White Paper | JANUARY 2019

NEUBERGER | BERMAN

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ESG Investing: An Active Approach to Long-Term Value Creation

The investment management industry is in the midst of a fundamental shift, as the increased acceptance of material environmental, social and governance (ESG) characteristics as a driver of long-term investment performance comes together with investor demand that a portfolio's social and environmental impact be considered alongside its return. Many investors now expect that any robust investment process should integrate material ESG considerations, and they are increasingly seeking to define, measure and enhance the total impact of their investments.

Neuberger Berman believes that ESG considerations are an important driver of long-term investment returns from both an opportunity and a risk mitigation perspective. We also understand that for many investors the impact of their portfolio is an important consideration in conjunction with investment performance.

Given the surging interest in ESG investing, investors have faced the dilemma of evaluating active versus passive approaches to ESG integration. Passive ESG strategies—particularly those that seek to implement an ESG tilt using third-party data—can be perceived as a low-cost approach of implementing client sustainability or impact preferences. While we understand the appeal of efficient fund selection and potential cost savings, the analytical limitations and performance outcomes of passive ESG make active ESG integration the more robust choice from a risk and opportunity perspective.

At Neuberger Berman, we believe active management is a demonstrably better approach for investors seeking ESG integration in their investment portfolios in the following key aspects:

- **ESG issues are often deeply intertwined with business and financial issues.** A single source of ESG data is often insufficient to make a judgment on investment risks and merits. Active ESG strategies are able to leverage multiple sources of research and data to qualitatively and quantitatively evaluate material and relevant ESG considerations as part of the holistic investment process.
- **Passive strategies are typically implemented by utilizing third-party ESG data that rely heavily on voluntary company disclosure, can be backward-looking and limited in scope.** Utilizing data can be valuable as a starting point, but limited in its absolute use. Because of the limitations in the quality, disclosure and other biases inherent with ESG data today, investors relying solely on data to make investment decisions are prone to missing a comprehensive risk-reward analysis. Multiple sources of data can provide the flexibility of a broader analysis and the ability to focus on the issues most relevant and material to the investment thesis.
- **Engagement beyond formal data is more meaningful than the data itself.** No one data provider has a monopoly on the most pertinent data. Quality data points come from diverse sources, requiring judgment and prioritization in the context of each investment decision. Active managers, due to their deep knowledge of companies, their business practices and industries, play a key role in the ability to engage with company management around the ESG data points. Active engagement with companies on material ESG issues is a core value-added proposition of active management that can positively influence corporate behaviors and drive sustainable long-term value for investors.
- Over rolling one- and three-year periods since 1999, **active ESG strategies beat their passive counterparts** after fees more than 60% of the time across capitalizations and geographies. The success of active management was particularly pronounced in global and non-U.S. equity portfolios, as active outperformed passive at least 70% of the time (see Figure 6).

ESG Assets Rising Globally with Flows to Passive and Active Strategies

As shown on the following page, investment allocations by individual investors and institutions alike reflect expectations for understanding the sustainability of their portfolios. Investment managers—both active and passive—have responded to this spike in interest by launching a variety of strategies designed to incorporate ESG considerations into the investment process to varying degrees.

At the same time, passive investment strategies—such as passive index funds and ETFs—have surged in popularity as an option for investors looking for lower-cost exposure to market beta. Investors are drawn to passive strategies given their performance run since 2009 and the ongoing demand for low-cost sources of beta. According to the U.S. SIF 2018 Trends report, the number of ESG ETFs more than doubled from 25 to 69 from 2016 to 2018.

The Investment Company Institute reports that from 2008 to 2017 $1.6 trillion in net new cash and reinvested dividends went into domestic equity index mutual funds and ETFs, while actively managed domestic equity strategies lost $1.3 trillion over the same period.

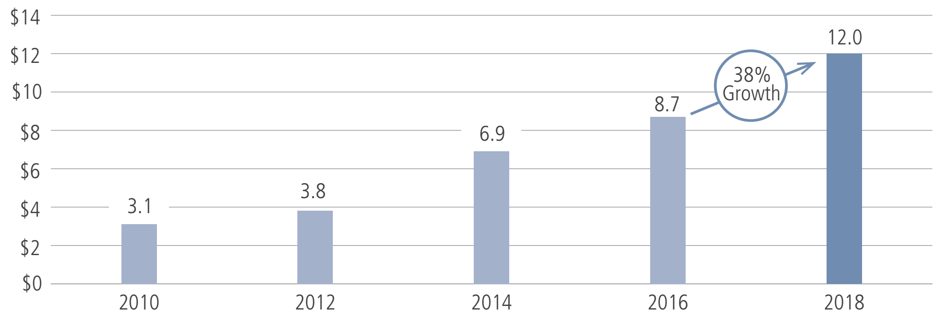
Active Primed to Regain Momentum

Unprecedented liquidity unleashed by central banks in the aftermath of the financial crisis has fueled one of the longest equity bull markets in history while also suppressing certain dynamics—including correlation and dispersion—that provide active managers with opportunities to distinguish among stocks through fundamental research.

That said, the relative performance of active and passive managers has varied over time, and there are many reasons to believe that the slow normalization of global central bank policy, already underway, will result in conditions more supportive of active management. Moreover, as we discussed in a recent paper, alpha is attainable across market cycles and has been far more prevalent during the current bull market than many would suspect.

FIGURE 1. DEMAND FOR ESG-RELATED INVESTMENTS CONTINUES TO GROW IN THE U.S.

Trillion U.S. Dollars



$1 out of every $4 in 2018

U.S. assets under management invested in sustainable strategies

Source: U.S. SIF, *The Forum for Sustainable and Responsible Investments 2018 Trends Report.*

FIGURE 2. INVESTMENT MANAGERS HAVE RESPONDED TO GROWING DEMAND IN ESG

Number of "socially conscious" mutual funds launched in past five years as of year-end 2018

	ACTIVE U.S. EQUITY	PASSIVE U.S. EQUITY	ACTIVE GLOBAL & NON-U.S. EQUITY	PASSIVE GLOBAL & NON-U.S. EQUITY
FUNDS	23	32	30	21
AUM	$2.1bn	$2.2bn	$1.4bn	$2.3bn

Source: Morningstar.

Active Management for ESG: Superior by Design

In our view, active strategies offer investors seeking ESG integration a more effective way to gain exposure to the equity markets—in terms of both investment performance and impact—due to their inherent structural advantages over passive strategies.

When it comes to evaluating active versus passive ESG strategies, it is important to consider the goals of the investor:

- **Seek long-term return through consideration of risk and reward:** The risk and reward analysis of ESG considerations may be unfairly skewed in passive approaches due to data limitations impacting portfolio optimization and sector weighting. Active fundamental bottom-up approaches have the ability to target analysis and assessment of ESG issues that are financially material.
- **Drive change through investments:** Active approaches allow for deeper shareholder engagement with management in a continuous, rigorous fashion within the context of broader financial and industrial considerations.
- **Comply with fiduciary duty:** Active managers concentrate on issues that are most relevant and material to underlying investment performance. Recent guidance from the U.S. Department of Labor reiterates the need for a fiduciary focus when evaluating ESG investments. In other words, fiduciaries need to determine that ESG factors are economically relevant when evaluating ESG managers, which speaks to active managers' focus on financial materiality.

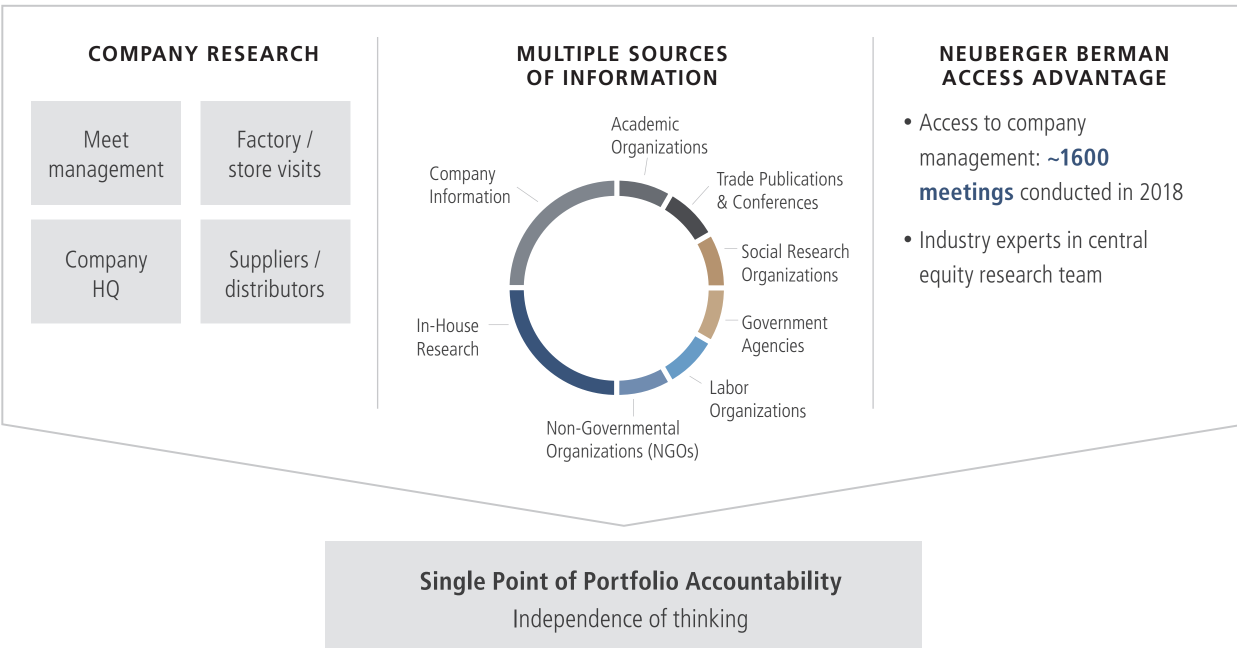
A FIDUCIARY'S EVALUATION OF THE ECONOMICS OF AN INVESTMENT SHOULD BE FOCUSED ON FINANCIAL FACTORS THAT HAVE A MATERIAL EFFECT ON THE RETURN AND RISK OF AN INVESTMENT BASED ON APPROPRIATE INVESTMENT HORIZONS CONSISTENT WITH THE PLAN'S ARTICULATED FUNDING AND INVESTMENT OBJECTIVES.[1]

[1] U.S. Department of Labor, Field Assistance Bulletin 2018-1, April 23, 2018.

Active ESG Integration is Multi-Sourced and Proprietary

To incorporate material ESG criteria into their investment processes, active strategies utilize fundamental analysis leveraging multiple sources of research and data, including original insights produced through in-house research analysis. For example, the Sustainable Equity team at Neuberger Berman utilizes information from multiple sources to assess the underlying ESG considerations as part of a bottom-up fundamental due diligence process.

FIGURE 3. NEUBERGER BERMAN: A FOCUS ON "KNOWING WHAT WE OWN"



Passive strategies, in contrast, implement a top-down approach and typically are dependent on a single third-party source for ESG research and data. Limitations with such an approach include:

- Third-party ESG data sources generally rely heavily on voluntary company reporting, and thus may fail to capture the vast majority of the equity universe. For example, only about 25% of U.S. listed companies disclose all of the requested material ESG data, and disclosure rates are even lower in small-cap equities and emerging markets equities.[2]
- When evaluating a company at a point in time, the backward-looking approach to data utilized by passive strategies may fall short in uncovering risks or opportunities or other cultural nuances not captured by a pre-determined checklist of indicators and scores.

Active fundamental research has the flexibility to holistically analyze an investment and home in on issues and considerations that are relevant and material at a certain point in time. Without this insight, it is difficult to discern emerging ESG trends—positive and negative—within companies and the effect they may have on stock valuations.

[2] SASB, State of Disclosure Report – 2017, data for FY2016.

Active portfolios are built on bottom-up fundamental analysis and can adjust investment allocations to reflect reassessments of ESG considerations as they arise. Their ability to react to changing ESG dynamics in a timely manner may enable active managers to uncover potential opportunities and risks that might be missed by passive ESG strategies, an advantage that may be particularly important in the current environment as companies labor to comply with evolving investor expectations across a range of issues.

Active ESG strategies also have the flexibility to evaluate investments across multiple dimensions and construct portfolios accordingly, potentially enhancing their impact. For example, while both active and passive managers can screen for companies with women on their board of directors, only active managers with research capabilities can dig deeper into a company's commitment to gender diversity to consider whether a company's underlying business practices, products and services also are empowering women.

See the white paper on Gender Diversity as an example of how the Neuberger Berman Sustainable Equity team engages with portfolio holdings to assess and report on hiring and training practices, board oversight and commitment to diversity, as well as women not just on the board, but the total number of women with P&L responsibilities.

Furthermore, an active portfolio also can encompass a broad range of sustainability issues, from climate change to diversity, while passive portfolios tend to focus on a single theme (low carbon, for example), potentially resulting in missed opportunities for uncovering risk or incremental ESG impact that the investor may desire.

ESG is Integral to Active Fundamental Analysis

Today, the myriad ESG integration approaches in the market—active, quantitative, passive, smart beta—leave investors with the challenge of evaluating and determining the credibility of the underlying investment process. In our experience, ESG evaluation is best conducted in the context of fundamental investment analysis by professionals who are thoroughly immersed in the business context, practices and industrial imperatives of each company. To separate ESG analyst roles or teams from the rest of fundamental investment analysis could lead to subjectivity in terms of adoption, as well as inconsistencies in the incorporation of these issues in the investment process.

As active fundamental investors, we believe ESG issues should not be decoupled in terms of accountability, as it may create room for inconsistency or inadequate depth of analysis of material ESG issues. If the issues matter from a materiality perspective, then they should be a part of the investment evaluation process right from the beginning.

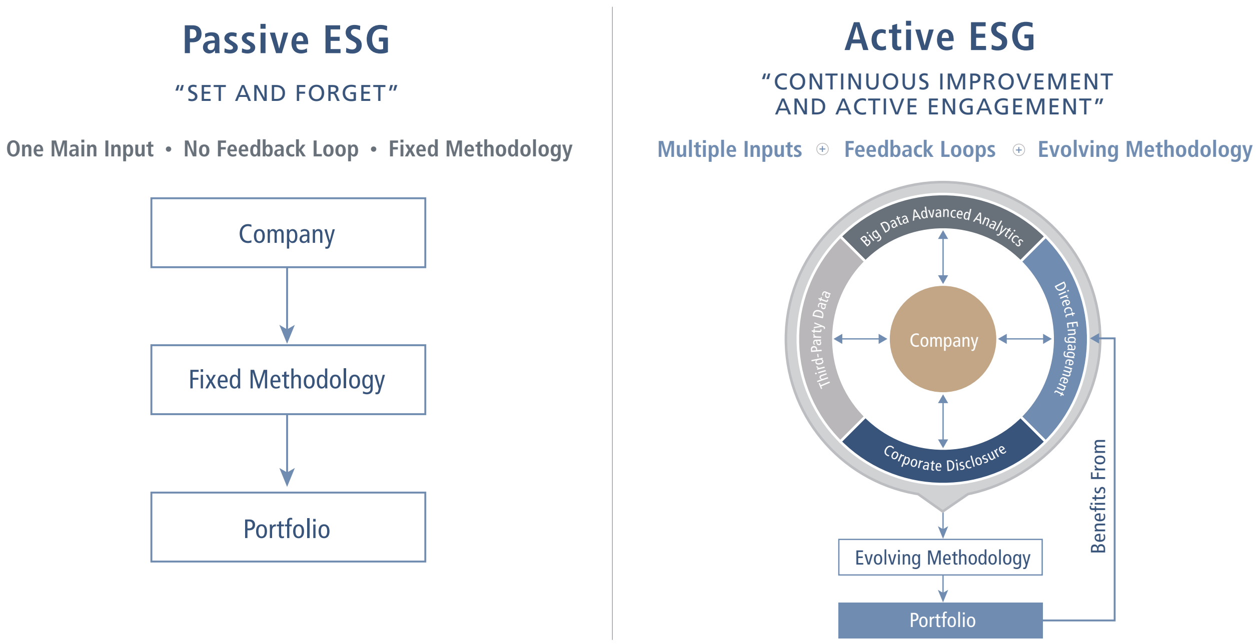
Managers relying on third-party ESG data are, we would argue, two steps removed from the underlying assessment of risks and opportunities, as they are unaware of the source of analysis, criteria or assumptions made in giving a company a certain score. Along these lines, passive ESG strategies are farthest removed given the sheer scale of holdings and lack of in-depth understanding of the business fundamentals.

An indication of how this works in practice is the significance of the choice of third-party ESG ratings provider by the manager of a passive strategy. This is because different third-party ESG ratings providers often have contradictory views on the same company. For example, Tesla is given a high rating by MSCI ("AA") with a heavy focus on their low carbon products, but is given an "Average Performer" rank by Sustainalytics due to labor disputes and governance concerns. That means that a passive ESG strategy labeled "sustainable" could either be overweight or underweight Tesla for reasons that the beneficial investor may not understand and which may have little to do with their investment objectives. In contrast, an active manager with a proprietary rating methodology knows exactly what ESG factors they are focused on and why. Neuberger Berman's proprietary environmental and social rating for Tesla is second quartile ("B") because concerns about product safety and workforce management are offset by leading performance on fuel economy and environmental innovation, while on governance our proprietary rating is bottom quartile ("4") for a number of reasons, including concerns about the ability of the Board and shareholders to hold the CEO to account.

From our perspective, some questions to consider when evaluating ESG strategies include:

- Who does the ESG research? Is there a separation of the financial and ESG analyst?
- What sources of data are utilized in evaluating ESG risks and opportunities? Are investment decisions made based on a single source of data or metric or multiple sources?
- How frequently is the ESG data evaluated and updated?
- At what point in the investment process are ESG considerations incorporated?
- What is the goal of incorporating ESG considerations? Is it client values, is it themes or is it risk/return?
- On which ESG issues, if any, does the manager choose to engage with company management?

FIGURE 4. ACTIVE ESG IS A VALUABLE ITERATIVE APPROACH



Active Management Has More Skin in the Game

We believe that engaging in constructive dialog with portfolio companies on material ESG issues is a core value-add of active management that can positively influence corporate governance and drive long-term, sustainable value for our clients. Individual portfolio managers and analysts bring multi-year perspective that comes with experience across business cycles. Specialized knowledge of specific business strategies and sectors, a history of interaction with executives over the course of their careers and a grounded view of the business environment all enhance and nurture a robust dialog.

It is encouraging to see that many passive managers have recently been stepping up their engagement activity. We believe that every investor voice counts in driving change, particularly when it comes to influencing corporate behavior. Passive managers have some degree of clout in engagement as a result of the scale of their investments, but the frequency and depth of their interaction is relatively limited. Furthermore, they have less recourse compared to their active counterparts due to their inability to divest if the company does not move in the desired direction.

"AN IMPORTANT PART OF HOW WE SERVE OUR CLIENTS IS BY ENGAGING WITH CORPORATE MANAGEMENT TEAMS AND BOARD MEMBERS. ACTIVE MANAGERS THAT HOLD CONCENTRATED POSITIONS WITH LONG INVESTMENT HORIZONS HAVE AN OUTSIZED RESPONSIBILITY TO USE THEIR FORMAL AND INFORMAL INFLUENCE TO SUPPORT SUSTAINABLE VALUE CREATION. WE HAVE A LONG TRADITION OF BEING UNAFRAID TO TAKE STRONG POSITIONS IN ORDER TO BRING POSITIVE CHANGE AT INDIVIDUAL COMPANIES. THIS WORK IS A CORE RESPONSIBILITY OF EACH OF OUR PORTFOLIO MANAGERS AND ANALYSTS—WE ARE ALL STEWARDS OF OUR CLIENTS' CAPITAL."

Joseph V. Amato | President and Chief Investment Officer–Equities

While the holding periods for active strategies vary, eVestment data[3] suggest that the average long-only equity mutual fund with over $1bn in assets under management had an average turnover rate of 38% in 2018, implying a holding period of over 2.5 years. The majority of Neuberger Berman's equity mutual funds had portfolio turnover rates that were lower than this; for example, the Sustainable Equity Strategy's historical average annual portfolio turnover rate of 25 – 30% implies an average holding period of almost four years.

While passive managers are long-term investors by nature and thus are incentivized to engage with companies in support of beneficial management strategies, they typically lack the experienced resources with deep knowledge of the companies that limits their ability to make judgments about the quality or success of its management team. The size and scale of their investments also limit their ability to delve deep into portfolio holdings. For example, the three largest passive managers in the industry have a combined $11 trillion in assets under management—and about 80 analysts in total tasked with voting proxies and managing engagement with 17,000 companies worldwide.

Materiality Evolves, Active Investment Decision Evolves with It

Another aspect of ESG investing to consider is that the issues that are material to performance constantly evolve, which means the approach to engaging with companies and analysis of these issues continues to evolve as well.

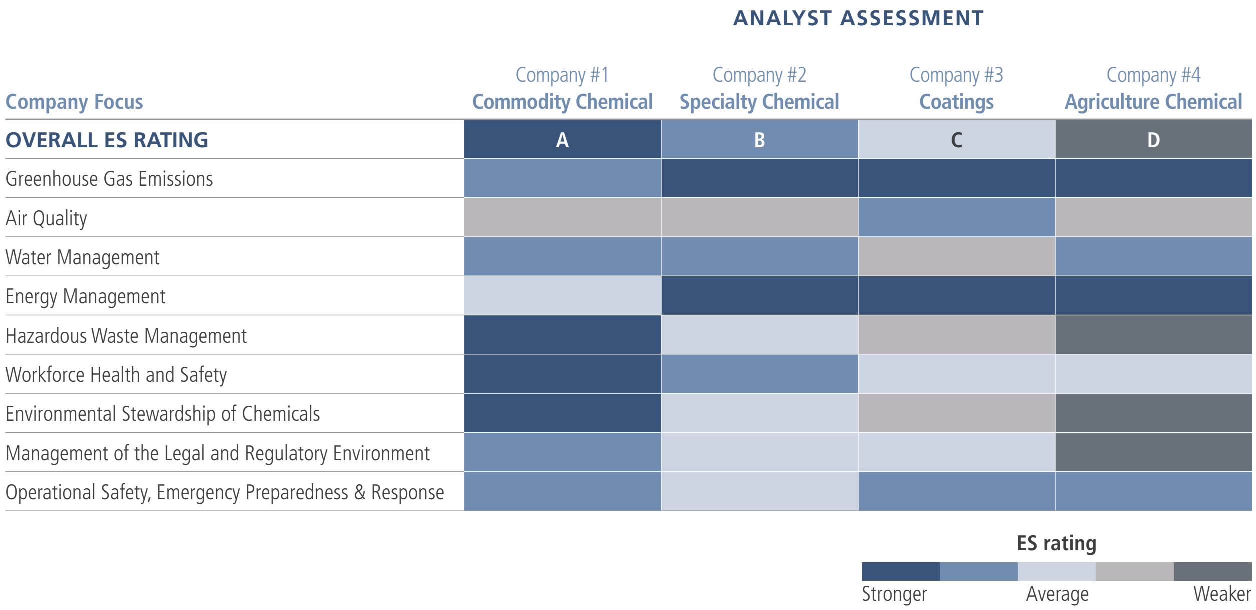
For instance, with respect to investor concerns around climate change, the industry has for many years focused on carbon emissions measurement and reporting. The engagement with company managements then evolved to considering the use of renewable sources of energy and/or the establishment of energy efficiency initiatives in place. Today, the conversation has evolved to considering implications on business growth from scenario analysis around science-based targets.

The complexity and the constantly evolving nature of these issues require a deep understanding of business fundamentals, as well as an ongoing engaged dialog with company management to understand implications from an investor perspective. Active managers consider new information as soon as it is available. Passive strategies have difficulty being as nimble because they may be rigid methodologically and backward-looking.

Our approach places primary responsibility for the assessment of material ESG factors with our fundamental equity and credit research analysts, supported by specialist expertise from our ESG investing team. Within the Commodity & Specialty Chemicals sector, for example, sector-specific material ESG factors like workplace safety and life-cycle plastics can assist in identifying sustainable and innovative companies. Our evaluation of potentially material environmental and social factors focuses on workplace safety and sustainable product innovation over the long term, in addition to environmental issues, such as greenhouse gas emissions, air quality and water management (Figure 5).

[3] eVestment, Goldman Sachs Investment Research, August 2018, data for 2002 – 2017.

FIGURE 5. CHEMICAL COMPANY RATINGS



Active ESG Tends to Outperform Passive in ESG

Relative performance supports our conviction that active management is a better approach, particularly in the world of ESG investing. We looked at rolling one- and three-year monthly returns over the 20 years from 1999 to 2018 for both active and passive socially conscious funds.[4] (Note that this grouping reflects Morningstar's definition of socially conscious funds, and the extent to which these funds engage in true ESG integration likely varies.) As shown in Figure 6, active U.S. ESG equity strategies across capitalizations beat their passive counterparts after fees more than 50% of the time. The success of active management was even more pronounced in global and non-U.S. ESG equity portfolios, with active outperforming passive at least 70% of the time.

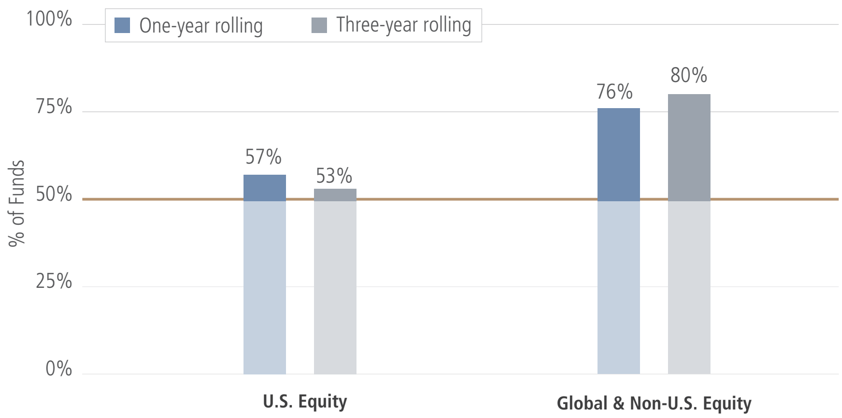
It is worth noting that the "low cost" nature of passive investing via ETFs and index funds is much less significant in the ESG context. Using Morningstar's definition of socially conscious open-end funds, net total expense ratios for passive funds and ETFs are generally higher than in the non-ESG universe. Passive ESG products, for example, levy a wide range of fees, with the median expense ratio of equity ETFs in the range of 40 – 50 basis points. Passive investment firms may justify this incremental expense based on the need to perform additional due diligence or screening in the ESG context, but in practice they generally rely on off-the-shelf ratings and third-party data. Market acceptance of these higher expense ratios for passive ESG reflects a recognition of the hands-on nature of ESG analysis, which we believe is best addressed in the analytical framework of active investing.

Conclusion: Active Investing Can Deliver Impact and Performance

For many investors, the impact of their investment portfolio has become a significant consideration in conjunction with investment performance. As such, these investors now expect that any robust investment process will integrate material ESG characteristics and they increasingly are seeking to define, measure and enhance the total portfolio impact in their investments.

[4] A socially conscious fund is defined by Morningstar as one that "selectively invests based on non-economic principles. Such funds may make investments based on such issues as environmental responsibility, human rights, or religious views. A socially conscious fund may take a pro-active stance by selectively investing in, for example, environmentally-friendly companies, or firms with good employee relations. This group also includes funds that avoid investing in companies involved in promoting alcohol, tobacco, or gambling, or in the defense industry."

FIGURE 6. ACTIVE ESG EQUITY INVESTING HAS BEEN MORE SUCCESSFUL THAN PASSIVE OVER MARKET CYCLES
Percentage of Time in Which Active ESG Equity Strategies Have Beaten Passive Ones after Fees, January 1999 through December 2018



Cumulative excess return over the past 20 years

34.81%
Active U.S. Equity

110.30%
Active Global & Non-U.S. Equity

Source: Morningstar. Morningstar category net average annualized return covering 229 (rolling one-year returns) or 205 (rolling three-year returns) time periods (January 1999 through December 2018). Weighted averages are based on the number of socially conscious ETFs, passively managed open-end U.S.-domiciled funds and actively managed open-end U.S.-domiciled funds with one- or three-year track records as of December 31, 2018, including funds that have been liquidated. Performance is based on funds' oldest share class. Investing entails risks, including possible loss of principal. **Past performance is no guarantee of future results.**

ESG investing is not an asset class in itself, but an investment approach that can be employed across asset classes to help generate enhanced returns, as well as to implement non-financial objectives.

While it's not surprising that some investors would consider passive strategies as a way to access ESG-driven portfolios at a low cost, a number of key structural limitations—in data and research, portfolio integration and corporate engagement—make passive ESG strategies a suboptimal way to gain exposure to markets, both in terms of investment performance and impact.

Active ESG strategies have delivered compelling relative performance, even in the beta-driven bull market that followed the 2008 financial crisis, while providing investors greater control over the impact of their portfolio. The ongoing normalization of central bank policy and its impact on financial market dynamics may further support the relative performance of active strategies, ESG-focused or otherwise.

Many strategies at Neuberger Berman are high active share, long-term and quality focused with a strong emphasis on shareholder engagement. Our view, from a materiality perspective, as well as using our stake to engage with companies, helps us drive long-term value for our clients.

Neuberger Berman ESG Investing

We have a long history of ESG integration dating back to the 1940s for exclusions and 1980s for dedicated sustainable investing teams in equities, and we continue to innovate:

- We have established best-in-class engagement and proxy voting capabilities among active managers.
- We have integrated ESG across equities, fixed income, private markets, including through innovative products.
- We manage our firm with consideration for national ESG best practices from diversity to TCFD climate-related disclosure.
- ESG is embedded in the firm culture and external interactions, especially with clients.
- We are recognized as a leader in ESG, including through A+ ratings by the Principles for Responsive Investment (PRI).

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

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