Total Portfolio Impact in Investment Management

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INTRODUCING TOTAL PORTFOLIO IMPACT

The investment management industry is experiencing a fundamental change as two long-running trends converge: first, a belief that material environmental, social and governance (ESG) characteristics can be a driver of better long-term investment performance, and second, a demand from clients to understand the social and environmental impact of their portfolio alongside investment performance. While much of the debate over the last decade has focused on whether and how specific investments can integrate ESG or achieve impact, we believe that the conversation has begun to fundamentally change. Many clients now have an expectation that any robust investment process will integrate material ESG characteristics regardless of asset class, and are increasingly seeking to define, measure and enhance total portfolio impact.

This shift reflects an acknowledgment that every investment has impacts, both positive and negative, whether intended or not. The question for investors is whether they choose to understand and incorporate impact into investment decision-making. An investment can be deemed to have an overall negative impact on society or the environment, a neutral effect, or even an overwhelmingly positive influence by contributing to solutions to social and environmental challenges—there are a range of outcomes.

Just as investors have portfolios with investments across various asset classes with different risk/return expectations, which collectively contribute to their total portfolio performance, investors can have portfolios with investments across the impact spectrum, which collectively contribute to their total portfolio impact. Thereby, impact is an additional dimension to investing and portfolio construction.

The need for investments with positive impact has never been greater; there is a growing urgency to address the challenges facing the world and an acknowledgment that the "same old approach" is not enough.

IN 2015, 193 COUNTRIES ADOPTED A SET OF GOALS TO END POVERTY, PROTECT THE PLANET AND ENSURE PROSPERITY FOR ALL BY 2030. TO ACHIEVE THESE GOALS, THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS HIGHLIGHT[1]:

$5-7tr.	is needed to eliminate extreme poverty
$2.5tr.	funding gap that investors and corporations are mobilizing to help bridge
15 out of the 17	goals are investable, enabling private capital to play a role while still achieving financial returns

The United Nations Sustainable Development Goals (SDGs) provide a common set of social and environmental outcomes that governments, non-profits, companies and investors can work together to achieve. The outcomes for people and the planet can be translated into investable solutions, such as improving sustainable growth and employment, improving health outcomes, promoting gender equality, addressing climate change and energy needs, and conserving the natural environment. This common framework across asset classes, combined with other impact dimensions—such as depth, scale, and who is being affected and their level of need—is helpful to align and aggregate impact objectives across a portfolio.

[1] United Nations Development Programme. *Impact Investments to Close the SDG Funding Gap*, July 13, 2017.

The convergence of several macro trends is driving increasing interest in investing with positive impact. Consumers increasingly care about how products are sourced and produced, how companies treat their employees, and the overall effect on the planet and their health. Meanwhile, more entrepreneurs are building for-profit companies that embody sustainable business practices, products and services. Many consumers want an investment approach that is consistent with the impact objectives they express through their consumption and spending. These shifting expectations are increasingly being reflected in the allocations made in individual accounts, by pension fund trustees and endowments. Other institutional investors such as foundations have historically employed loans, guarantees and/or equity to supplement their social or environmental grantmaking activities, and are increasingly directing more and more endowment dollars in a way that is consistent with their stated missions; for example, the Ford Foundation committed $1 billion from its endowment over 10 years to mission-related investments.[2] In addition, regulators, especially in Europe, are raising the bar for investors to pay attention to the full range of risks, opportunities and externalities of their investments.

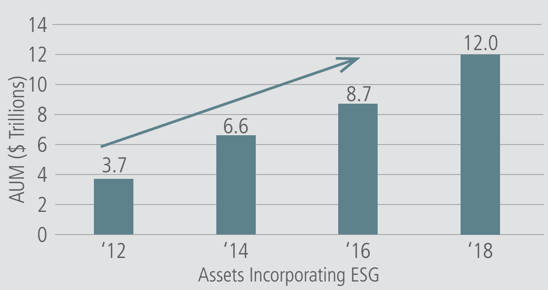
INSTITUTIONS AND INDIVIDUALS ARE INCREASINGLY SEEKING IMPACT THROUGH THEIR INVESTMENTS

$30tr. in millennial generation inheritance by 2050[3]

77% of millennials are interested in having an impact with their investments[4]

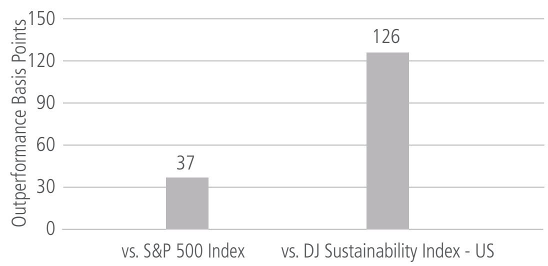
33% institutional investors plan to increase portfolio allocations to impact investing in the coming three years[5]

The institutional stewards of this capital and the asset management industry are responding to this growing client demand[6]

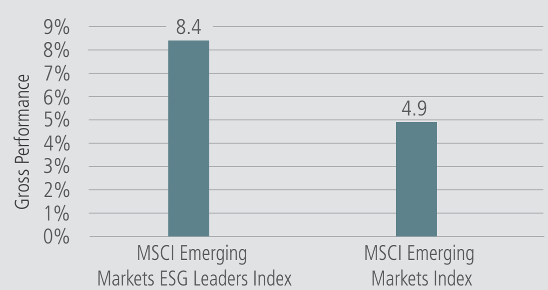


HISTORICAL PERFORMANCE SHOWS THAT IMPACT AND RETURNS CAN GO HAND-IN-HAND

U.S. Active Large Cap – ESG annualized outperformance over a 10-year period ending June 30, 2019[7]



10 Year Annualized Gross Performance ending July 31, 2019[8]



[2] Ford Foundation press release, April 2017.

[3] Accenture Consulting. *The "Greater" Wealth Transfer: Capitalizing on the Intergenerational Shift in Wealth*, 2016.

[4] U.S. Trust. 2018 *U.S. Trust Insights on Wealth and Worth, June 2018.*

[5] Greenwich Associates. *Impact Investing: Institutions Awaken to New Possibilities*, February 16, 2017.

[6] US SIF Foundation, Report on US Sustainable, Responsible and Impact Investing Trends (2018).

[7] Morningstar. US Active Large Cap - ESG is an equally weighted net-of-fee portfolio that includes all funds that meet the following criteria: Morningstar category of Large Blend, Large Growth or Large Value and deemed socially conscious by Morningstar. The number of funds that had aggregate Fund assets of at least $500 million as of June 30, 2019 included in US Active Large Cap - ESG with a 10-year track record was 59 out of 91; 15-year track record was 51 out of 74 and 20-year track record was 38 out of 54.

[8] Source: MSCI.

NB ESG INTEGRATION FRAMEWORK

At Neuberger Berman, we believe that material environmental, social and governance characteristics are an important driver of long-term investment returns from both an opportunity and a risk mitigation perspective. So, we start our approach to total portfolio impact by integrating ESG factors across asset classes in a manner that is tailored for each particular investment strategy in order to better assess the fair value of a security. However, many of our clients want to go a step further: to consider the impact of their portfolios in conjunction with investment performance. Some may seek to invest in best-in-class issuers because they believe this will not only lead to better financial returns, but also amplify improved social and environmental outcomes. Or they may seek to address social or environmental challenges by investing in companies that intentionally generate social and environmental outcomes alongside financial returns. Our ESG Integration framework captures how portfolio managers incorporate these factors at a practical level, as part of their investment strategies.

AVOID	ASSESS	AMPLIFY	AIM FOR IMPACT
Excluding **particular companies or whole sectors** from the investable universe	Considering the **valuation implications of ESG risks and opportunities alongside traditional factors** in the investment process	Focusing on **'better' companies** based on environmental, social and governance characteristics	Seeks to **intentionally generate positive social and environmental impact** alongside a financial return
INVESTMENT APPLICATIONS	INVESTMENT APPLICATIONS	INVESTMENT APPLICATIONS	INVESTMENT APPLICATIONS
ALL ASSET CLASSES • Ability to implement in Separately Managed Accounts • All UCITS Funds	**EQUITY** • Emerging Markets Equity • Small Cap Intrinsic Value **FIXED INCOME** • Global Investment Grade • Global Non-Investment Grade Credit • Emerging Markets Debt • Municipal **ALTERNATIVES** • Private Equity • Private Credit **QUANTITATIVE** • ESG Factor **MULTI-ASSET CLASS**	**EQUITY** • Sustainable Equity **FIXED INCOME** • Global Investment Grade • Global Non-Investment Grade Credit **QUANTITATIVE** • ESG Factor **MULTI-ASSET CLASS** **ALL ASSET CLASSES** • Separately Managed Accounts	**FIXED INCOME** • Municipal Impact **ALTERNATIVES** • Private Markets Impact

*Avoidance screens can be combined with other ESG integration strategies based on client requests.
Note: Investment strategies' ESG integration approaches may evolve over time.

Historically, there has been considerable confusion in the industry around different labels and terminology—responsible vs. sustainable vs. impact, for example—but ultimately, for investors who care about the impact of their investments, we believe it is important to emphasize outcomes, or the effects on people and the environment, rather than the means to achieve the intended end result or the labels.

NB IMPACT SPECTRUM

Incorporating impact into asset allocation adds another dimension to portfolio construction. Just as there is a spectrum of asset classes with a range of characteristics such as return, risk and liquidity, there is a spectrum of how impact can be targeted and manifested across different investments. As an overlay to our ESG Integration framework, we can consider the implications of an investment strategy's ESG integration approach to the potential social or environmental outcomes on people and the planet that can occur as a result of the investment. This "impact spectrum" of end results or outcomes on people and the planet occurs regardless of whether the investor motivation is financial or values-driven. Reviewing the portfolio as a whole across these four different approaches allows the investor to have a view of their total portfolio impact.

ESG INTEGRATION APPROACH	SOCIAL / ENVIRONMENTAL OUTCOMES	EXAMPLES
AVOID	***Avoid certain negative outcomes*** on people or the planet by excluding companies that significantly contribute to these negative outcomes via their products/services or practices	An investor excluding tobacco companies is avoiding exposure to companies that significantly contribute to negative health outcomes
ASSESS	***Seek neutral or positive outcomes, but negative outcomes are possible,*** given that companies that significantly contribute to negative outcomes could still be invested in at the appropriate valuation	An investor may believe that social and environmental trends are driving a shift away from combustion engine vehicles to electric vehicles and build in these considerations in the valuation of a traditional automobile company. However, at the right market price, the investor may still choose to invest in the company
AMPLIFY	***Seek positive outcomes*** by selecting only companies that have an overall benefit to people or the planet based on ESG characteristics of their products/services or practices	For the same automobile example above, the investor may instead seek a best-in-class automobile company that not only has an excellent safety record, but is also heavily investing into the development of electric vehicles, and has industry-leading employment practices that keep workers safe and sustainably employed
AIM FOR IMPACT	***Aim to intentionally generate significant positive outcomes*** by targeting companies that contribute to solutions to pressing social or environmental challenges via their products/services or practices	An investor may target electric vehicle companies and alternative energy companies with the intent to reduce carbon emissions and address climate change in conjunction with the attractive financial opportunity driven by macro trends

In addition to looking at impact at the company or enterprise level via its products/services and practices, the ***role of the investor*** is also an important driver of determining the overall impact of an investment. For example, by making valuation or capital allocation decisions based on the integrated assessment of ESG factors, the investor is signaling to the market that impact matters. The investor may engage with management to encourage change and improve positive outcomes, which is a *particular focus at Neuberger Berman, especially in our capacity as an active manager across asset classes*. Or, the investor may direct capital to grow a new or undercapitalized company or market, or support system-wide improvements in transparency, reporting and regulation. All of these actions can act as a contribution to impact to varying degrees.[9]

Investors who care about the impact of their investments within the lens of total portfolio impact can consider investments across the ESG integration spectrum—avoid, assess, amplify and aim for impact—that will result in a range of negative and positive outcomes for people and the planet.

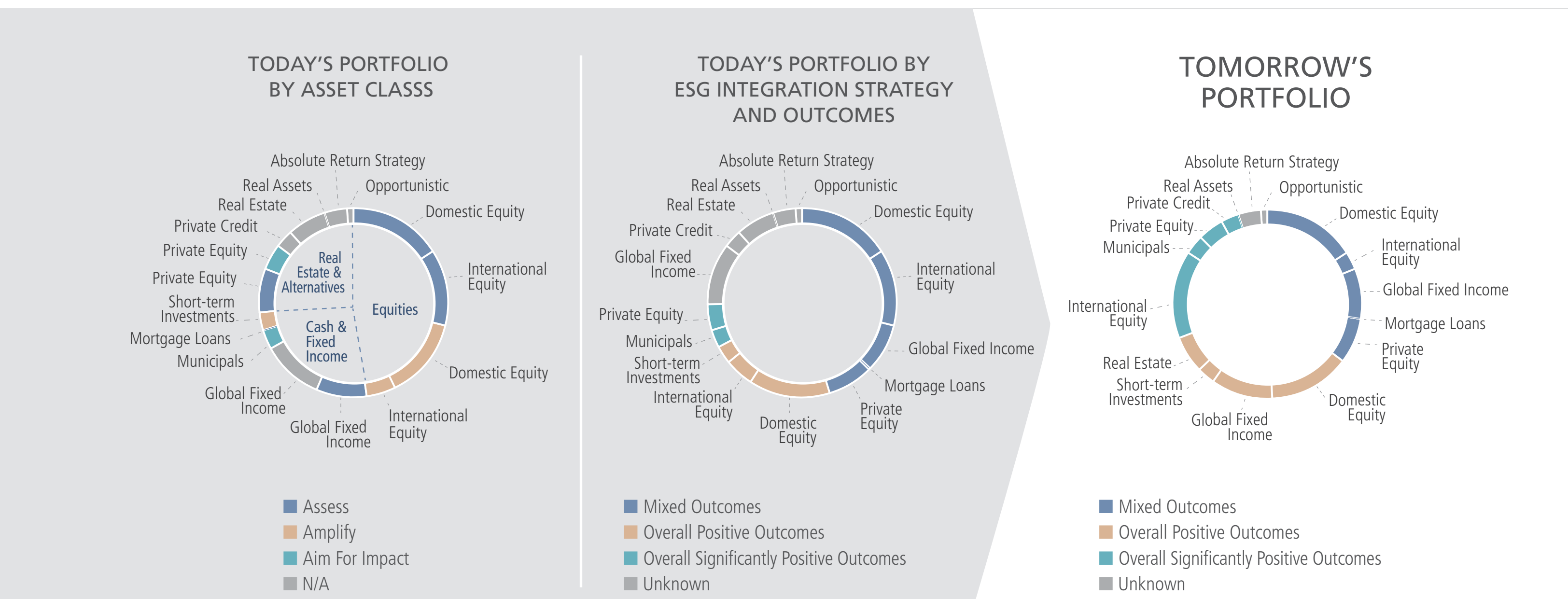
[9] The Impact Management Project.

Often, the ability to maximize positive outcomes may be constrained by the investor's particular profile, which includes size or liquidity requirements. In addition, given product availability, it may currently be challenging for an investor to maintain a portfolio that is entirely aiming for impact while meeting risk-adjusted return and liquidity requirements. For instance, a retiree who has expressed an interest in having a positive impact on society through her investments may have modest wealth and high liquidity needs; a private markets strategy focused on improving financial inclusion in emerging markets may have potential to generate significant impact, but is likely not an appropriate fit for this investor's portfolio. In contrast, an investment grade fixed income product that seeks to invest in companies with best-in-class ESG characteristics, diversified across sectors, could be a better fit for achieving both financial and impact objectives.

Today, investors can begin by defining their impact objectives and analyzing their current portfolios to understand what they own with respect to the level of ESG integration and the corresponding potential social and environmental outcome implications. They can then explore ways to increase their overall total portfolio impact by incorporating ESG or impact objectives into formal policies and selecting managers that integrate ESG considerations into their investment processes. Investors can assess a full range of risks and opportunities and begin swapping in a more "impactful" product (i.e., strategies that amplify best-in-class ESG or aim for impact) within an asset class that seeks to achieve the same or better financial results. (And in some instances, certain investors can be more flexible on the expected financial return, risk or liquidity of an investment in the pursuit of impact—though this would not be our focus as a fiduciary investment manager.) The integration of impact into portfolio management need not be all or nothing, but is more likely to be a gradual evolution of the portfolio, especially as more products come to market and investors become more sophisticated in their approach.

This is an exciting and innovative time for the investment management industry. Investing with additional impact dimensions is a relatively new approach and requires investors to work together to develop shared market infrastructure, especially with regard to impact measurement and management. At Neuberger Berman, we are working collaboratively with industry associations and peers to help shape the future of the industry. We are excited to partner with clients as they embark on their own journeys to increase total portfolio impact.

EVOLUTION OF A HYPOTHETICAL PORTFOLIO OVER TIME



For illustrative and discussion purposes only.

FOR MORE ABOUT OUR APPROACH TO ESG & IMPACT INVESTING, PLEASE VISIT **WWW.NB.COM/ESG.**

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ESG integration approaches may evolve over time. **Please note that for certain products ESG integration is only one input in the credit analysis and is not solely determinative of whether an asset will be purchased.**

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The **S&P 500 Index** consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market value weighted index (stock price times number of shares outstanding), with each stock's weight in the Index proportionate to its market value. The "500" is one of the most widely used benchmarks of U.S. equity performance. As of September 16, 2005, S&P switched to a float-adjusted format, which weights only those shares that are available to investors, not all of a company's outstanding shares. The value of the index now reflects the value available in the public markets.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 24 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, and the UAE.

The **Dow Jones (DJ) Sustainability U.S. Index** is designed for investors seeking an index tracking U.S. securities that applies a sustainability best-in-class selection process. The index tracks the performance of the top 20% of the largest 600 U.S. companies in the Dow Jones Sustainability North America Index, selected by the SAM's Total Sustainability Score.

The **MSCI Emerging Markets (EM) ESG Leaders Index** is a capitalization weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers. MSCI EM ESG Leaders Index consists of large and mid-cap companies across 24 Emerging Markets (EM) countries.

Indices are unmanaged, and the figures for the indices shown include reinvestment of all dividends and capital gain distributions and do not reflect any fees or expenses. Investors cannot invest directly in an index.

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