

Impact Investing: The Performance Realities



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SUMMARY

A commonly held belief among investors is that impact investing—adding environmental, social or governance criteria to the investment selection process—will require a trade-off in performance. Though this may have been true in the early days of impact investing, the space has evolved significantly in the last decade.

In this paper, we will evaluate current impact investing by examining:

- What impact investing is and how it has evolved to be a viable investment approach
- How investors can maintain returns in their portfolios while investing for impact
- How ESG factors can be used to identify risks and opportunities in the market
- Historical risk and returns from a range of impact investments
- How investors can start accessing the impact investing marketplace today

What is impact investing?

Impact investing is a term that has different meanings for different people. On the face of it, impact may seem subjective and the kinds of impact an investor would like to make are likely as unique as he or she is. Nevertheless, as the impact investing space has grown, a more concrete definition can be advanced.

Bank of America Global Wealth and Investment Management has adopted the Global Impact Investing Network's definition and views impact investing as: "investments made into companies, organizations and funds with the intention to generate measurable social and environmental impact alongside a financial return."¹ Other common terms for aspects of impact investing include socially responsible investing (SRI); environmental, social and governance (ESG) investing; and values-based investing (VBI). While they have some distinctions, they share common elements of investing strategies designed to create positive change in society.

Key Implications

Impact investing has significantly evolved as an investment and risk management approach and now may allow investors to reflect environmental, social and governance considerations into their investment portfolios without having to give up return.

Analyzing investments across a more holistic set of impact factors, above and beyond traditional risk and return, can potentially enhance investment selection and serve to lower overall portfolio volatility, aiding in the risk-adjusted profile of portfolios.

While various targeted or thematic strategies in the impact space, or certain types of sustainable companies, may provide the potential for alpha or excess return over the market, at a minimum, impact investments can often be used in a client's market based portfolio while preserving risk and return as compared with other market rate investments.

Impact investments now span across asset classes and environmental and social issues, allowing a client to simultaneously pursue both their financial and non-financial goals.

¹ Definition available at Global Impact Investing Network's website: www.thegiin.org/impact-investing



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In its simplest terms, impact investing is the process of choosing an investment with the goal of generating both financial returns and non-financial impact. These investments span the spectrum of asset classes and vehicles, such as publicly traded equities, fixed income instruments and private investments.

In the impact fund space, new public/private financing structures are receiving interest from for-profit institutions and policy makers from the White House to local municipal issuers. In the last five years, there has been a marked increase in social impact partnerships², where return is predicated on the success of addressing a particular social issue that results in government cost savings, as well as green bonds that allow investors to gain scalable access to alternative energy and sustainable projects. The Green Bond market stood at US \$121 billion as of April 30th, 2016. The universe is now comprised of 700+ bonds, from 26 countries in 24 currencies.³

Examples of ESG Factors

Environment

Published goals and progress in managing environmental impact return
Resource utilization - water, waste, energy
Dedicated sustainability office, liability management

Social

Corporate philanthropy, community involvement
Working conditions, supply chain management
Updated and inclusive HR policies, progressive pay policies

Governance

Reporting and disclosure
Published policies, balance of powers, board structure
Product recalls, fines, settlements, consumer and employee lawsuits

There are even companies, including newer structures known as B Corporations, which have a “double bottom line,” with a dual objective of financial return and social or environmental benefit. Impact investing is an area of investments that is growing, driven by entrepreneurs, established business leaders and mainstream investors.

Is there a tradeoff between “doing well and doing good?”

When impact investing started to emerge in the 1970s, investors used negative screening—excluding certain stocks or industries from portfolios—to align investments with their values. For example, an investor may have chosen to screen out investments related to alcohol, tobacco or weapons manufacturers.

While excluding certain investments can provide the benefit of better aligning a portfolio with an investor’s values, this approach can be limited as an investment approach. Negative screens can sometimes amplify risk by eroding diversification and potentially causing unintended concentration of exposure to specific firms or sectors that can result in a portfolio’s failure to perform in-line with a benchmark or achieve an expected rate of return. While some investors accepted this as the price for honoring their beliefs, many did not. And shortfalls in returns entrenched negative perceptions about impact investing.

A good example of how negative screening can lead to significant underperformance can be seen in the energy sector. Ten years ago, investors concerned about climate change had to rely on negative screening of carbon-intensive investments, like coal and oil companies or alternately, invest in a nascent clean tech strategy. When energy markets increased in value substantially over the last decade, and clean tech went through a significant correction, investors lacked a viable alternative to provide them exposure to the energy sector and they missed out on significant gains with no recourse.

However, the impact investing landscape has come a long way since the 1970s. Today, investors and fund managers harness the power of increased availability of impact data from companies and data providers to review investments using positive environmental, social and governance data. This combined with modern portfolio construction techniques helps reduce the risk and performance drawbacks of negative screening.

Changes to the impact investing landscape

Evolution in the impact investing space has largely been a result of pressures coming from the investing community itself. Large institutions and private foundations—including pension funds and endowments—are one group of investors that have been asking for more responsible investment strategies. There is also a strong demand from individual investors, who demand more transparency in their investments across impact traits, such as sustainability and

² Social Impact Bonds are a new and evolving investment opportunity which are highly speculative and involve a high degree of risk. An investor could lose all or a substantial amount of their investment. There is no secondary market nor is one expected to develop for these investments and there may be restrictions on transferring such investments.

³ Bank of America Merrill Lynch, “Corporates & EMs Going Green (bonds)”, Thematic Investing, June 18th, 2015 issue.

governance. These individual investors are driving the era of the “conscious consumer,” shopping at organic food stores, buying clothing and accessories from companies with social missions and driving environmentally sensitive cars. Finally, the historic COP21 agreements in 2015 will drive increased global reporting on greenhouse gas emissions as well as innovation in how private capital can be harnessed to address climate change.

Institutional investors were some of the first to start incorporating impact investing criteria into their mandates and are taking an increasingly formalized approach to impact investing. One example of this trend is The California State Public Employee Retirement System (CalPERS) that recently issued a statement that it would evaluate all managers along ESG lines⁴. Such definitive action by one of the largest pension funds in the country has a profound impact on the behavior of other investors. Further evidence is seen in the 2,200 financial institutions, asset managers, service providers and other industry participants that have signed the Principles for Responsible Investment.⁵

Yet, adoption is far from universal. A recent Merrill Lynch survey showed that less than 25% of investors know that impact investing options are available to them.⁶ There is evidence that some institutions lack the understanding of how ESG investing works. A survey of 200 university endowments by the Commonfund Institute found that just 53 are “actively engaged in responsible investing,” with just 17 having formally incorporated ESG criteria. Factors such as the difficulty of finding suitably knowledgeable investment managers and a lack of understanding by decision-makers have limited adoption.⁷ The same report also shows that certain investors, such as investment managers at public funds in more politically conservative states, may neither support the specific goals of some ESG investments nor be willing to risk a backlash by critics of those investments.⁸

A significant hurdle that investors, specifically institutional boards, face in adopting more robust impact investing guidelines is concern around breaching fiduciary duty and whether ESG investments will deliver competitive returns. Seen leading the way are mission-aligned investors, such as endowments, foundations and schools. These investors are

broadening their analysis of both companies and investment managers to incorporate ESG considerations and becoming conscious of their fiduciary duty in considering other factors beyond simply maximizing short term returns. In fact, the PRI has asked the Department of Labor to examine its definition of fiduciary duty to incorporate these concepts.⁹

Though institutional assets are much larger than those of individual investors, individual investors are driving the demand for impact investing. The U.S. Trust Annual Insights on Wealth and Worth survey indicates a growing desire among wealthy individuals and families to use their wealth for societal impact. More than half of the investors surveyed said that social impact investing is “the right thing to do.” In addition, 49% say they want to make a positive impact on the world and 53% say that corporate America should be accountable for its actions.¹⁰

These same investors are also changing how they approach investing, with nearly six in ten investors stating that they now consider the social and environmental impact of the companies they invest in to be an important part of their investment decision-making process. And the numbers are even higher for millennial investors. When evaluating investments, 93% of millennials consider social, political or environmental impact important.¹¹

The new generation does not see financial and social returns as being separate, and this reflects a change in the structure of the market. Historically, philanthropy was the main avenue where investors could be socially oriented and express their values. However, according to the U.S. Trust 2016 Insights on Wealth and Worth survey, younger generations see no reason to separate investing and impact, which is why 85% of Millennials and 55% of Generation X are interested in or currently use social impact investments.¹²

Corporate and governmental response to investor demand

In response to the demand of the investor community and consumer trends a growing number of companies are reporting impact investing and social responsibility data; and the quality of this data is improving.

In 2011, only 20% of the S&P 500 companies issued corporate

⁴ Amanda White, CalPERS gives its managers ESG ultimatum, May 22nd, 2015 available at: www.top1000funds.com/news/2015/05/22/calpers-gives-its-managers-esg-ultimatum/

⁵ The United Nations-supported Principles for Responsible Investment (PRI) Initiative is an international network of investors working together to put the six Principles for Responsible Investment into practice. Its goal is to understand the implications of sustainability for investors and support signatories to incorporate these issues into their investment decision making and ownership practices. For details about this initiative, visit: www.unpri.org/about-pri/about-pri/

⁶ Merrill Lynch 2014 ESG Market Research, November 2014.

⁷ Implementation Hinders Sluggish Endowment ESG Uptake, by Tim Sturrock, FundFire, May 5, 2015.

⁸ Political Minefields Impede ESG Adoption, by Tim Sturrock, FundFire, May 8, 2015.

⁹ “Fiduciary Duty Concerns Create ESG Roadblock,” by Tim Sturrock, Fund Fire, September 25th, 2015.

¹⁰ U.S. Trust 2016 Insights on Wealth and Worth Highlights. Data available at: <http://www.ustrust.com/ust/pages/insights-on-wealth-and-worth-2016.aspx>.

¹¹ U.S. Trust 2016 Insights on Wealth and Worth Highlights. Data available at: <http://www.ustrust.com/ust/pages/insights-on-wealth-and-worth-2016.aspx>.

¹² U.S. Trust 2016 Insights on Wealth and Worth Highlights. Data available at: <http://www.ustrust.com/ust/pages/insights-on-wealth-and-worth-2016.aspx>.

social responsibility reports. By 2014, 80% of the S&P 500 companies were creating corporate social responsibility reports.¹³

There has also been substantial growth in indexes, network services and other collaborative or aggregative sources of social responsibility data from a range of financial index providers. Industry leading data providers like MSCI, Sustainalytics, Thompson Reuters and Bloomberg are all providing data to inform impact investing decisions, with now large teams of ESG focused analysts collecting thousands of ESG data points on companies. However, data from these sources is sometimes difficult to put in context and no one provider has become the go-to source providing easily comparable data in a universally accepted standard.

Compared with traditional investments analysis tools such as credit ratings, there is no broadly accepted source or methodology for evaluating impact investments. In fact, there is no single, standardized way to evaluate the impact of any securities in this space. Efforts are underway to develop frameworks for measurement, notably through the Sustainability Accounting Standards Board (SASB), to define materiality thresholds for the environmental, social and governance factors to qualify as an impact investment, but the market is still evolving towards this goal.

Enhancements to data quality and portfolio construction

While there is still room to grow, the structural changes in the markets and financial innovation have dramatically improved how managers can incorporate impact analysis into their portfolios. Investors are increasingly armed with better data and improved portfolio construction techniques that make it even easier to integrate impact into an investment process.

The proliferation of data means that investors have the environmental, social and governance data that, along with traditional financial analysis, they can use to make informed decisions around investing in sustainable companies. Investors no longer have to focus on leaving out specific exposures through negative screening, but rather can use ESG integration to replace them with other investments that

have similar risk/return characteristics thereby mitigating the risks of exclusion. With the improvement in available data, the number of strategies that now incorporate impact investing into their portfolios has grown significantly (see exhibit 2). ESG factors were incorporated into 925 investment funds in 2014, up from 720 two years earlier and 55 in 1995 as more and more mainstream managers see how they can use impact criteria in their investment management processes.¹⁴ Even when faced with imperfect data, investors can now make better choices that allow them to maintain a balanced portfolio.

What does ESG integration look like? A simple example exists in the healthcare space. While traditional negative screening focused on removing tobacco companies, positive integration allows investors to take that capital and invest it in another consumer goods company that provides healthy drinking water to the developing world, or a healthcare company that manufactures life saving drugs.

Using substitution methods based on the advances in factor-based analysis as well as portfolio optimization techniques, investors can employ positive ESG factors to remove certain exposures and substitute others while maintaining the overall risk and reward characteristics of the portfolio. For example, an investor worried about climate change can exclude a coal

Exhibit 1: Active Weights vs. Market Indices

| Market | Index | Time Period | Energy | Materials | Utilities |
|-----------|-------------------|----------------------|---------|-----------|-----------|
| Global | MSCI ACWI | Jan/1/1997-Dec/31/13 | -5.51% | 1.59% | 2.75% |
| U.S. | Russell 3000 | Jan/1/1988-Dec/31/13 | -4.33% | 0.67% | 3.08% |
| Australia | S&P/ASX 200 | Jan/1/2002-Dec/31/13 | -4.48% | 2.42% | 1.26% |
| Canada | S&P/TSX Composite | Jan/1/2000-Dec/31/13 | -12.39% | 5.89% | 3.67% |

Source: Aperio Group LLC.

Aperio Group's study focuses on hypothetical equity portfolios obtained by excluding carbon industries from standard market indices in Australia, Canada and the U.S., as well as a Global Index. In each market, Aperio excluded from the universe the readily available GICS (Global Industry Classification Standard) industry of Oil, Gas and Consumable Fuels from the broadest available index. In the second step, the remaining stocks are re-weighted so that the portfolio can track the index as closely as possible. The re-weighting process takes into account the fundamental risk characteristics of the excluded assets, such as their size, valuation ratios, leverage, and liquidity. A quantitative optimization is used to match the risk characteristics of the Tracking Portfolio as closely as possible to the risk characteristics of the index.

Exhibit 2: Investment Funds Incorporating ESG Factors 1995-2014

| Market | 1995 | 1997 | 1999 | 2001 | 2003 | 2005 | 2007 | 2010 | 2012 | 2014 |
|--------------------------------|------|------|-------|-------|-------|-------|-------|-------|---------|---------|
| Number of Funds | 55 | 144 | 168 | 181 | 200 | 201 | 260 | 493 | 720 | 925 |
| Total Net Assets (In Billions) | \$12 | \$96 | \$154 | \$136 | \$151 | \$179 | \$202 | \$569 | \$1,013 | \$4,306 |

Source: US SIF Foundation.

Note: ESG funds include mutual funds, variable annuity funds, closed-end funds, exchange-traded funds, alternative investment funds and other pooled products, but exclude separate account vehicles and community investing institutions.

¹³ Governance & Accountability Institute Flash Report. Available at: www.ga-institute.com/nc/issue-master-system/news-details/article/seventy-two-percent-72-of-the-sp-index-published-corporatesustainability-reports-in-2013-dram.html

¹⁴ US SIF, "Report on US Sustainable, Responsible and Impact Investing Trends 2014," executive summary, at page 13: www.ussif.org/Files/Publications/SIF_Trends_14.FES.pdf

company, but add a firm making investments in renewables to retain exposure to the energy sector. Another technique is selecting stocks based on financial and ESG factors, then using optimization to neutralize any sector biases that resulted from this approach.

Improvements in portfolio construction techniques now allow investors and fund managers to incorporate robust quantitative and factor research analysis into their investment decision processes to help build a portfolio with positive impact and return. However, investors still have to be careful about the degree to which they alter the portfolio from the reference index or benchmark. A recent study by the Aperio Group on portfolio substitution shows that divesting from carbon intensive investments can prove difficult. For example, optimized carbon-free portfolios in markets with large concentrations in carbon assets historically have generated substantial tracking error, resulting from sector overweighting that occurs over time. Exhibit 1 shows these sector biases that resulted from a study by Aperio in which they created hypothetical carbon-free Tracking Portfolios over different time periods across four geographies.

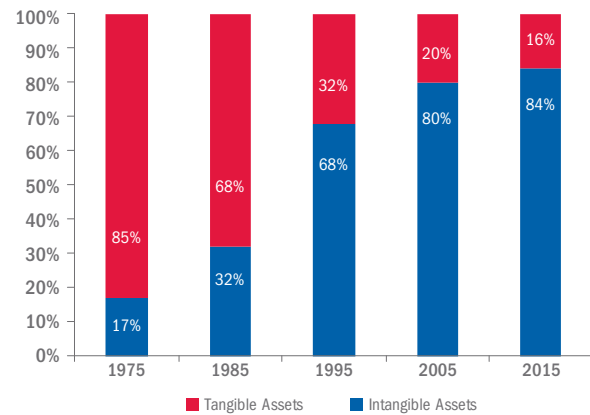
Divesting carbon investments meant a shift not to other sectors but to related ones—in this instance to the utilities and materials sectors. The difficulty of this narrow substitution highlights the difficulty of smart screening and the skill required to create robust impact portfolios. However, when done right, with the combination of better data and improved processes, the impact on portfolio performance can be mitigated. Most managers now run optimization processes to neutralize large sector bets which can help reduce tracking error.

How does impact investing affect portfolio returns?

Two-thirds of investors are uncertain about whether impact investments can offer competitive returns.¹⁵ This perception is somewhat justified given the enhanced risk and reduced performance that many experienced using negative screening techniques in the early days of impact investing. These perceptions are also likely influenced by a long history of “purist” investors who would argue that the sole objective of a public company is to maximize shareholder value. These same investors might also view any resources dedicated to ESG related improvements as a conflict, or at least an investment constraint.

However, with all the improvements in the impact investing space, smart use of impact data has been shown to help

Exhibit 3: Components of S&P 500 Market Value



Source: Ocean Tomo, LLC January 1, 2015

reduce portfolio volatility by helping managers identify risks beyond the balance sheet and even help spot opportunities in the marketplace. In fact, as will be shown below, companies who demonstrate ESG prudence have been able to reduce risk and potentially enhance shareholder value. As a result, these benefits can actually help lead to enhanced risk management and performance of a portfolio.

How can impact criteria help identify risks?

As investors harness the growing availability of impact investing data, a natural question arises: Does an expanded set of non-financial ESG data lead to better risk and return characteristics of a portfolio? Given the non-financial risks that may exist in an investment, the short answer is yes.

One of the most intriguing analyses that supports why impact factors are important in the evaluation of corporations is Exhibit 3. Today, firms look very different; forty years ago, tangible assets—items like property, factories and equipment—made up more than 80% of the value of the S&P 500 companies. Today, that ratio has been reversed, with 80 percent of value now comprised of intangible assets such as intellectual property, market share, brand awareness and perceptions of a company’s effect on society and the environment.¹⁶

When most of the valuation of public companies is made up of intangible assets, increasingly, nonfinancial measures such as a company’s brand and reputation, human capital and R&D are key to the evaluation of a company, as we’ve seen with the news surrounding Volkswagen in 2015 and subsequent material drop in the company’s stock price. A growing body

¹⁵ Bank of America Merrill Lynch, 2015 ESG Research, “A Roadmap to Leadership in ESG and Social Impact,” Page 15.

¹⁶ Ocean Tomo, Backgrounder on Ocean Tomo 300® Patent Index (OT300): www.oceantomo.com/productsandservices/investments/indexes/ot300

of commentary shows that using ESG-related criteria actually helps to augment traditional financial analysis by increasing an investor's ability to assess risks that sit outside of the balance sheet, but are critical to the financial well-being of the company. Therefore, when used alongside traditional financial and risk analysis, this data can lead to better investment decision making.

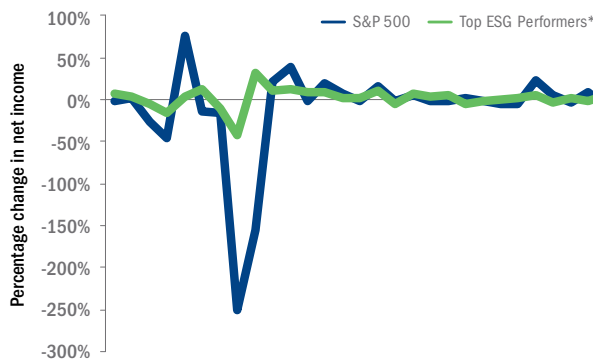
From a practical standpoint, using impact analysis to evaluate companies can help mitigate risk, regardless of whether the investment is being evaluated for impact. There is wide recognition that companies that do not have good governance, that lack good management, that fail to consider environmental risks or that disregard community impacts are ignoring risks to their bottom line.

In fact, there is a range of ESG-related risks that companies

face. Issues such as climate change, health and safety concerns, and issues with transparency, risk management and governance can have a direct financial impact when they affect a company's operations. The classic case of this is of course the BP oil spill. Poor supply chains and labor policies, and the associated potential PR backlash, can pose a significant reputational risk that translates into lost sales, lower valuations and, in the extreme, consumer boycotts.

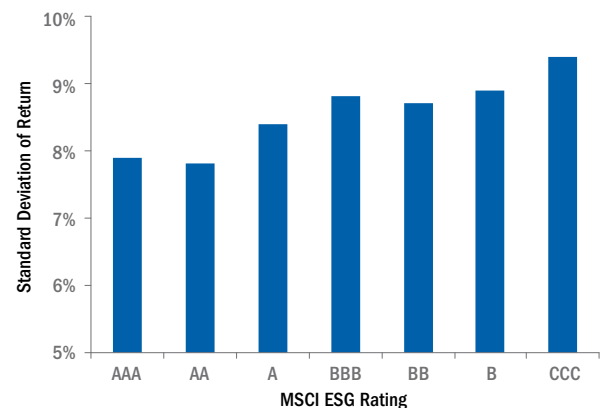
In Exhibit 4, looking at the available analysis helps bring these issues into focus. A recent study by Breckenridge shows that using ESG factors enhanced an investment manager's ability to perform credit analysis and evaluate risk management more broadly—so much so that the firm now uses ESG factors in all its investment decisions. The correlations of ESG factors to financial factors were found to be very low and when using

Exhibit 4: High ESG Performers Exhibit Lower Earnings Volatility



*Represents Breckenridge's 100 Top Q214 ESG performers vs. peer group.
Source: Bloomberg, Breckenridge.
Past performance does not guarantee future results.

Exhibit 5: Return Dispersion (2007-2012)



Source: MSCI®, Analytic Investors

Exhibit 6: MSCI KLD 400 Social Index

| Annual Return | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|------------------------------|--------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| MSCI KLD 400 Social Index** | -12.08 | -20.10 | 28.47 | 10.31 | 3.00 | 13.26 | 3.72 | -34.94 | 31.73 | 11.89 | 1.60 | 13.24 | 36.20 | 12.72 |
| MSCI USA IMI GR USD | -11.02 | -21.65 | 31.01 | 12.32 | 6.41 | 15.70 | 5.78 | -36.98 | 28.72 | 17.17 | 1.23 | 16.41 | 33.39 | 12.51 |
| S&P 500 TR USD | -11.89 | -22.10 | 28.68 | 10.88 | 4.91 | 15.79 | 5.49 | -37.00 | 26.46 | 15.06 | 2.11 | 16.00 | 32.39 | 13.69 |
| Excess | | | | | | | | | | | | | | |
| MSCI KLD vs. MSCI USA IMI GR | -1.06 | 1.55 | -2.54 | -2.01 | -3.41 | -2.44 | -2.06 | 2.04 | 3.01 | -5.28 | 0.37 | -3.17 | 2.81 | 0.21 |
| MSCI KLD vs. S&P 500 | -0.19 | 2.00 | -0.21 | -0.57 | -1.91 | -2.53 | -1.77 | 2.06 | 5.27 | -3.17 | -0.51 | -2.76 | 3.81 | -0.97 |

| | Std Dev | | | Sharpe | | |
|-----------------------------|---------|--------|---------|--------|--------|---------|
| | 3 Year | 5 Year | 10 Year | 3 Year | 5 Year | 10 Year |
| iShares MSCI KLD 400 Social | 8.70 | 11.52 | | 1.92 | 1.27 | |
| MSCI USA IMI GR USD | 8.71 | 12.24 | 15.22 | 1.94 | 1.30 | 0.50 |
| S&P 500 TR USD | 8.56 | 11.74 | 14.72 | 1.94 | 1.34 | 0.49 |

Source: MSCI Returns as of 7/31/15
Historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction.

these factors, Breckinridge was able to identify additional credit risks. Furthermore, they found that companies that manage their ESG risks tended to be more stable credit risks and had lower earnings volatility.¹⁷

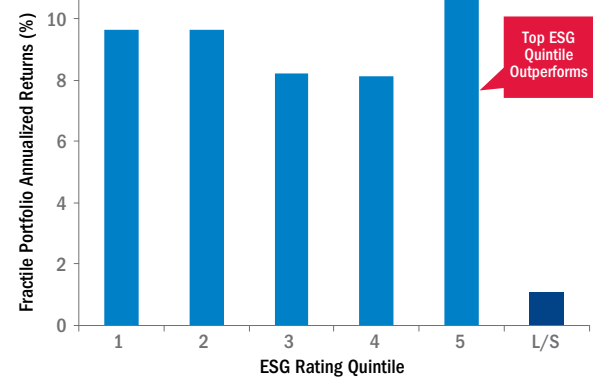
In addition, a paper by Analytic Investors also analyzed the volatility of MSCI ESG rated¹⁸ companies (mapped to the seven point letter scale with ratings from AAA (highest) to CCC (lowest)) found that higher rated ESG companies had a more stable return pattern, leading to the potential for ESG analysis to preserve capital in a portfolio (see exhibit 5).

Another study by Deutsche Bank Climate Change Advisors analyzed existing academic and practitioner research and found that companies identified as having high CSR or ESG rankings historically have had a strong correlation with superior risk-adjusted securities returns.¹⁹ These companies typically have a lower cost of debt capital and equity, which is likely a reflection of the market rewarding them with a lower cost of capital in exchange for lower risk. However, in the same study, companies designated as having SRI qualities, which primarily use exclusionary screens, showed little additional benefit, although they did not underperform the broader markets.²⁰

While ESG data and ratings do help inform investors and their use may even lower portfolio volatility, it is important that investors do not confuse ESG ratings with an expected performance or credit rating, like sell side buy/sell ratings or a Moody's rating. For example, investors also frequently are provided with the evidence that the KLD index has outperformed the S&P 500. The MSCI KLD 400 Social Index tracks the top 400 U.S. companies with outstanding ESG ratings and excludes companies whose products have negative social or environmental impacts. However, when you look at the attribution of returns, much of the performance has to do with sector bets or owning/not owning individual companies, not as a result purely derived from the firms' ESG ratings. However, the index, does exhibit lower volatility over the long term, adding to the thesis that historically, investing in these companies has at the very least preserved capital in a portfolio context (see exhibit 6).

While there is debate as to whether ESG ratings can lead to enhanced performance, multiple studies and Bank of America's Global Wealth & Investment Management Chief Investment Office's internal analysis show that there are benefits to the risk-adjusted return profile of a portfolio. Out of the actively managed public equity strategies that met both investment and ESG integration criteria, 60% outperformed other GWIM

Exhibit 7: Average Monthly Quintile Return of Size Adjusted ESG Score

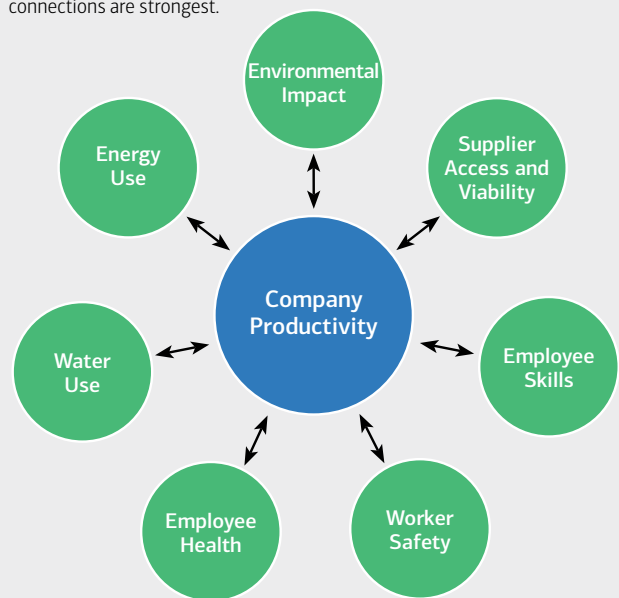


Source: MSCI ESG Research, Compustat, IBES, Russell, S&P; Thomson Reuters, MSCI, Deutsche Bank Quantitative Strategy.

Historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction.

The Connection Between Competitive Advantage and Social Issues

There are numerous ways in which addressing societal concerns can yield productivity benefits to a firm. Consider, for example, what happens when a firm invests in a wellness program. Society benefits because employees and their families become healthier, and the firm minimizes employee absences and lost productivity. The graphic below depicts some areas where the connections are strongest.



Source: Porter and Kramer, "Creating Shared Value," Harvard Business Review

¹⁷ "ESG Integration in Corporate Fixed Income," study by Breckinridge Capital, January 2015: www.breckinridge.com/insights/whitepapers/esg_integration_in_corporate_esg/

¹⁸ The MSCI ratings are based on MSCI ESG Research's Intangible Value Assessment (IVA) methodology. MSCI ESG IVA identifies the key ESG drivers for each industry, calculates the size of each company's risk exposure, analyzes the companies' risk management strategies and ranks each company against its industry peers.

¹⁹ "Sustainable Investing: Establishing Long-Term Value and Performance," by Mark Fulton, et al., DB Climate Change Advisors, Deutsche Bank Group, June 2012: www.institutional.deutscheawm.com/content/_media/Sustainable_Investing_2012.pdf

²⁰ "Sustainable Investing: Establishing Long-Term Value and Performance," by Mark Fulton, et al., DB Climate Change Advisors, Deutsche Bank Group. Abstract released on the Social Science Research Network, June 12, 2012: www.papers.ssrn.com/sol3/papers.cfm?abstract_id=2222740

CIO Due Diligence analyst covered strategies, which on average have a higher risk-adjusted return than the universe.

Do impact investments also offer the potential for alpha generation?

There is a growing body of research on the alpha-generating potential of impact investing, both empirical studies by companies and academic evaluations. While multiple studies have emerged, it is difficult to generalize about their conclusions and whether impact investing can generate superior returns in comparison to traditional strategies. However, it is worth noting that a significant portion of the timeline of these studies include a period in which negative screening was the predominant approach. Given the enhancements in data and portfolio construction techniques identified above, these results would likely look different if this analysis was conducted again in ten years' time.

Also, when looking at ESG ratings for public companies, a high rating does not automatically equate with high performance expectations. In fact, when looking at an individual company analysis performed by Deutsche Bank the most highly ESG-rated companies did show slight outperformance, but the lowest rated ESG companies outperformed the second and third highest quintiles (see exhibit 7, previous page).²¹

However, other studies have shown that firms that have made a proactive commitment to being environmentally and socially responsible and are serious about good governance practices, also referred to in much of the academic studies as "sustainable companies," are generally better run, more profitable and enjoyed associated cost savings.²² One could deduce that these savings would allow an investor to create a portfolio of such companies and, if not capture some element of outperformance, at least provide the potential to deliver strong relative performance to the broader market.

Michael Porter, who authored the early work on shareholder value, has done much work on linking corporate value to the emphasis that companies place on responsible and sustainable business models, which he calls "shared value."

Similarly in exhibit 8, a study performed by Eccles, Ionnou and Serafeim analyzed two sets of 180 U.S. companies from 1993 to 2010. One set of companies had adopted sustainability policies by 1993 and were termed "High Sustainability" companies, while the other set had not and were termed "Low Sustainability" companies. "High sustainability" companies delivered returns 47% higher than their low-sustainability equivalents between 1993 and 2010 while exhibiting lower volatility, both on a value and equal weighted basis.²³

²¹ "The Socially Responsible Quant" by Deutsche Bank Markets Research, April 24th, 2013 issue.

²² "Creating Shared Value," by Michael E. Porter and Mark R. Kramer, Harvard Business Review, January 2011: www.hbr.org/2011/01/the-big-idea-creating-shared-value

²³ "The Impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance," by Robert G. Eccles, Ioannis Ionnou and George Serafeim: Harvard Business School Working Paper 12-035, November 25, 2011.

Exhibit 8: Figure 1-Evolution of \$1 Invested in Stock Market in Value-Weighted Portfolio

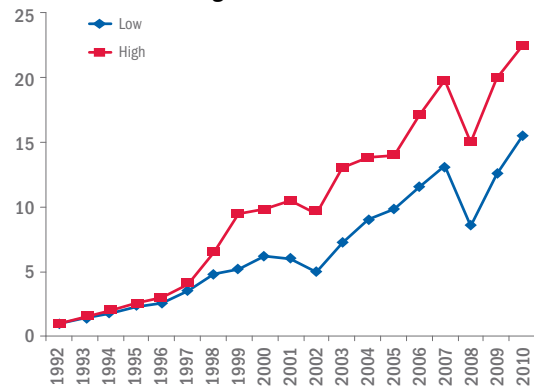


Figure 2-Evolution of \$1 Invested in Stock Market in Equal-Weighted Portfolio²⁴

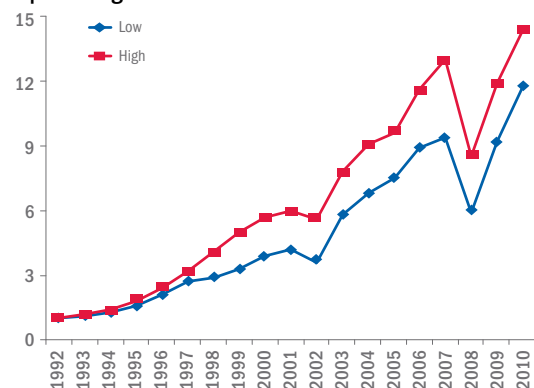


Figure 1 and 2 show the cumulative stock returns of value-weighted and equal-weighted portfolios for the two groups. The researcher identified 90 companies with a substantial number of environmental and social policies that have been adopted for a significant number of years and term these "High Sustainability" companies. Then, they identify 90 comparable firms that have adopted almost none of these policies and term these "Low Sustainability" companies. In 1992, the two groups operate in exactly the same sectors and exhibit almost identical size, capital structure, operating performance and growth opportunities. The performance does not reflect transaction costs. If such cost were reflected the performance would have been lower. Past performance does not guarantee future results.

Exhibit 9: Average 5 Year Annual % Return

| | |
|-----------------------|------|
| Sustainable Investing | 17.9 |
| MSCI World | 14.9 |
| S&P 500 | 13.4 |
| Negative Screening | 13.2 |

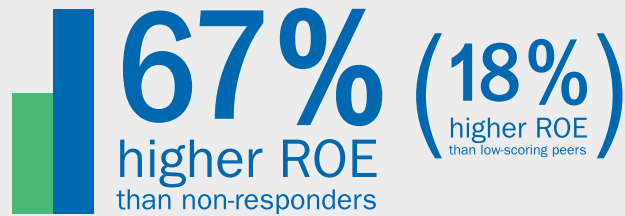
Source: Cary Krosinsky, Nick Robins, *Sustainable Investing: The Art of Long Term Performance*. Negative Screening is defined as strategies that eliminate companies with material revenues from tobacco, alcohol, gambling, firearms, apartheid, Sudan.

Sustainable investing is defined as investment strategies that use an "extra-financial best-in-class", "financially weighted best-in-class", "sustainability themes" or "integrated analysis" approach. Extra financial best-in-class approach is the active inclusion of companies that lead their sectors in environmental or social performance. Financially weighted best-in-class approach is the active inclusion of companies that outperform sector peers on financially material environmental or social criteria. Sustainability themes approach is the active selection of companies on the basis of investment opportunities driven by sustainability factors, such as renewable energy. Integrated analysis approach uses active inclusion of environmental and social factors within conventional fund management.

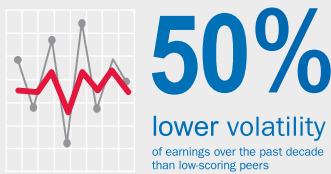
Historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

S&P 500 Industry Leaders:

Generated Superior Profitability



Enjoyed More Stability



Grew Dividends to Shareholders



Exhibit Value Attributes Attractive to Equity Investors

Source: CDP S&P 500 Climate Change Report 2014.

Methodology: CDP requested annual climate change disclosures from the world's largest companies on behalf of its investor signatories. This analysis was based on 337 company responses received by June 28, 2014. The response rate of 70% is based on time of printing. Historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction.

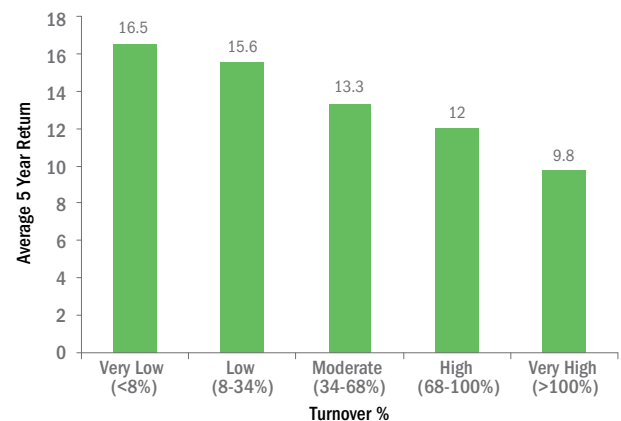
Furthermore, in the book, *Sustainable Investing: The Art of Long Term Performance*, the authors found that a strategy identifying sustainable companies rather than simply screening out companies led to material outperformance for the period (five years trailing from the end of 2007).²⁴ By investing in companies that have higher ratings on environmental, social and governance factors, the investor is encouraging good corporate practices, thus creating an impact. Exhibit 9 shows the return differences between a sustainable investing strategy identified by the author and a negative screening strategy.

A 2014 study of the CDP Global 500 Universe found that S&P 500 industry leaders on climate change generated 18% higher ROE, 50% lower volatility of earnings over the past decade and 21% stronger dividend growth to shareholders than their low scoring peers.²⁵ Therefore, the authors concluded that these

companies provide an attractive investment opportunity given their greater profitability and relative affordability. While other factors could affect these results in the future, there are multiple studies that link management's consideration of issues like resource efficiency to strong overall results.

In other research, Osmosis Investment Management conducted two separate studies to determine the impact of resource efficiency on firm value. They define resource efficiency as the use of fewer resources to produce one unit of revenue, which is measured using their proprietary resource efficiency score (RES). The first study compared the returns of the Osmosis MoRE Indices, which invest in top decile of resource efficient companies, to benchmark indices using Capital Asset Pricing Model and Fama and French Models. Overall, the study found that the MoRE Indices

Exhibit 10: ESG Funds by Turnover



Source: Cary Krosinsky, Nick Robins, *Sustainable Investing: The Art of Long Term Performance*.

Returns for the Sustainable Mutual Funds included in the study are calculated on a net basis from January 1st, 2003 to December 31st, 2007.

provided excess returns relative to the benchmarks. They also performed a study where they attempted to isolate the impact of resource efficiency (RES) on firm value using data from 2005 to 2012 covering 876 public firms across the world. They found that a one standard deviation increase in RES is associated with 2.2% increase in firm value, significant at the 1% level. This demonstrates the importance of resource management in both margin protection and positive value generation for companies.

Another indication of potential outperformance of ESG strategies can be found in an on average higher active share in

²⁴ Cary Krosinsky, Nick Robins, *Sustainable Investing: The Art of Long Term Performance*.

²⁵ CDP S&P 500 Climate Change Report 2014. CDP S&P 500 Climate Change Report 2014. www.cdp.net/CDPResults/CDP-SP500-leaders-report-2014.pdf

Methodology: CDP requested annual climate change disclosures from the world's largest companies on behalf of its investor signatories. CDP began scoring company responses to its questionnaire in 2007 to provide a gauge of the transparency of climate change information disseminated to the market. Participating companies receive a CDP disclosure score (from 0 to 100) and performance band (from A to E). Companies who score in the top 10% are included in an annual index known as the Climate Disclosure Leadership index (CDLI). CDP's analysis is based on 337 company responses received by June 28, 2014. The response rate of 70% is based on time of printing.

these strategies. Active Share represents the share of portfolio holdings that differ from the benchmark index holdings. A study by Cremers and Petajisto found that the highest ranking active funds, those with an active share of 80% or higher, outperformed their benchmark indexes.²⁶ The research indicates that funds with high active share may be able to

produce higher returns in some strategies. Our analysis shows that 58% of our ESG strategies²⁷ rank in the top decile for active share when compared to their respective traditional actively managed peer groups.²⁸

Finally, a key focus of many impact investors is long-term investing, which they believe provides a more sustainable way for companies to generate long term returns rather than a focus on managing quarter to quarter. The study in exhibit 10 shows that due to the generally longer time horizon, buy and hold nature of professional investors in the impact investing space, a resulting benefit to investors in such strategies is the possible reduction of tax consequences, relative to higher turnover strategies.

Thematic impact investing

As integration of impact data into the investment analysis gains traction among investors across the public and private investing space, impact investors are becoming more engaged in directing private capital to climate change, healthcare and education concerns or social inequalities, which in addition to having significant scale economic impacts, also have large impacts on society and the environment. In A Transforming World²⁹, Merrill Lynch and U.S. Trust identified numerous such themes as material, long-term investment opportunities, that are also impact investing opportunities (see exhibit 11). BofA Merrill Lynch Global Research has been tracking the performance of many of these themes, which unlike the diversified sustainable strategies that have been highlighted so far, tend to have a more defined impact focus and smaller universe. These thematic investments exhibit the potential for outsized returns but with higher risk, such as in the water space, which can exhibit higher volatility. These strategies also tend to have high active share, which, as indicated above, can be an indicator of outperformance in some markets.

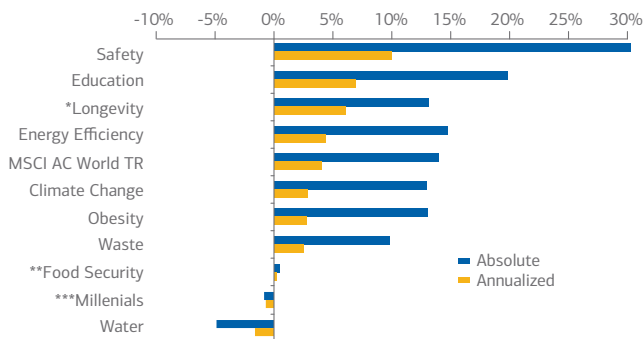
As more impact investment strategies incorporate analysis on sustainability and focus on those themes that will impact society for years to come, impact investing not only provides the investor the ability to have a positive impact with their investments, but also provide an opportunity for growth.

Exhibit 11: A “Transforming World” Thematic Investments

| Innovation | Earth | People |
|---|---|---|
| <ul style="list-style-type: none"> • Cybersecurity • Robots & AI • Virtual/ Augmented/ Mixed Reality | <ul style="list-style-type: none"> • Water • Sustainable Assets (includes Waste, Climate Change & Extreme Weather) • Alternative Energy (includes Energy Efficiency and Clean Tech) • Green Bonds | <ul style="list-style-type: none"> • Healthcare (includes Longevity, Pandemics, Obesity, and Safety) • Aging • Bottom Billions • Health & Wellness • Millennials & Centennials |

Exhibit 12: BofA Merrill Lynch Global Research Primer Picks: Inception date 12/6/13

*Thematic Primer Picks Performance since inception (through September 4, 2016)*³⁰



Performance representation methodology: Each Thematic Investing Primer Picks list is equal-weighted, with rebalancing each time the team publish an update. The performance of any individual security on the list is its percentage change in price, including dividends. Dividends and corporate actions are credited when the stock goes ex-dividend. The performance does not reflect transaction costs. If such cost were reflected the performance would have been lower.

²⁶ K.J. Martijn Cremers and Antti Petajisto, "How Active is Your Fund Manager? A New Measure That Predicts Performance" International Center for Finance, Yale School of Management Article available through Review of Financial Studies, 2009, 22(9) at: www.rfs.oxfordjournals.org/content/22/9/3329.full.pdf?keytype=ref&ijkey=M0noS3O1M6QvzdG

²⁷ These are third party investment vehicles managed by external managers consisting of Separately Managed Accounts (SMAs) or Mutual Funds (MFs). The active share analysis considered all 12 ESG equity strategies that are under qualitative analyst coverage. Active share was observed as of 6/30/15 and compared to each strategy's peer group (large cap growth strategy vs. the large cap growth peer group as an example). 7 of the 12 strategies ranked in the top 10% of their respective peer group for active share. Additionally, Active share can be a predictive factor of ex-ante alpha, but in no way is the active share statistic calculated using historical performance.

²⁸ Based on strategies' active share data on June 30th, 2015. Active share numbers are calculated since portfolios' inception.

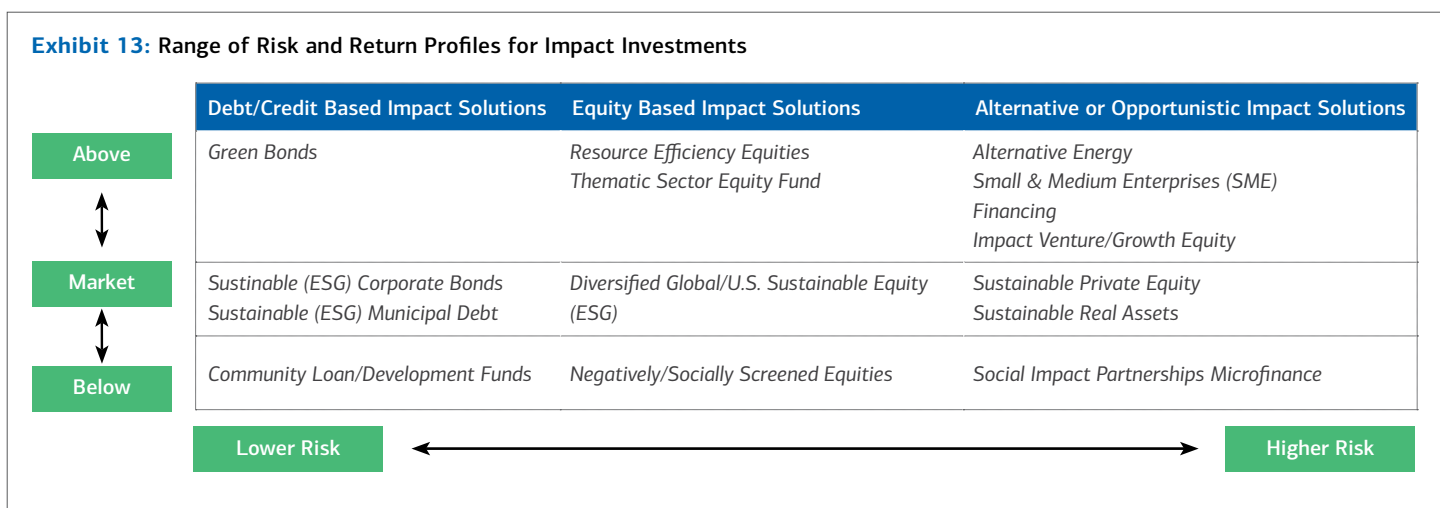
²⁹ A Transforming World is a framework to help clients understand the new investment landscape through a lens of five broad areas of change (People, Earth, Markets, Innovation, Government). In a transforming world, a framework that links multiple investment themes is required, in our view, to identify the major trends that will likely influence asset markets in coming years.

³⁰ Bank of America Merrill Lynch Global Research Primer Picks. Bank of America Merrill Lynch Research, August 10th, 2015:

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Exhibit 13: Range of Risk and Return Profiles for Impact Investments



A range of risk and return profiles

While there is a common misconception that impact investments require a below market return or are generally more risky than traditional investments, many diversified public equity and fixed income strategies that integrate ESG provide market like returns, and some more targeted public and private strategies may have the ability to outperform, as described below. Exhibit 13 shows a representation of the impact investing universe across public and private investments and an illustration of the range of potential investment risks and returns. The risks of many impact investments are not necessarily greater than their traditional counterparts, but they often are different, and understanding what those risks are is critical.

For example, investors in an alternative energy strategy are using capital to create a positive impact on the environment. So in addition to having the potential for lowering carbon emissions, investors are expecting a higher return because alternative energy companies are working in a high growth oriented space. However, the scale of the alternative energy sector, while maturing, is still small and might not be able to absorb significant capital inflows or outflows. These issues of scale and capacity are common in the impact investing landscape, particularly in smaller private markets where many of the social venture strategies that have potential for commercial and impact success are still early in their development.

Recently, studies from both Cambridge Associates in conjunction with Global Impact Investing Initiative (GIIN)³¹ and separately from Wharton at the University of Pennsylvania³² have shown that impact managers in the private equity and debt space that hold themselves out as market-rate

investments have indeed produced results that are either on par or above traditional private equity strategies. Though the sample sizes were relatively small in these reports given where the impact investing industry is in its maturation, the findings are important for investors, and this type of evidence is being collected by more and more entities looking to prove out the impact thesis.

Conversely, investments in strategies such as microfinance and community development offer a significant potential for social impact, but often yield lower returns than traditional strategies with non-rated credit risk. This is due to the fact that there needs to be a cap on the return that can be extracted from loans designed to benefit low income communities. However, as opposed to traditional philanthropy, the difference is that impact investing is designed so that the investor actually receives the capital back, with a return, depending of course on the program meeting certain metrics and realization of the targeted improvements. One of the goals of impact investing is to create a mechanism for the markets to reinvest that capital, thus creating the potential to scale and magnify the social and environmental impact.

Range of Potential Impact Investments across Goals

| Market Goals | Aspirational Goals |
|--|--|
| <ul style="list-style-type: none"> • Thematic ETFs • ESG public equity/debt • Structured impact notes • Sustainable private equity • Green hedge funds • Green bonds | <ul style="list-style-type: none"> • Social Impact Bonds • Niche, private thematic investments • Non-profit finance |

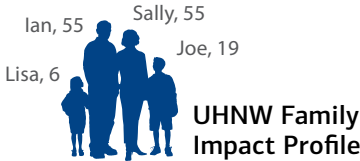
³¹ Cambridge Associates and Global Impact Investing Initiative (GIIN), Introducing the Impact Investing Benchmark 2015, article available at: www.thegiin.org/assets/documents/pub/Introducing_the_Impact_Investing_Benchmark.pdf

³² Grey, Ashburn, Douglas, and Jeffers, Great Expectations: Mission Preservation and Financial Performance in Impact Investing, Wharton Social Impact Initiative, article available at: www.socialimpact.wharton.upenn.edu/wp-content/uploads/2013/11/Great-Expectations_Mission-Preservation-and-Financial-Performance-in-Impact-Investing_10.7.pdf

Your Financial Strategy

WEALTH ALLOCATION FRAMEWORK

GOALS ALLOCATION PORTFOLIO



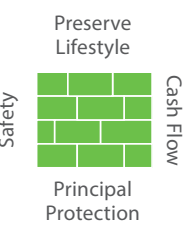
- Lisa and Joe have participated in Habitat for Humanity
- Joe is at a school where student groups engage with 350.org
- Sally supports charities for educating women and girls
- Ian has multiple generations of veterans in his family

Goals:

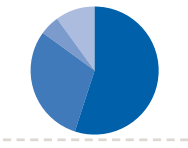
- Invest in ways that support education for women and girls
- Reflect environmentally responsible practices in portfolio
- Reflect important social issues, such as veterans rights and low income community support



Personal
Do not jeopardize standard of living



Market
Maintain lifestyle



Aspirational
Enhance lifestyle and society



Private Debt

- Include a social impact bond that focuses on veterans rights

Private Equity

- Add an allocation to a fund that expands educational opportunities for women

Green Bonds

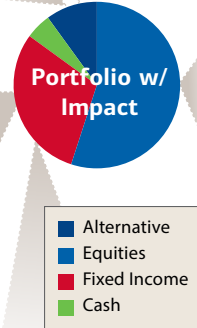
- Include World Bank guaranteed green bonds to reflect client's environmental interest

U.S. Equities

- Invest in a fund that evaluates companies on issues ranging from deforestation to human rights in the supply chain

Municipal Fixed Income

- Add an allocation to a muni manager that integrates ESG factors into their investment process



Alternative Investments, such as private equity and social impact bonds can result in higher return potential but also higher loss potential. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity, and your tolerance for risk. Some or all alternative investment programs may not be suitable for certain investors.

The case study is intended to illustrate products and services available through Merrill Lynch. Case studies do not necessarily represent the experiences of other clients, nor do they indicate future performance. Investment results may vary. The investment strategies discussed are not appropriate for every investor and should be considered given a person's investment objectives, financial situation and particular needs.

Some impact investments also provide returns tied to non-market factors. One example is the NYImPACT social impact bond, the nation's first pay-for-success program to link investors and a state government to finance social change based on provable positive outcomes. The program helps former convicts reintegrate into society and find jobs, reducing costs to the state. If successful, the \$13.5 million program could save taxpayers more than \$30 million a year.³³ While the returns to investors may exceed what they could earn from a traditional core bond portfolio, they still are not likely to match the returns from more venture-like initiatives and many of these structures come with philanthropic guarantees to de-risk this completely new financing structure. This tells us that context is critical in evaluating impact investments.

Finally, there are some impact investments where the investor has opted to accept a below-market rate of return because the investment would not be viable otherwise, or is in an undeveloped sector which creates risk that might require philanthropic subsidy. These kinds of investments are where the issue being addressed has little potential for profit, such as combating AIDS in Africa. Transmission prevention programs have very little ability to provide return, even though they produce huge social and economic benefits to the affected populations. Exhibit 13 shows the range of risk and returns profiles for impact investments.

Fund managers, public officials, nonprofit leaders and others are trying to find ways to better capture and monetize for investors more of the social and economic benefits of impact investments. Success in doing so would enable funds to address social issues while more consistently generating a return appropriate to risk.

Impact Investing Within a Goals-Based Framework

At Merrill Lynch, we look at each client's financial situation through a goals-based lens. Within this approach, it may be

possible for a combination of financial and non-financial goals to be achieved by incorporating impact investments.

As described earlier, many impact investments can be used in the core market portfolio, allowing investors to direct their capital to investment opportunities while maintaining a traditional market based return and risk profile. Where suitable, opportunistic impact investments can then be used to fulfill an investor's more aspirational goals: either to take liquidity or newer markets investment risk for a greater return alongside a positive social or environmental impact, or to explore goals that go beyond financial return and focus instead on having a lasting impact on their community, the environment or society at large that can help them leave the legacy they want. On the previous page, we list the types of impact investments that fall under the market and aspirational goals based portfolios and an illustration of how you might be able to begin thinking about your own portfolios.

Risks of Investing in Impact Investments

While there are many impact strategies that do have longer track records, as the investment approach is expanding, there are many strategies that may have limited performance history. As described above, data availability and standardized frameworks are still evolving both for the private and public impact investments industry and will be subject to multiple improvements in coming years. As such, reporting around the particular impacts of impact investing strategies are subject to the manager's definition of those results and investors should be aware of these issues prior to investment. Finally, as impact investing approaches are being more widely integrated into investment processes, it is important for investors to acknowledge that certain portfolio managers and other investors offering solutions in this space are still in their developmental stage and investors need to be aware of these risks.

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Anna is responsible for manager research across all asset classes for the wealth management businesses. She also defines and executes investment strategies focusing on impact strategy research, thought leadership and investment implementation.

Prior to this role, Anna was part of the alternative investments group where she advised clients on hedge fund and private assets portfolio construction and became head of research for externally managed alternative investment fund of funds.

She was also a senior analyst in the risk management division at U.S. Trust. Anna offers many years of investment and risk analysis experience, having held positions at the Federal Reserve Bank of New York, JP Morgan and UBS focusing on market, credit and operational risk management.

She graduated from Connecticut College. She holds the Chartered Alternative Investment AnalystSM (CAIASM) designation. Anna serves as chair of the board for High Water Women, a foundation based in New York City.

³³ "Bank of America Merrill Lynch Introduces Innovative Pay-for-Success Program in Partnership With New York State and Social Finance Inc.," Bank of America news release, December 30, 2013

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The investments discussed have varying degrees of risk. Some of the risks involved with equities include the possibility that the value of the stocks may fluctuate in response to events specific to the companies or markets, as well as economic, political or social events in the U.S. or abroad. Bonds are subject to interest rate, inflation and credit risks. Investments in high-yield bonds may be subject to greater market fluctuations and risk of loss of income and principal than securities in higher-rated categories. Historically, municipal bonds have been high-quality investments relative to other fixed income securities. However, not all municipal bonds are high grade, and when deciding whether to invest in municipal bonds, you should consider: default risk, market risk and liquidity risk. Income is generally exempt from federal taxes and state taxes for residents of the issuing state. While the interest income is tax-exempt, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT). Investments in foreign securities involve special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments. These risks are magnified for investments made in emerging and frontier markets. Investments in a certain industry or sector may pose additional risk due to lack of diversification and sector concentration. Investments in real estate securities can be subject to fluctuations in the value of the underlying properties, the effect of economic conditions on real estate values, changes in interest rates and risk related to renting properties, such as rental defaults. There are special risks associated with an investment in commodities, including market price fluctuations, regulatory changes, interest rate changes, credit risk, economic changes and the impact of adverse political or financial factors.

Alternative Investments, such as hedge funds and private equity, can result in higher return potential but also higher loss potential. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity, and your tolerance for risk. Some or all alternative investment programs may not be suitable for certain investors.

Impact investing and/or Environmental Social Governance (ESG) investing has certain risks based on the fact that ESG criteria excludes securities of certain issuers for nonfinancial reasons and therefore, investors may forgo some market opportunities and the universe of investments available will be smaller.

An offer to purchase Interests in a Social Impact Partnership or Social Impact Bond offering can only be made pursuant to a Confidential Private Placement Memorandum ("PPM"), which contains important information concerning risk factors, conflicts and other material aspects of the Company and must be carefully read before any decision to invest is made. Social Impact Bonds are a new and evolving investment opportunity which are highly speculative and involves a high degree of risk. An investor could lose all or a substantial amount of their investment. *There is no secondary market nor is one expected to develop for these investments and there may be restrictions on transferring such investments. The specific terms of any individual offering may provide for substantial or total loss in the event that specific targets are not met and must be carefully reviewed with the various potential outcomes carefully considered.*

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