserve holders to adding positive exposure to clean technology.***

Using our data and analysis on carbon reserves, carbon emissions, and companies' climate strategies, MSCI ESG Research calculated the carbon intensity and effects on performance of applying three carbon-reduction approaches to the roughly 2,500 companies in the MSCI All Country World Index (ACWI). These three approaches, as well as a fourth option of capturing opportunities beyond the broad-based index through thematic investments, are summarized in Table 1.

Table 1: Brief Summary of Four Approaches

Approach #1	*Approach #2*	*Approach #3*	*Approach #4*
Fossil Fuel Divestment	**Low Carbon**	**Carbon Tilt**	**Thematic Opportunity**
Exclude from MSCI ACWI any company with identifiable fossil fuel reserves in the following GICS industries: Integrated Oil, Oil & Gas Exploration, and Coal & Consumable Fuels.	Exclude the biggest carbon reserve owners up to 50% of the reserves in the MSCI ACWI; additionally, exclude the largest carbon emitters, up to 25 percent of the carbon emissions in the index. This is similar to the methodology for a custom index recently designed by MSCI.[ii]	Apply no exclusions to MSCI ACWI. Tilt the portfolio, with higher weights given to companies in each industry with stronger performance on their carbon strategy relative to peers, and lower weights given to companies in each industry with weaker performance on their carbon strategy relative to peers.	Focus on the upside using a thematic approach. Unlike the other approaches, this approach does not involve applying exclusions or tilts to MSCI ACWI. We use MSCI's Global Environmental Index to demonstrate this approach.

(*Note: A previous version of this analysis was published based on the period January 1, 2007 to November 28, 2013*).

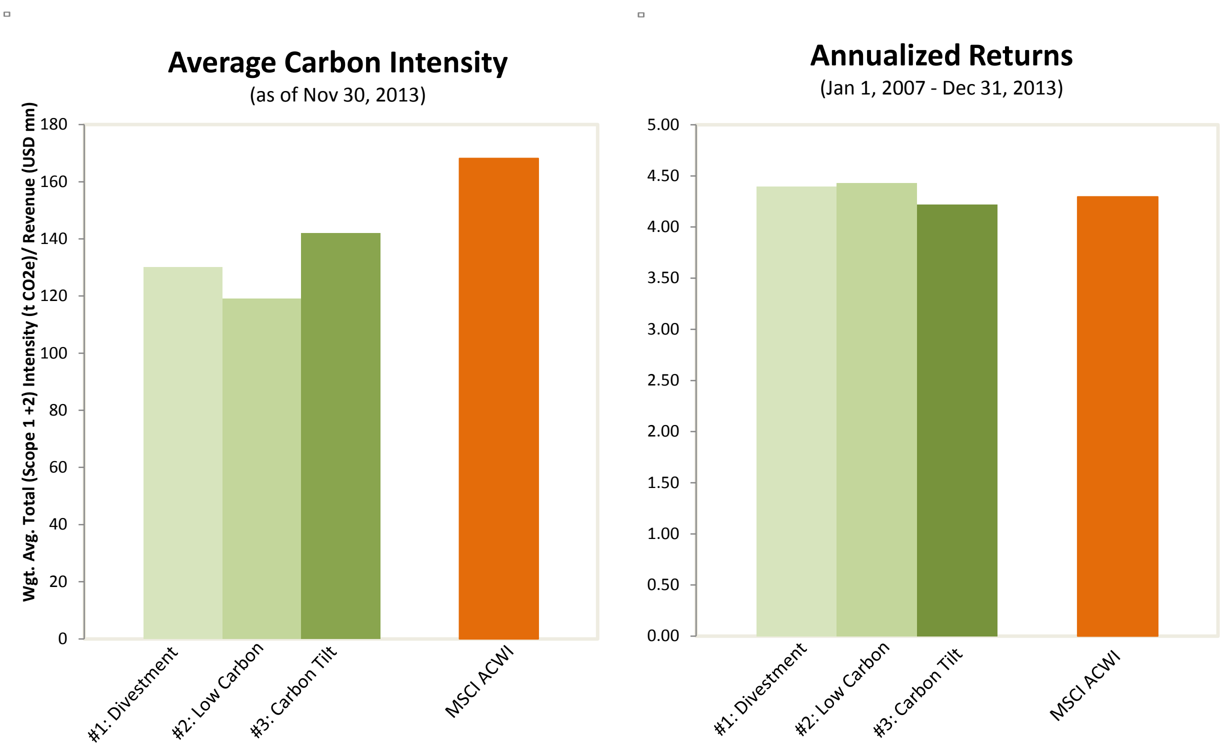
For the period January 1, 2007 through December 31, 2013, we find that (See Figure 1):

- The current snapshot of ***all four approaches shows lower carbon intensity relative to MSCI ACWI***. The Divestment approach and the Low Carbon approach have very similar overall carbon intensity, at 77% and 71% of the ACWI carbon intensity. Over the test period, all three ACWI-based approaches (Approaches #1, 2, and 3) performed roughly in line with the MSCI ACWI, with annualized returns ranging from 4.22% to 4.40%, compared to 4.30% for MSCI ACWI. Tracking error ranged from .47 to 1.23.[iii]
- Of the three ACWI-based approaches, the ***Low Carbon approach showed the lowest carbon intensity and the highest active returns***.

For comparison, an example of a Thematic Opportunity approach may include companies with substantial exposure to technologies that are poised to benefit in a low carbon economy.

- MSCI's Global Environmental Index, which includes approximately 155 companies that derive at least 50% of their revenues from clean technology, performed roughly comparable to the MSCI ACWI IMI. Annualized gross returns since inception (November 2008) through December 2013 averaged 17.33%, versus 16.83% for the MSCI ACWI IMI.
- However, given greater risk, taking this approach would have returned lower risk-adjusted returns since inception, compared to the MSCI ACWI IMI.

Figure 1: Comparison of Approaches, on Carbon Intensity and Performance [iii]



And then there is a fifth approach: engagement. In October 2013, a group of 70 investors with over USD 3 trillion in assets wrote to 45 of the world's largest oil & gas, coal, and electric power companies to demand a response on what each company is doing to address the carbon reserves risk.

As investors consider their range of options, we believe that valuation models will start to include more scenario planning around potential stranded assets. Some of those scenarios will include differential cost of extracting reserve types and geographic location[iv]. ***But one of those scenarios could well be that if enough investors become concerned about a potential carbon bubble, there could be a self-fulfilling prophesy to how the financial community values current and future carbon reserves.***

For more details about our analysis, please download the ESG Issue Brief "Options for Reducing Fossil Fuel Exposure".

How are Emerging Markets Economies Turning Income into Wealth?

Improvements in Human Capital Infrastructure

Slowing growth in the Emerging Markets has prompted investors to take a harder look at the risk factors differentiating the previously high flying economies from one another. Social protests and labor strikes in Brazil and South Africa, respectively, surfaced underlying social schisms that challenge the rosy picture of growing prosperity to which investors have become accustomed. After all, the GDP of the BRICs countries have collectively grown by 16% over the past decade, more than four times compared to major developed countries such as the US or Germany. But in some countries, rapid income growth has masked stagnation in improving the lot of the very poor. ***For investors, the question is whether limited progress in converting economic prosperity into an expanded pool of economically productive people could portend future limits to growth.***

In country credit ratings, fiscal health and financial governance trump considerations of income disparities and human development indicators. Yet the long term ability of countries to sustain economic growth depends also on its ability to harness its natural resources and develop its human capital base. MSCI ESG Research analysis has discussed how taking into account ESG factors may provide additional material insights beyond credit ratings. For example, of the 91 countries we analyzed in 2007, ***5 out of the 8 countries that had the largest discrepancies between their ESG rating and their credit rating received a credit rating downgrade sometime in the next four years***. The five countries were Egypt, Italy, Portugal, Spain, and Tunisia.[v] [vi]

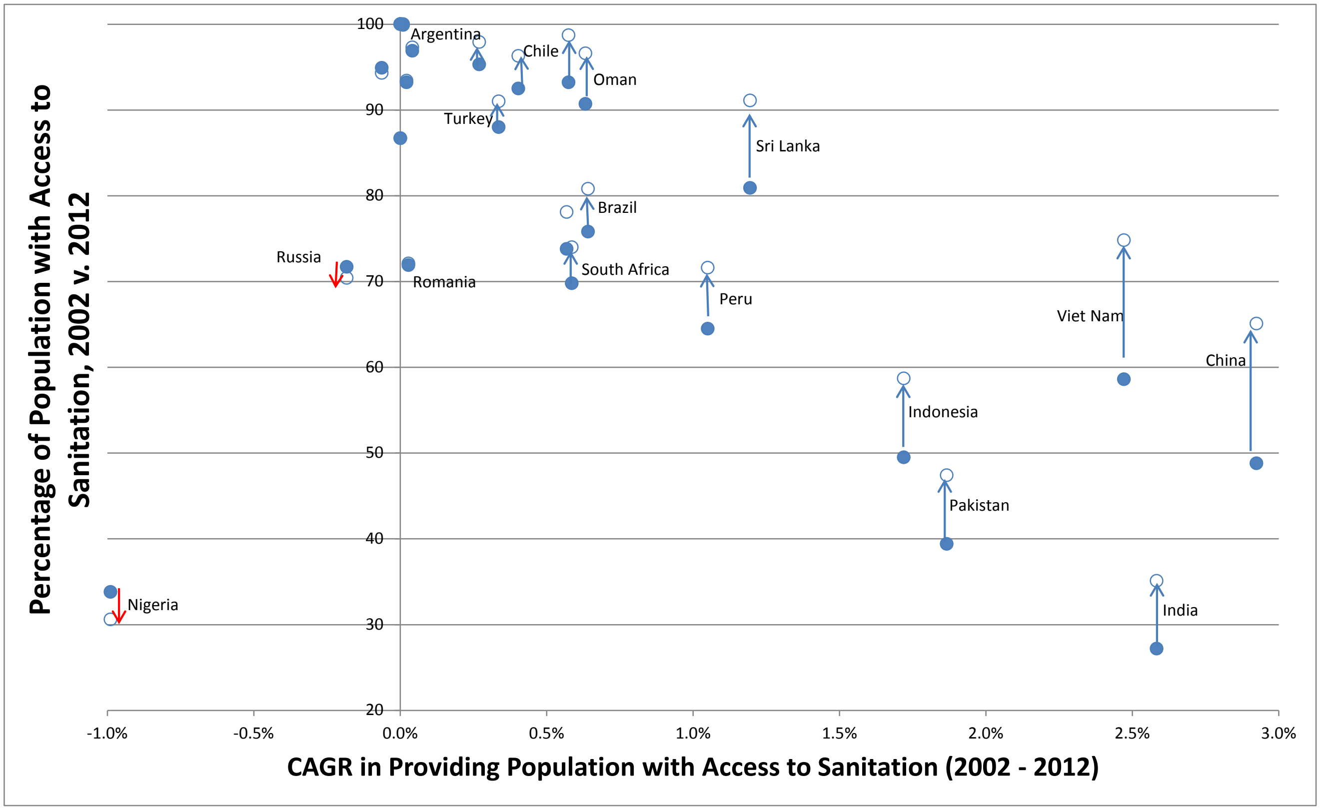
So, in the race to build a solid human capital infrastructure for future economic growth, which of the fast growing markets show greater promise? And which could face risks of eruptions in social tension, as rapid income growth fail to alleviate the burdens of an impoverished underclass?

As part of MSCI ESG Research's Government Ratings, we analyze over 86 metrics that provide investors with a view to the underlying ESG fundamentals of 101 countries. Our analysis looks at the 25 Emerging Markets and Frontier Markets countries that showed the fastest GDP per capita growth between 2002 and 2012. Using Access to Basic Sanitation Services as one proxy metric for bringing the very poor into a country's human capital infrastructure, we find that (see Figure 2):

- Among these fast growing countries, more than half barely moved the needle on providing access to sanitation services: ***14 countries had access rates improving an average of less than 0.5% per year***. Notably, Nigeria, Russia, and Romania experienced either no progress or deteriorating access rates, despite a large gap with Developed Market standards.
- The countries that made the most progress in closing their respective gaps with Developed Market levels of access included ***Chile, Oman, Estonia, Argentina, Sri Lanka, Vietnam, and China***, each of which made at least a 30% improvement in closing its gap with Developed Markets.
- Even as GDP per capita grew 12% to 15% per annum on average, ***Brazil, South Africa, and Turkey made minimal progress in improving access to basic needs*** (average increase of roughly 0.6% per annum in access to sanitation services). This allowed countries such as Vietnam, Sri Lanka, and Peru to catch up to similar rates of access to basic needs, potentially laying a foundation for improved human capital competitiveness.

The inability of a country to close the gap with Developed Markets in providing basic needs to its poorest, even during a period of rapid economic growth, signals not only potential long-run limits to the skill base of the economy. It may also signal weak government effectiveness in addressing pressing social and economic needs. As investors consider their exposures to Emerging Markets, these types of additional metrics could broaden their view of the robustness and sustainability of countries' long term growth prospects.

Figure 2: Changes in Provision of Basic Sanitation Services in 25 Fastest Growing Emerging and Frontier Markets Countries (2002-2012)



What's Green about "Green Bonds"?

Three Questions Investors Should Ask

While 'impact investing' – investments intended to generate a social benefit while producing a financial return[vii] – has been making its way into foundations and private wealth circles for some time, more institutional investors are dipping their toes into the space. What has helped to ramp up the buzz, if not quite as much the actual investment dollar flows, is the development of a related but quite different category of investments called 'green bonds.' Investors seem intrigued, despite much hand-wringing over where to draw the line between 'green' and 'greenwashing.' In 2014, the 'green' bonds market appears poised to take off. ***While a number of large investors are seeking opportunities to enter this new market, they will be grappling with some fundamental questions about what 'green' bonds can deliver when it comes to both environmental and financial performance.***

Because definitions vary widely, estimates of the 'green bonds' market range from as low as USD 13 billion[viii] to as high as USD 346 billion. The narrowest definition would include only the labeled Green bonds that are issued by multilateral development banks such as the World Bank, the International Finance Corporation (IFC), and the European Investment Bank (EIB). The most inclusive estimate comes from the Climate Bonds Initiative, whereby approximately USD 263bn of the total USD 346bn market that it has estimated to qualify as supporting climate resilience are bonds related to rail operations and infrastructure, including approximately USD 117bn from China's Ministry of Railways alone.

That 'green bonds' as a distinct variant of impact investing has attracted more investor interest owes much to the fact that investors are typically both certain of and familiar with their basic financial characteristics. The vast majority of green bonds to date have been issued by multi-lateral development banks that historically carried minimal risk. From a pure risk and return perspective, there is nothing distinguishing these 'green' labeled bonds from a vanilla bond in that they have full recourse to the issuer, rather than being project-finance bonds which only have recourse to the specific project for repayment. The bonus is that the issuer promises to produce an extra-financial benefit with the proceeds from the 'green' version of the bond. ***When that issuer is the World Bank or the IFC, few would question that the proceeds will be channeled to the advertised aims. But when that issuer is a corporate actor, the typical responsible investor prefers additional assurances.***

As is characteristic of the ESG space, stakeholder groups may jockey to set standards to improve the transparency and credibility of these emerging products. Among the most prominent currently are the Fixed Income Working Group of the UN PRI, a Green Bonds Working Group proposed by Bank of America Merrill Lynch and Citigroup, and the non-profit group the Climate Bonds Initiative. These groups aim to create a consensus around what constitute robust processes for defining and monitoring the use of proceeds and what constitute 'green'-eligible activities to which proceeds can be channeled.

Assuming that issues of transparency and credibility will be resolved, we see three fundamental questions for investors seeking to formulate an investment policy for this emerging class of products.

First, does it matter whether proceeds generate marginal positive environmental impact?

If an investor's goal is to channel additional capital toward environmentally positive activities that would otherwise not take place, then having strong assurances on where the proceeds are used is necessary but potentially insufficient. Earmarking capital for climate-related projects that would otherwise be implemented with allocations from a general capital pool in the absence of 'green' earmarks is not the same thing as raising additional capital for new climate-related projects that would not otherwise be achieved.

If, on the other hand, an investor's goal is to identify the parts of its investment universe that can be linked to providing some environmental benefits, then credible 'green' bonds can be conceptualized as providing an added benefit of greater transparency into the use of proceeds. In this latter case, credibly labeling bonds as 'green' may solve a current failure whereby interested investors cannot discover all the 'green' investment opportunities that are already underway or planned.

While a growing market of credible 'green' bonds could more directly fill this gap, ***investors today already possess some of the critical information required to discover 'green' investment opportunities in the existing investment-grade universe***. MSCI ESG Research analyzes issuers comprising over 90% of the Barclays Global Aggregate Bond Index[ix]. Based on our analysis of the investment grade benchmark-eligible bonds outstanding (as of October 2013) – see ***ESG Issue Brief: Harnessing the Power of Clean Technologies – Green Bonds***, we find that:

- Between USD 81.2 billion and USD 517.6 billion qualify as 'clean tech leaders.'
- Using a narrow definition, the USD 81.2 billion pool includes labeled 'green' bonds issued by supranationals, renewable energy project-linked bonds issued by distinct legal entities (e.g. Topaz Solar, Brookfield Renewable Energy, HeroAsia/Longyuan Power), as well as corporate and municipal issuers that derive over 50% of their revenues from clean technologies (including alternative energy, clean technology, sustainable water, green building, and pollution prevention).

- The broader definition drops the threshold to 10% of revenues derived from clean technologies. This expands the pool to such players as Siemens, Schneider Electric, Iberdrola, and other large corporates with diversified activities but significant investments in clean technologies.

Second, to what extent is an investor willing to accept a 'green' bond from a 'dirty' issuer?

The ESG risk profile of an issuer is an aggregation of the different risks and opportunities of all of its revenue streams. If the ESG risk profile of the specific business activities funded by the 'green' bond more or less align with that of the issuer (based on all of its business activities), investors may be able to ascertain the ESG risk characteristics of the bond.

On the other hand, if the ESG risk profile of the business activities being funded by the 'green' bond differs dramatically from that of the issuer, investors should be prepared for some level of dissonance – and perhaps reputational risk -- should the issuer experience adverse events due to higher ESG risk exposure. As a thought experiment, investors should be prepared for a potential major oil spill should their 'green' bonds that are earmarked for renewable projects are in fact issued and backed by an Oil & Gas company with a poor health & safety track record.

Some investors are specifically attracted to the prospect that 'dirty' issuers could be incentivized to shift their capital allocation if they can more readily attract capital earmarked for 'green' investments. For other investors, there may be at least some discomfort with buying 'green' bonds from an egregious polluter.

Third, to what extent is an investor willing to pay a premium for 'green' bonds?

Thinking positively, if a booming 'green' bonds market successfully creates incentives to allocate more capital toward climate-friendly investments, it could mean that issuers find it easier – and cheaper – to raise capital for 'green' projects than non-green projects. ***The law of supply and demand would dictate that 'green' bonds could eventually command a premium.*** At this nascent stage, neither investors nor issuers face a trade-off: so far, 'green' bonds and vanilla bonds from the same issuers carry the same parameters. But as this market takes off and expands beyond the stakeholder-centered development banks, issuers may require some incentives in financial pay off, however small, in order to shift the profile of their capital investments.

No doubt investors of different stripes will reach quite different conclusions when considering these knotty questions. Despite ambiguities about the direction for these new products, we should not lose sight of the fact that there is much to cheer about the emergence of a 'green' bonds market. It pushes the boundaries of the sustainable investment space beyond its traditional focus on long-only, equity investments. Perhaps more encouragingly, it is a sign that the innovation capacity in our financial markets is not fixated on opaque over-engineered financial instruments but can in fact be harnessed to target our longer term environmental challenges.

Are Some Sectors More Sustainable Than Others?

Evolving ESG Allocation Strategies

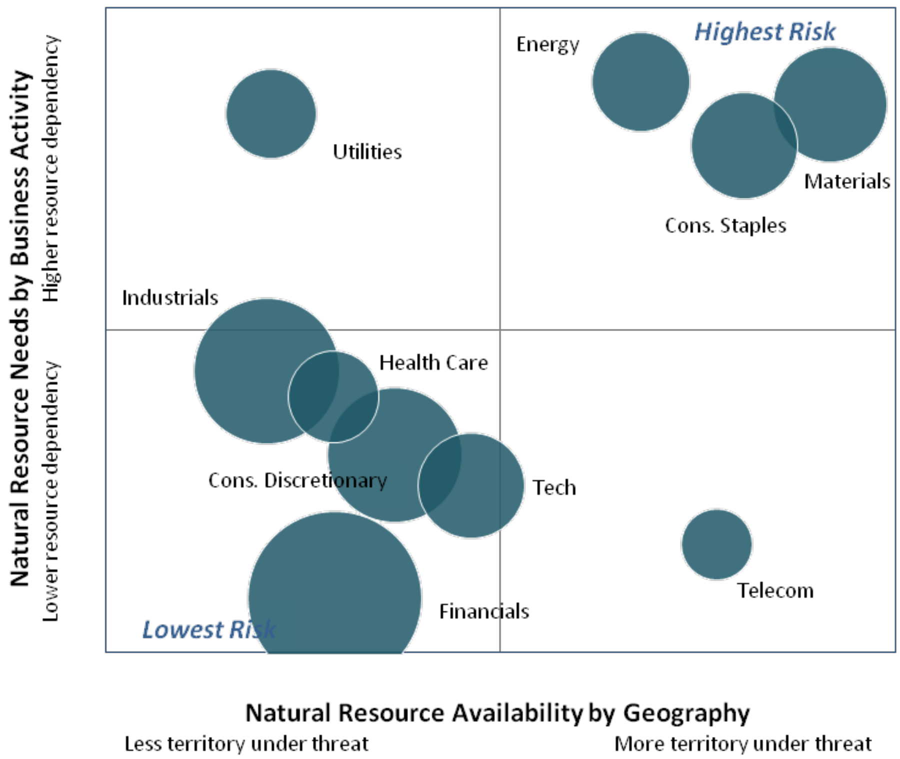
The shift from implementing ESG-based exclusions towards a best-in-class approach continues apace, as investors embrace integration of ESG assessments into their investment processes. While a best-in-class approach may help reduce exposure to ESG risks within a sector, it typically is not designed to address differences in the environmental and social sustainability of different sectors – differences that are driving rapid depletion of the global stock of key resources.

Investors who are considering macro-level exposures to ESG risks across their portfolio and even across asset classes have begun to take a more systematic, top-down view of how ESG risks can inform sector allocation decisions. At a superficial level, it would seem obvious that some sectors are more resource intensive than others, whether the resources are natural resources or human resources. What is crucial to developing a data-driven view to address sector-level ESG risks is the overlay of resource intensity with the resource available to each sector, especially given the changing geographic distribution of where sectors are located.

We compared the 10 GICS sectors against their need for natural resources, such as water or land, as part of their core business activities by aggregating estimates from MSCI ESG Research's company-level analysis for the roughly 2,500 companies in the MSCI ACWI (see Figure 3).[x] By mapping the geographic locations of where each sector is operating, we saw that, despite similarly high levels of needs, the natural resources required by Utilities are more likely to be available to them in the locations where they are operating, compared to the Materials sector, for which the natural resource inputs required are scarce in the locations where they are operating.

Generating such sector level risk assessments can be applied across many types of ESG risk factors, such as assessing the labor input needs of sectors versus their availability globally. The general framework of examining resource intensity against future availability is an exercise that could prove useful beyond sector allocation analysis. We could see greater application of such macro level approaches to assessing allocation decisions to asset classes such as property, infrastructure, and commodities, as we have seen asset owners in particular begin to undertake more systematic efforts to reduce ESG risks across asset classes.

Figure 3: Natural Resource Intensity vs Availability, by Sector



Who's Paying Less and Who's Paying More?

The Push for Tax Transparency

Policy change, particularly involving multinational coordination, can be a slow moving affair. In December 2011, we highlighted aggressive corporate tax strategies among our 2012 ESG Trends to Watch as an area we believed would receive greater policy attention and thus represent growing reputational risk. Not waiting around for policy makers to weigh in, media and the public have since singled out some high profile global companies such as Starbucks, Apple, and Google for public shaming given a perceived mismatch between their level of tax payments and revenues earned in countries such as the UK and Italy. So what's next? In 2014, will the naming-and-shaming game give way to a more systematic push to compel improved tax disclosure, driving investors to question the ability of some companies to keep their tax payments below the norm?

A confluence of factors continued to drive calls for greater tax transparency in 2013: fiscal strain in key OECD economies struggling to fund social programs on a weakened tax base; relatively healthy corporate profits at a time of high unemployment; public mistrust of global companies, reinforced by media and social media exposés of corporate misdeeds. As a result, the OECD[xi], the G20[xii], the G8[xiii], and the EU[xiv,xv] have all published separate but related plans in 2013 calling to increase corporate tax transparency and to fight erosion in the tax base. Increasingly, major accounting firms such as Ernst & Young[xvi] and KPMG[xvii] are telling their corporate clients to re-examine their tax strategies with a view to mitigating reputational risk and to anticipating greater disclosure requirements on where taxes are paid.

We see two areas of vulnerability for companies.

First, ***even when perfectly legal, companies with large discrepancies between their reported rate of tax payments and the average corporate rate of the countries where they generate revenues make for easy targets by the media, politicians, and activists.*** This is particularly true if companies generate large revenues from a country where politicians are motivated by major fiscal imbalances and by popular support to invoke 'tax fairness' as a policy plank. Second, with far more media attention to the role of tax havens in facilitating tax avoidance, ***companies with subsidiaries in tax havens are likely to face higher hurdles for justifying their legitimate business activities in those locations***.

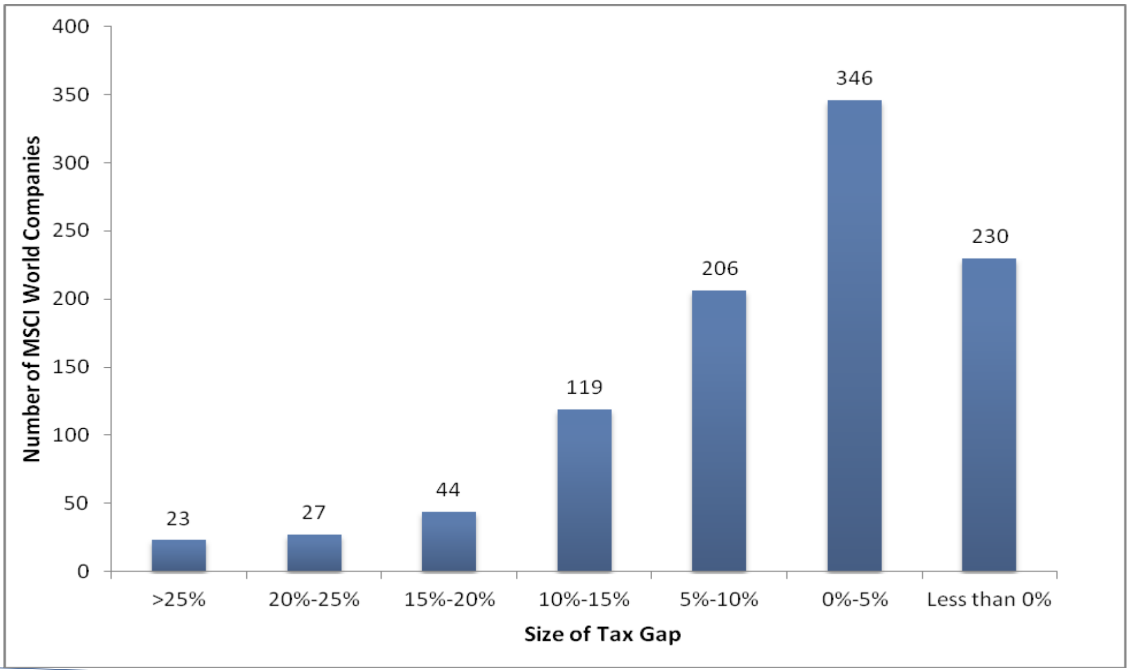
Which companies face these vulnerabilities?

For the 1,595 companies in the MSCI World Index[xviii], MSCI ESG Research compared each company's reported tax payments between 2008 and 2012 to the average corporate tax rate of the countries in which it generated revenues. See Figure 4.

- Excluding companies generating a loss during this period, REITs, and mining companies, we found that 21.4% of companies (213 out of 995 companies) paid tax rates that were substantially below the weighted average tax rate of the countries in which they generate revenues.
- As a group and in aggregate over these years, these 213 companies paid a 19.3% tax rate or the equivalent of USD 450 billion over this period. At 34.3%, the weighted average tax rate of the countries in which these 213 companies generated revenues is nearly 75% more than the actual rate paid by this group over this time-period. The 19.3% rate also compares unfavorably to their peers on the MSCI World Index: the other 782 companies paid in aggregate a rate of 34.0% over this period.

Figure 4: **MSCI World Companies, by Size of 'Tax Gap'**

Gap Between Actual Tax Rate Paid and Weighted Average Tax Rate of Countries Where Revenues are Generated, 2008-2012, for MSCI World Index Companies excluding REITs, Mining Companies, and Companies with Negative Profits (n=995)



Given the media hype over such strategies as the 'Double Irish With A Dutch Sandwich[xix], whereby a company can shift profits to low or no tax jurisdictions and avoid paying taxes in the countries in which it generate revenues, a number of organizations such as the Tax Justice Network have published lists of countries that they deem to be 'tax havens'.

Using MSCI ESG Research's securities mapping of issuers to their subsidiaries, we examined the 4,587 entities that are majority-owned subsidiaries of the 1,595 companies on the MSCI World Index in 2013. We matched the country of domicile of these subsidiaries to the list of tax havens compiled by the U.S. Congressional Research Service in January 2013, which combines the work of organizations such as the OECD and the Tax Justice Network.[xx]

- We found that 10.8% of MSCI World companies had at least one majority-owned subsidiary in a 'tax haven' country in which it is not domiciled.
- The most popular countries for these subsidiaries, outside of the domicile country, are Cayman Islands and Luxembourg.
- Of the 213 companies that had a significant 'tax gap' as described above, 39 (18%) were domiciled in a 'tax haven' jurisdiction and 32 (15%) had at least one majority-owned subsidiary in a 'tax haven' jurisdiction.

We conducted our analysis from the perspective of potential vulnerabilities to reputational risk and hence the 'tax gap' could be viewed as a potential trigger for scrutiny by the media or the public, which is not necessarily informed by a detailed understanding of the intricacies of international tax laws and treaties.

Yet, our initial estimates at the aggregate level of the MSCI World Index companies suggested a fairly sizable sum of potential tax revenues that many governments across the world, struggling to contain their budget deficits, may find attractive. ***The 213 companies with a large 'tax gap' alone would have paid an estimated USD 70 billion per year in aggregate, had these companies been paying taxes at the same rate as their peers on the MSCI World Index*** (the 782 companies paying a rate of 34.0% over this period, which excludes REITs and other companies paying near-zero to negative taxes) or had been paying taxes at the average rate of the companies in which they generate revenues.

Such payments over this period could have reduced aggregate profit after taxes across these companies by approximately 20%.

Despite gradually improving economic conditions in the major European markets and the US, the continuation of fiscal imbalances coupled with distrust of the corporate sectors will likely continue to shine a spotlight on companies' inscrutable tax strategies. Whether regulators will enact tax policy changes, companies may peremptorily begin to make at least some disclosure improvements, perhaps at the behest of investors who need to better quantify the magnitude of risk to their portfolio from tax policy.

For more details about our analysis, please download the ESG Issue Brief "The 'Tax Gap' in the MSCI World."

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[1] *As of September 30, 2012, as published by eVestment, Lipper and Bloomberg on January 31, 2013* *Apr 2013*

[i] For a brief summary of the divestment movement, please see Appendix 1: Excerpt from FAQ on Fossil Fuel-Free Investing.

[ii] MSCI Custom Emerging Markets Low Carbon Index, designed for Swedish pension fund AP4, was licensed for The Northern Trust Emerging Markets Custom Low Carbon Dioxide Equity Index Fund.

[iii] This report may contain analysis of historical data, which may include hypothetical, back-tested or simulated performance results. There are frequently material differences between back-tested or simulated performance results and actual results subsequently achieved by any investment strategy. The analysis and observations in this report are limited solely to the period of the relevant historical data, back-test or simulation. Past performance -- whether actual, back-tested or simulated -- is no indication or guarantee of future performance. None of the information or analysis herein is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision or asset allocation and should not be relied on as such.

[iv] See for example Coal and Carbon Stranded Assets: Assessing the Risks, from HSBC Global Research. https://www.research.hsbc.com/midas/Res/RDV?p=pdf&key=dXwE9bC8qs&n=333473.PDF

[v] See also Sovereign Bonds: Spotlight on ESG Risks, 2013. UN PRI. http://www.unpri.org/viewer/?file=wp-content/uploads/SpotlightonESGrisks.pdf

[vi] The analysis and observations in this report are limited solely to the period of the relevant historical data, back-test or simulation. Past performance -- whether actual, back-tested or simulated -- is no indication or guarantee of future performance. None of the information or analysis herein is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision or asset allocation and should not be relied on as such.

[vii] Definition from the Global Impact Investing Network (GIIN): “Impact investments are investments made into companies, organizations, and funds with the intention to generate measurable social and environmental impact alongside a financial return.” http://www.thegiin.org/cgi-bin/iowa/investing/index.html

[viii] The narrowest definition would include only the green labeled bonds issued by supranationals. The broadest definition is based on Climate Bonds Initiative estimates.

[ix] Excluding the securitized segment of the index

[x] To calculate sector level natural resource needs, we match each company’s business segments to the estimated natural resource intensity of the business activities based on CEDA EIO-LCA data and MSCI ESG proprietary research. To calculate geographic level natural resource availability, we match each company’s geographies of operation to the estimated natural resource capacity based on proprietary analysis of data sources including but not limited to Water Stress index (Hoekstra and Mekonnen 2011); annual rate of deforestation (FAO); annual rate of natural resource depletion (World Bank WDI); country richness in biodiversity (Convention on Biodiversity); percentage of territory in threatened eco-regions (ECORISK).

[xi] Tax Transparency 2013: Report on Progress, http://www.oecd.org/tax/transparency/draft%20annual%20report%202013%20%20for%20GF_2.pdf

[xii] Action Plan on Base Erosion and Profit Shifting, http://www.oecd.org/tax/beps.htm

[xiii] G8 countries agree to tackle tax evasion, http://www.theguardian.com/world/2013/jun/18/g8-countries-agree-tackle-tax-evasion

[xiv] Fighting Tax Evasion and Avoidance: A year of progress, http://europa.eu/rapid/press-release_MEMO-13-1096_en.htm

[xv] Tackling Tax Avoidance: Commission tightens key EU corporate tax rules, http://europa.eu/rapid/press-release_IP-13-1149_en.htm

[xvi] http://www.ey.com/Publication/vwLUAssets/Tax_Transparency_-_Seizing_the_initiative/$FILE/EY_Tax_Transparency.pdf

[xvii] http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/tax-morality-transparency-overview-v1.pdf

[xviii] As of November, 2013

[xix] This is a known tax-reduction structure between wholly-owned subsidiaries, which involves transactions in Ireland, the Netherlands and Bermuda. The Irish affiliate has dual residence with Bermuda and moves profits through another Dutch affiliate. Profits go to Bermuda and are not taxed since Bermuda has no corporate income tax. (http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130574/LDM_BRI(2013)130574_REV1_EN.pdf

[xx] See page 9 of Tax Havens: International Tax Avoidance and Evasion. United States Congressional Research Service. January 23, 2013. http://www.fas.org/sgp/crs/misc/R40623.pdf