

COLLECTIVE IMPACT IN PUBLIC EQUITY

Responsible Investing (RI) continues to be one of the hottest trends in asset management. Asset owners who are signed up to the United Nations Principles for Responsible Investing (UNPRI) have a total of US\$ 13.9 trillion to invest¹, and the figure is climbing. New indices² are being created to cater for the growing number of RI-sensitive investors. Given industry trends, we think the time is ripe for responsible investors to consider using their collective strength to make more of a positive impact in the markets by intentionally moving firms' cost of capital.

Studies concur that investments targeting environmental, social and governance (ESG) goals yield better (measurable) returns. What's more, research consistently shows that companies perceived to comply with high ESG standards also enjoy a lower cost of capital compared with non-ESG-compliant firms.³

The question we are seeking an answer to is whether responsible investors can cause a meaningful shift in the cost of capital for publicly listed firms. A quick analysis of a standard supply and demand curve shows that a reduction in demand (a downward shift in the demand curve) for shares in a company will result in a lower share price. A lower share price implies investors require a higher expected return. The opposite is true for an increase in demand. The demand curve moves upward and the price goes up, implying a lower expected return. This is the simple mechanism of shifting the cost of equity capital. By allocating capital (buying and selling), responsible investors have the power to shift companies' cost of capital. By shifting the cost of raising capital, responsible investors can influence the direction of economic development by making it cheaper for sustainable companies to raise additional capital and more expensive for non-sustainable companies to do so.

After all, the role of public equity markets in providing new risk capital is not limited to initial public offerings (IPOs). Listed companies raise additional equity through a so-called secondary public offering (SPO). It's not often appreciated that the secondary public offerings by non-financial companies listed in countries belonging to the Organisation for Economic Cooperation and Development (OECD) exceeded the proceeds from IPOs every year from 2005 to 2015. Indeed, the amount of equity that OECD companies raised through SPOs since 2009 has been more than fourteen times the amount they raised through IPOs.⁴

Responsible investors have the power to influence the amount of capital firms can raise in their secondary offerings by moving the share price through their allocation decisions. It may be that the effect on the cost of capital of any one investor may be miniscule. ***But how much money would it take for sustainability-driven investors in aggregate to drive significant shifts in the cost of capital for publicly traded equities?***

¹ www.unpri.org

² <https://www.etfstrategy.co.uk/ftse-russell-launches-emerging-markets-and-latin-america-sustainability-indices-15142/>

³ University of Oxford, September 2014, 'From the Stockholder to Stakeholder: How Sustainability Can Drive Financial Outperformance'.

⁴ <https://www.oecd.org/daf/OECD-Business-Finance-Scoreboard-2016.pdf>

To answer this question, we present a simple framework involving two key factors:

- The total active weights due to ESG. Let's call this Active ESG Shares, defined below.
- The price elasticity of demand, or how shifts in the demand for shares affect the price. We will use a price impact model, defined below.

These two variables, Active ESG Shares and price elasticity, together with how much money is integrated in active ESG management⁵ will give us the potential price change the RI community could collectively achieve in moving firms' cost of capital.

⁵ Integrate ESG refers to using environmental, social, and governance factors in one's investment process. By Active ESG Shares, we are looking to measure how much the ESG integration actually affects portfolio weights.

The first part of the model is to determine the total active weights due to ESG. The idea of an ESG manager is to overweight (go long) firms that provide solutions to our environmental and social challenges while underweighting (go short) firms that are adding to the problems.

We define Active ESG Shares as the change in portfolio weights if all ESG inputs to the investment process were removed. It is explicitly defined as the sum of the absolute values of the differences in portfolios with and without ESG integration. For quant managers, this can be explicitly measured, but for most managers it will be a thought experiment: how much would my portfolio weights change if I didn't consider ESG at all?⁶ These portfolio weight differences will sum to zero by definition (for every overweight there is an underweight), which is why we take the sum of the absolute values and divide by two.

$$\text{Active Share} = \frac{1}{2} \sum_{i=1}^N |w_{\text{fund},i} - w_{\text{index},i}|$$

Consider the example of a manager who is fully invested outside the benchmark solely based on ESG issues. This manager would have Active ESG Shares of 100 percent. Even if the manager is unable to invest outside the benchmark, in theory all assets could be in the single stock with the smallest weight in the benchmark, giving Active ESG Shares of very close to 100 percent. This is the theoretical maximum percentage of Active ESG Shares for a long-only manager.

A more common scenario is a large asset owner who holds a global capitalisation portfolio and decides that 50 to 100 stocks are 'black-listed' or deemed unsustainable, and they divest from this list of companies. Since the global portfolio has up to 10,000 names, the Active ESG Shares of this manager's portfolio are likely to be around 1 per cent, or 100 times less than the theoretical maximum for long-only investing.

Studies show that the total of Active Shares of most traditional long-only active managers is about 60 per cent.⁷ We have never seen a study on whether managers who claim to integrate ESG take more risk relative to benchmark, so let's assume they have the same risk profile as traditional active managers. Neither have we seen studies that have tried to isolate the percentage of active weights coming from ESG, but we suspect it is no more than half of the active weights even within the most responsible portfolios, and about one-quarter for the average RI manager. This would give the average active ESG manager Active ESG Shares of 15 per cent (60 per cent total active shares with 25 per cent driven by ESG). For simplicity, let's assume that half of the RI community invests through exclusion or divestment only, and half does ESG integration with an average Active ESG Share of 15 per cent. This gives us an Active ESG Share for the RI community at large of 8 per cent.⁸

⁶ We will present an analytic model to estimate any manager's Active ESG Shares in the next Auriel White Paper.

⁷ 'How Active is Your Fund Manager? A New Measure That Predicts Performance' – 31 March 2009, by Martijn Cremers and Antti Petajisto.

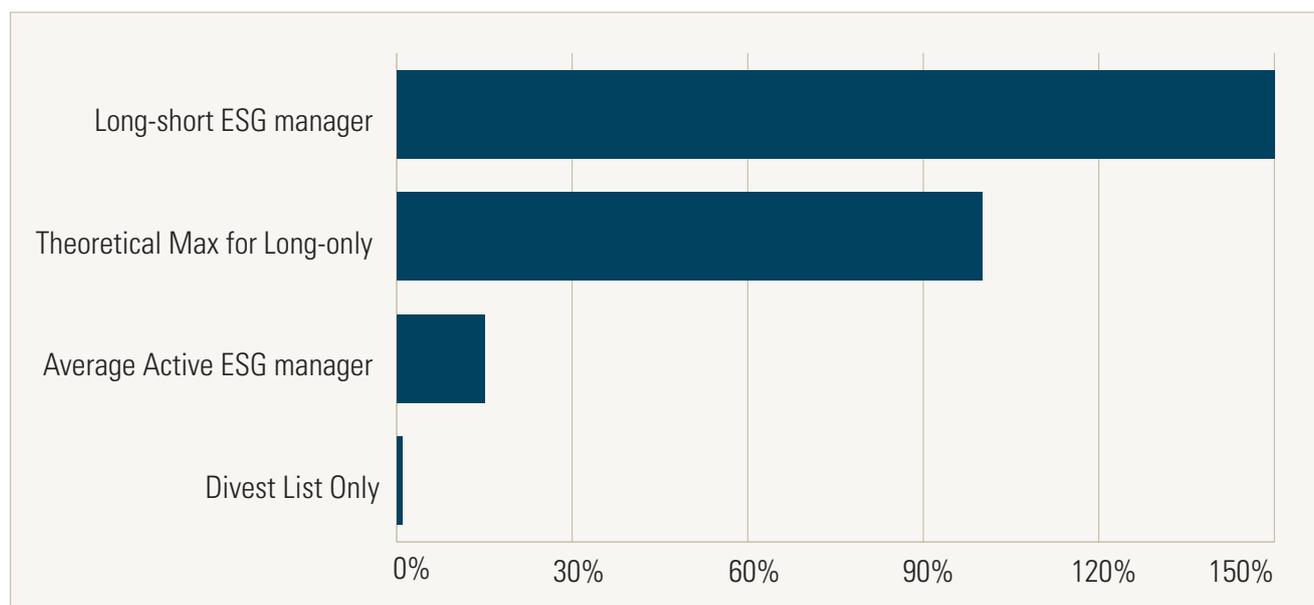
⁸ We derive the 8 per cent figure through the equation: $(\frac{1}{2} * 1\%) + (\frac{1}{2} * 15\%)$.

ACTIVE ESG SHARES (CONT.)

A much less common example is a net zero long/short ESG manager – a recent article by Deloitte cites only eight such managers.⁹ Whereas the long-only manager will hold a portfolio whose weights sum to 1.0, and will have underweights and overweights relative to their respective benchmark, the long/short manager will hold a portfolio whose weights sum to zero, and the underweights become her short positions while the overweights become her long positions. Thus all the positions are 'active weights' and her Active Shares are calculated as the sum of the absolute value of all positions.

This gives her an Active Share of 300 per cent in the typical long/short context. If ESG drives half of her trades, her Active ESG Shares would be around 150 per cent, more than the theoretical maximum for a long-only fund and about ten times the average active ESG fund.

Active ESG Shares



⁹ <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-fsi-hedge-fund-impact-investing.pdf>

The second part of the model involves measuring the degree to which shifting the demand curve moves the price – that is, the price elasticity of demand. How much additional expected return does the marginal investor require in order to hold additional shares in company XYZ? We will proxy the price elasticity using a market impact model. Some years ago, as traditional fund managers working at a firm with huge assets under management (AUM), we worked on market impact models to determine how our trades would move the market price. These are measures of market liquidity.

To assess the thresholds at which we moved the price and by how much, we set out to estimate the price impact for various-sized trades. By using a dataset of literally millions of trades containing prices before and after our trades of various sizes, we came up with a surprisingly elegant rule of thumb to estimate the long-term price impact: ***Trading four days volume impacts the price by one day's standard deviation.*** For example, if the average stock has 40 million average daily volume and a daily volatility of 2 per cent, a USD 40 million trade would move the price by 1/2 per cent.¹⁰

¹⁰ Here, we are using a linear model for simplicity, since we are discussing normal trade sizes.

PUTTING IT ALL TOGETHER

One more ingredient is required to complete our cost of capital analysis: the amount of investments integrating ESG or assets under management of the responsible investing community, which we refer to as RI AUM. We can proxy it using the amount of assets signed up to UNPRI (from asset owners only, to avoid double counting). Currently this figure stands at USD 13.9 trillion.

We can now put all the pieces together by multiplying the assets integrating ESG (RI AUM) by the total active weights due to ESG (Active ESG Shares), then dividing by the number of active positions driven by ESG (Num Stocks).¹¹ This gives us the Active ESG Money per Stock (AMPS). We then divide this number by two times the average daily volume (ADV) of global equities to arrive at the number of trading days. This number of days compounds the average daily standard deviation of global equity share prices (STD) to give us the estimated price change.

In notation, this calculation is expressed as follows:

$$\text{RI AUM} * \text{Active ESG Shares} = \text{Active ESG Money (AEM)}$$

$$\text{AEM} / \text{Num Stocks} = \text{Active ESG Money per stock (AMPS)}$$

$$\text{AMPS} / (\text{ADV} * 4) = \text{Num Days}$$

$$(1 - \text{STD})^{\text{Num Days}} - 1 = \text{price change}$$

To present a tangible example, we can substitute some estimates to get a sense of the degree to which the RI community is shifting companies' cost of equity capital. Then, we can look at how that calculation changes as we change some of our estimates.

Let's assume that the average manager has a \$1 billion portfolio, with 50 active positions, and Active ESG Shares comprising 15 per cent. Using 2 per cent as the average daily stock volatility (based on 30 per cent annualised price volatility for the average single stock), and USD 50 million for the typical ADV), we arrive at 3 bps of price impact on each of the 50 stocks.

One billion dollars invested in a long-only impact fund of public equities will shift the price by about one-thirtythird of one per cent for each of 50 firms – 25 up and 25 down. No manager is going to win the Nobel Prize for such an invisible impact. However, when we look collectively, the picture is much different.

¹¹ A typical active equity mandate will have a benchmark with hundreds if not thousands of stocks. A typical active manager will only have positions deviating from the benchmark in a few dozen stocks. Num Stocks is the number of stocks deviating from the benchmark due to ESG (sustainability) considerations.

PUTTING IT ALL TOGETHER (CONT.)

Let's use a global equity portfolio of 5,000 companies. Then let's use a '80/20 rule' to say that 10 per cent of these companies are the focus for underweights (unsustainable companies) and another 10 per cent are the focus for overweights (sustainable companies). By 'focus' we mean that these stocks represent the active weight of ESG-oriented managers. The Active ESG Shares are spread across 500 companies (collectively).

Now let's plug in the collective numbers: the RI AUM is around USD 14 trillion, with about half invested in public equity; we estimated the Active ESG Shares of the RI community (asset weighted) to be around 8 per cent. Factoring these numbers into the equation gives a price impact of 10 per cent on each of the 500 focus firms.

$$\text{RI AUM (\$7T)} * \text{Active ESG Shares (0.08)} = \text{Active ESG Money (\$560B)}$$

$$\text{Active ESG Money (\$560B)} / \text{Num Stocks (500)} = \text{Active ESG Money per stock (\$1.12B)}$$

$$\text{Active ESG Money per stock (\$1.12B)} / \text{ADV} * 4 \text{ (100m)} = \text{Num Days (5.6)}$$

$$1 - (1 - \text{STD (2\%)}) ^ \text{Num Days (5.6)} = \text{negative price change (0.1)}$$

So what does this price impact imply for the ability of sustainable firms to raise additional capital? Consider that in 2015 alone, secondary equity issuance globally totalled \$400 billion.¹² If we assume that the 500 companies comprised 10 per cent of total issuance (they are 10 per cent of companies), the RI community helped raise about USD 4 billion more capital for sustainable companies at the expense of secondary public offerings of unsustainable companies.

Let's show how this works. The RI community collectively pushed the share price of sustainable companies up, and the price of unsustainable companies down, by moving their demand for shares away from unsustainable firms to the share of sustainable firms. We estimated this collective shift in demand to have an 10 per cent share price impact. Now when those companies go to raise more capital by issuing additional shares, the sustainable firms get 10 per cent * US\$40B more capital or about US\$4B more capital.¹³

¹² <https://www.oecd.org/>

¹³ We arrive at this figure by taking \$400B times 10 per cent to get the estimated capital raise of sustainable firms, and then multiplying by 20 per cent to get the extra capital received.

What can we do to increase our collective impact? Clearly, getting more assets into the RI community will help. Also, investors and managers can take more active ESG positions – **more assets and less benchmark hugging!** At the same time, if the RI community reduced the total number of ‘focus companies’, the AUM impact would be narrowed to fewer names, but the price impact would be greater, as the same money shift in demand would take place across fewer companies. Finally, our calculation suggests that **if 10 per cent of the RI community assets moved from long-only to long-short ESG-focused strategies, the total impact could double**, since long-short positions have about ten times more impact than long-only per dollar invested. It is time for the responsible investment community to use all of the tools at its disposal – actively moving our money away from unsustainable companies to the sustainable ones, and embracing shorting as a tool for change while adding to returns. There is truly a window of opportunity for a win-win scenario.

Auriel Capital is an asset manager specialising in responsible investing. Our strategy is designed to produce absolute returns with no market directional exposure while promoting the **United Nations Sustainable Development Goals for 2030**. For more information on Auriel Capital, please contact:

Auriel Equity Investors LLP

Sheraton House,
16 Great Chapel Street,
London, W1F 8FL

Tel: +44 (0) 207 117 2923

Email: london@aurielequities.com

Regulated by the Financial Conduct Authority