



NEUBERGER BERMAN

2019 Environmental, Social and Governance Annual Report

NEUBERGER BERMAN

Founded in 1939, Neuberger Berman is a private, 100% independent, employee-owned investment manager. From offices in 35 cities worldwide, the firm manages a range of strategies—including equity, fixed income, quantitative and multi-asset class, private equity, real estate and hedge funds—on behalf of institutions, advisors and individual investors globally. With more than 600 investment professionals and approximately 2,200 employees in total, Neuberger Berman has built a diverse team of individuals united in their commitment to delivering compelling investment results for our clients over the long term. That commitment includes active consideration of environmental, social and governance factors. Our culture has afforded us enviable retention rates among our senior investment staff and has helped earned us a citation from *Pensions & Investments* as a Best Place to Work in Money Management for six consecutive years. The firm managed \$356 billion in client assets as of December 31, 2019. For more information, please visit our website at www.nb.com.

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JOSEPH V. AMATO

President and Chief Investment Officer—Equities

Living Our Commitment

At a time when COVID-19 is threatening the health of people around the world, the responsibility of businesses to their workers, suppliers, customers, communities and the planet has never been clearer. As an active manager, we are focused on navigating these unsettled markets on behalf of our clients, just as we have done for over eight decades. The companies in which we invest need not only to take the short-term actions which we believe are required to survive, but also to recognize the long-term impacts that their choices will have. An analysis of material environmental, social and governance (ESG) factors is just as important to Neuberger Berman's investment processes today as it has been in calmer times.

With a rigorous framework led by our ESG Investing team, 150 ESG-focused analysts¹ are now embedded across our portfolio management teams and working groups, while commitment to ESG research has become a formal element of compensation for our equity research analysts. We continue to refine our proprietary in-house ESG ratings, tailored to industry, and complementing traditional fundamental insights from our investment professionals. In all, approximately 60% of our assets consistently and demonstrably integrate ESG factors into portfolio construction and security analysis, and 100% of our assets are ESG conscious. In light of our advances, we have received the highest scores possible across all categories in the UN-supported Principle for Responsible Investment's latest assessment report on ESG integration.²

Innovation, Communication and Insight

Our ESG toolbox continues to expand. Looking beyond traditional information sources, the mining of large data sets has already proven exceptionally valuable to achieve timely assessments of economic and company-specific fundamental trends. Given issuers' generally uneven reporting of ESG factors, Data Science is providing us with meaningful takeaways on a real-time basis.

Process and innovation alone, without meaningful dialogue, is not enough. Our research professionals regularly share their ESG-related findings and initiatives with one another, the firm and our clients, whether informally or through white papers or publications such as our *ESG Headlines* research notes and quarterly *Engagement Series* updates.

We have interesting stories to tell: as more commerce migrates online, for example, cybersecurity has become an existential issue for many companies. The ESG analysis conducted by our traditional sector analysts has identified companies with weak safeguards prior to the occurrence of damaging breaches. After noting risks to private prison companies amid socially driven shifts toward rehabilitation and reentry for nonviolent offenders, we were not surprised by reports of those companies' reduced access to capital and ratings downgrades. Our internal assessments of opioid manufacturers' vulnerability to higher public scrutiny contributed to reduced ESG ratings and lower exposure prior to the high-profile Oklahoma opioid trial last spring.

Constructive Engagement

Engagement remains central to our ESG process, driven by our enduring relationships with many of the companies in our clients' portfolios, and the constructive dialogue we apply to achieving long-term value creation. One of our higher-profile interactions in 2019 involved governance reforms at Ashland Global Holdings Inc., which headed off a potentially destructive proxy fight with an activist investor, and resulted in new board members and CEO at the company, as well as additional guardrails around compensation and capital allocation.

Many of our interactions are more discrete, however, as we work with companies to help address sustainability issues. For example, a real estate management holding company approached us to better understand our ESG priorities, which we explained included their board make-up and

disclosures. Although a work-in-progress, this company's commitment was encouraging, and we welcomed the insights we achieved from the discussions. Another example is our dialogue with a leading software company that helped lead to their adoption of measurable reductions in carbon emissions in the coming years.

Looking to foster more strategic partnerships on ESG, we are enhancing our already deep involvement with initiatives tied to ESG, for example by engaging with regulators on proposed rules, and hosting industry roundtables.

Living Our Commitment

As an organization, we realize that we must "walk the walk" in terms of disclosure and adherence to sustainable practices.

In light of the "greenwashing" trend in our industry, transparency is especially important. Last year, we released our climate-related corporate strategy, setting forth our commitment to considering material climate-related issues when managing client assets and improving our ability to capitalize on investment opportunities they may provide. We also formalized an ESG subcommittee on products to ensure the integrity of any ESG-related claims made by our strategies through a shared labeling system.

Importantly, in February 2020, we announced the closing of a sustainability-linked corporate revolving credit facility, in which our cost of debt will be higher or lower depending on our performance against key ESG metrics. Neuberger Berman is the first North American financial services firm to enter into such a credit agreement (linking corporate financing to material ESG metrics), and this marks just the third sustainability-linked loan in the United States so far this year.³

Our actions demonstrate our commitment to the principles and practices that we seek from those we invest in, and that clients have come to expect from us.

In the following pages, we provide a comprehensive view of those recent developments and provide perspectives from clients around the world on efforts to further achieve sustainability goals. Please do not hesitate to reach out to your Neuberger Berman team regarding its contents or our ESG efforts generally.

¹ As of December 31, 2019.

² Please refer to page 48 for further information on these grades along with their corresponding disclosure.

³ Source: Seligson, Paula (February 8, 2020). "Neuberger Berman First U.S. Asset Manager to Ink ESG-Linked Loan." Bloomberg.

Our ESG Philosophy

As an active manager, Neuberger Berman has a long-standing belief that material environmental, social and governance (ESG) factors are an important driver of long-term investment returns from both an opportunity and a risk-mitigation perspective.

We also understand that for many clients the impact of their portfolios is an important consideration in conjunction with investment performance. We recognize that ESG factors, like any other factor, should be incorporated in a manner consistent with the specific asset class and style of each investment strategy. We consider ESG factors across our investment platform and offer a range of solutions to meet client objectives.



“Getting to a more sustainable world requires the judgment to make complex decisions about where to allocate precious long-term capital. Our clients have always chosen to partner with us because they trust our judgment—and increasingly that trust is earned through our innovative approach to ESG and impact analysis.”

– JONATHAN H. BAILEY
Head of ESG Investing



2,074

Engagement meetings with corporate management teams across equities and credit in 2019



~60%

Assets managed with consistent and demonstrable ESG integration*

\$339 billion

Assets Under Management



All information is as of December 31, 2019 unless otherwise noted.

1989

First dedicated sustainable investing strategy

941 Proprietary ESG Credit Ratings

2,200 Proprietary Equity Ratings

Proprietary ratings on all Russell 1000 constituents.

A+

Awarded Top Score

In the most recent UN-supported Principles for Responsible Investment (PRI) assessment report for our overarching approach to ESG strategy and governance, as well as ESG integration across each asset class*

*Please refer to page 48 for associated disclosure.



150 colleagues in ESG across committee and working groups



34%

Institutional RFPs and DDQs asked about ESG in 2019

Innovations in ESG Integration in 2019

More investment teams achieve ESG integration status

Our ESG Committee sets a high bar for our investment teams to reach before they can claim to be “ESG integrated.” Being aware of third-party ESG ratings or having a few anecdotes about a time ESG factors made a difference to a portfolio decision won’t cut it. Robustly integrating ESG factors takes time because it needs to be tailored to the asset class and specific investment objective in order to add value. Our ESG Investing team provides support to our PMs as they go on this journey.

In 2019, many of our investment teams were awarded ESG integration status, including our Multicap Opportunities in equities, our Special Situations and European Private Loans strategy in fixed income, and our Private Credit strategy in alternatives.

We demonstrated that our proprietary ESG ratings generated alpha

We firmly believe that a proprietary approach to ESG analysis is the best way to generate alpha because it combines data and judgment with a focus on what we believe is financially material for the specific asset class. We monitor whether our proprietary ESG ratings are adding value in order to continuously improve them.

In the fixed income asset class where downside mitigation is more of a focus, we saw that the lowest rated of issuers based on our proprietary ESG ratings underperformed the benchmark. In 2019, the credits and loans that we avoided helped contribute additional performance to our strategies, supporting our belief that our ESG rating system can lead to stronger insights on issuers.¹

We released our TCFD-aligned climate strategy and rolled out our top-down climate risk modeling

As an advocate for the Taskforce on Climate-related Financial Disclosure (TCFD), we knew it was important not only to ask the companies we invest in to implement the TCFD’s recommendations, but to do so ourselves. In 2019, we released our Climate-related Corporate Strategy

and our Board of Directors took on overall responsibility for oversight of climate risk in our operations and investment portfolios.

To enable climate risk analysis, we rolled out top-down climate risk modeling, covering both physical and transition risk across all of our public equity and corporate credit holdings in co-mingled funds. This top-down analysis enabled the prioritization of additional bottom-up work by our investment analysts and portfolio managers, and a focus on engagement with what we believe have the greatest climate-related risk exposure.

We formally incorporated ESG into incentives and oversight

Our ESG integration approach puts the responsibility for ESG analysis on our fundamental research analysts. To acknowledge the additional work and signal the importance we place on it, we formally incorporated ESG analysis and engagement activities into the performance assessment and bonus structure for each member of our central Global Equity Research Team.

As part of our commitment to ESG principles, in 2019, in addition to auditing ESG integration practices of select investment teams, our internal audit function completed its first firm-wide ESG audit.

We partnered with clients across four continents on ESG

Demand for ESG integration in existing and new mandates continued apace in 2019. Many of our clients are on their own journey as to how they incorporate ESG analysis into internally and externally managed assets. Some are exploring opportunities for Sustainable and Impact mandates. Others are focused on specific risks like climate change.

In 2019, we ran closed-door roundtables and one-on-one knowledge-sharing sessions with clients across four continents to share best practices, identify opportunities for new solutions, and to accelerate our collective progress toward even more effective ESG integration.

¹Calculation uses standard attribution analysis comparing the returns of the Avoidance List with the returns of the overall HY market. Benchmark: ICE, BofA, U.S. High Yield Constrained Index.

“As a private employer and firm, we do a comprehensive review of our progress on key ESG metrics. Linking our borrowing costs to these metrics is a way to show the market we are committed to driving change not just with the investments we make, but within our own firm.”



WILLIAM A. ARNOLD
Chief Financial Officer

OUR COMMITMENT TO ESG INTEGRATION

Our Sustainability-Linked Credit Facility

In February 2020, Neuberger Berman became the first U.S. asset manager to sign a sustainability-linked revolving credit facility, in which our borrowing costs will be higher or lower depending on our performance against key environmental, social and governance factors.

This loan is a way for Neuberger Berman, as a private firm, to demonstrate that we hold ourselves to the same standards that we hold the companies in which we invest; specifically, measuring our performance on a series of metrics that include engagement with portfolio companies on ESG issues, alignment with clients, increasing diversity at the management level, and maintaining “A” or higher ratings as measured by the UN-supported PRI.

We believe that transparency and accountability on these measures is an important part of leading change in our industry, and have seen this trend gaining traction in recent years. Globally, the volume of these types of loans increased 178% in 2019 to \$133.4bn, the U.S. representing just \$18.3bn of this total.¹ Our loan is the third such loan in the U.S. this year.²

^{1,2} Source: Seligson, Paula (February 8, 2020). “Neuberger Berman First U.S. Asset Manager to Ink ESG-Linked Loan.” Bloomberg.

The New Zealand Superannuation Fund: Leading change from the bottom corner of the world

The New Zealand Superannuation Fund (“NZSF”) was established by Act of Parliament in 2001 to pre-fund part of the rising cost of the country’s state pension. Today, the Fund manages assets worth more than \$40 billion and withdrawals are expected to begin in 2035 – 36. We spoke to Katie Beith, the NZSF’s Responsible Investment Strategist, about leading a global collaboration and what it means to be a genuinely long-term investor.

The assets in the NZSF are expected to peak in the 2070s. Very few institutional investors enjoy that kind of capacity to think and act for the very long term. How does it affect the way you do things?

Katie Beith: Our multi-generational mandate requires us to think long term and makes us quite contrarian. Making our investments and the broader economy fit for the world in 10, 20 or 50 years’ time comes with short-term costs. We can afford to look beyond some of those costs. We can be more principled in our approach to engagement rather than passing over positive but potentially costly resolutions.

Although the NZSF has a large allocation to equity, its portfolio is still diverse. How do you achieve consistency in responsible investing across that portfolio?

Beith: Consistency isn’t really what we strive for. We do what we can in each area. Like Neuberger Berman, we recognize there is a spectrum of approaches, from simple exclusion through active engagement to seeking impact, and not all are appropriate or necessary for every investment. Engagement processes are clearly different for a bondholder than for a shareholder. You may not approach these issues in the same way in private versus public equity, or in traditional active management versus quantitative or passive management. In private equity, we increasingly work with dedicated ESG teams, and we expect to see

detailed work on ESG opportunities before we invest and ongoing reporting thereafter. For passive investments, by contrast, we have focused on overlaying mandates with our climate change strategy. Regionally, we focus at home for deep engagement, where we have most influence, often working with other local financial institutions; internationally, we outsource some engagements.

You have been leading the global investor response to the “Christchurch Call to Action.” How important to the NZSF is collaborative engagement?

Beith: We have joined collaborations that align with our priorities, but being in the bottom corner of the world does limit us. In the days following the March 2019 Christchurch mosque attacks, however, we recognized a project that we believe we were uniquely positioned to lead. Nine months later, 95 fellow investors have signed up.

The Christchurch Call has its origins in an international conference organized by New Zealand’s Prime Minister, Jacinda Ardern, to tackle dissemination of violent extremist content via social media platforms. The Prime Minister has been instrumental in bringing the social media companies around the discussion table but, separately, we saw a clear case for shareholder engagement: to address the risk that legislators and regulators seek to curb social media platforms if they fail to tackle this and other well-publicized problems.

We are not technology specialists, but before we put this topic at the top of our engagement agenda, we worked with industry experts to define realistic objectives and clarify points where we could push back against company management. For example, a common stated obstacle to taking action is the sheer volume of traffic on social media platforms, but we learned that sophisticated analysis can help to identify suspicious user activity before extremist material is posted, as well as objectionable material soon after posting. The platforms already use intelligent search and image- or music-matching technology for commercial purposes. Knowing that, and acting on it with a single voice, pre-empts the objection that ‘it’s too complex.’

Leading a global collaboration effort has raised our profile on engagement and helped us tap into new expertise. The team at Neuberger Berman helped us stay on the right side of U.S. regulatory constraints on group formation and concerted action, for example. Having some of our asset manager partners join the Christchurch Call has deepened our relationships.

The NZSF aims to “promote good practice ESG reporting.” How would you rate companies’ progress, and how are you promoting it?

Beith: We offer constructive feedback on ESG reports and make a point of talking with management teams about how we use the information

companies provide. We remain agnostic about reporting frameworks; as long as companies commit to something, that initial move is often a cultural shift that leads to more systematic integration of ESG analysis and reporting into business strategy.

I think we are in the midst of a reporting revolution. It took a long time for the Carbon Disclosure Project to gain traction in New Zealand—between 2013 and 2018 fewer than 15 companies reported against it, whereas another 18 signed up in 2019 alone. The Task Force on Climate-Related Financial Disclosures is making a difference, and New Zealand has proposed mandatory disclosure for all listed and pre-issue companies. But I think a big reason for the change is a global cultural shift: once you start measuring something, you understand it, and once you understand it, it becomes much clearer why you need to measure it.

The NZSF “considers investments which provide positive social returns in addition to the required financial return.” How much impact investing do you do?


Beith: We have a sleeve for impact investment but we’d like to do more. The market is evolving fast, driven by climate change and the U.N. Sustainable Development Goals (SDGs), and we are still figuring out how impact investing fits into our strategy. The Act that established the Fund requires it to pursue best-practice portfolio management, maximize return without undue risk and avoid prejudicing New Zealand’s reputation. It can be hard to assess impact investments against those requirements, and we need to define what kind of impact is important to us rather than simply following the crowd.

Climate change is transforming the way investors think about impact, however. Our own climate change strategy, introduced in 2016, has four pillars: reduce, analyze, engage and search. The fourth pillar is about actively seeking opportunities in climate change prevention or mitigation, introducing an important impact component into our strategy.

What was the most important underappreciated risk that you identified while preparing your climate change strategy?

Beith: Stranded carbon assets was the underappreciated risk back then. Today it’s policy risk. There’s a palpable sense of grass-roots alarm as we see real-world, real-time effects of climate change, and that could create a policy tipping point where governments have historically been skeptical. That is the case next door to us in Australia, with its devastating bush fires, but also in the U.S., where state and municipal governments have taken the lead while the federal government moves in the opposite direction. Those potential tipping points create substantial investment risk.

The New Zealand Superannuation Fund spoke with Neuberger Berman in New York on December 9, 2019.



OUR APPROACH TO ESG INTEGRATION

ESG Integration Framework at Neuberger Berman

Investment professionals throughout the firm are responsible for incorporating material ESG factors in portfolios and investment research. Over 150 of our professionals have formal ESG roles, a bottom-up orientation that encourages strategy-specific innovation while allowing each portfolio management team to draw on best practices from across the investment platform. Our ESG Investing team accelerates this process with top-down expertise and support.

Each portfolio manager has a customized approach to ESG integration, which is driven by multiple factors, including the objectives of the strategy, asset class and investment time horizon, as well as the specific research and portfolio construction, philosophy and process used by the portfolio manager.

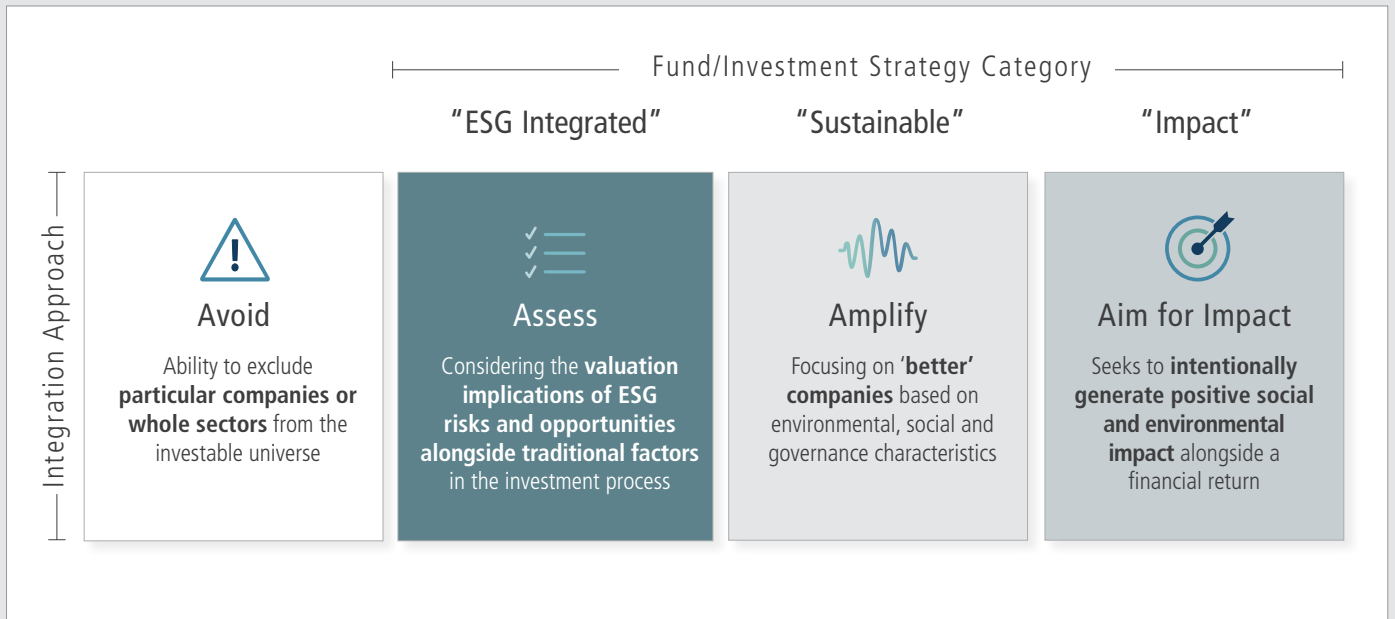
Each portfolio management team determines how best to achieve its ESG integration objectives. It then lays out how to conduct research into ESG related risks and opportunities; how to measure and compare ESG issuers at the security level; and how to construct portfolios influenced by these insights.

We believe the most effective way to integrate ESG factors into an investment process over the long term is for investment teams themselves to research ESG factors and consider them alongside other inputs. For this reason, ESG is included in the work of our research analysts rather than have a separate ESG

research team. To augment our analysis, we regularly add new data sets and leverage the capabilities of our Data Science team. With proprietary ratings covering more than 2,200 equities and 941 credit issuers, the investment teams can then choose how best to apply all the tools of active management.

To heighten transparency and process, last year, we formalized our governance of ESG integration across the firm. Our ESG committee now reviews and approves all ESG integration by portfolio managers, while internal audits ensure that our overall framework and application by portfolio managers remain consistent with our representations and PRI requirements. To reinforce the importance of ESG to our efforts, compensation for many investment professionals is now tied to ESG research insights and integration.

Our Environmental, Social and Governance Integration Framework



OUR APPROACH TO ESG INTEGRATION

Our Sustainable Categorization System

The majority of our investment strategies by assets formally integrate ESG factors into portfolio construction and security analysis.



ASSESS

“ESG INTEGRATED”

(used in fund offering documents, but not in the fund names)

Portfolio manager systematically and explicitly includes material ESG risks and opportunities in investment analysis and investment decisions for all securities.¹

STRATEGIES

Investment Grade Fixed Income
Non-Investment Grade Fixed Income
Emerging Markets Debt
Municipal Fixed Income
European Private Loans
Special Situations
Emerging Markets Equity
Small Cap Intrinsic Value Equity
Private Equity
Insurance-Linked Strategies
Private Debt
Quantitative Strategies
Multi-Asset Class Strategies



AMPLIFY

“SUSTAINABLE”

(in name of fund)

Portfolio manager selects and includes securities on the grounds that they fulfill certain sustainability criteria, such as being best-in-class issuers. There is a clear investment rationale for focusing on sustainability leaders, such as its potential to signal business quality, or to align with secular sustainability trends. Engagement outcomes are set and tracked with influence on buy/sell decisions.

STRATEGIES

Emerging Markets Debt Sustainable
Global High Yield Sustainable Action
Sustainable Equity
Emerging Markets Equity Sustainable
Autonomous Vehicles
Sustainable Research Opportunities
Systematic Global Equity Sustainable
Multi-Asset Class Sustainable



AIM FOR IMPACT

“IMPACT”

(in name of fund)

Portfolio manager seeks to achieve positive social and environmental outcomes for people and the planet alongside a market-rate financial return. The core business, products or services of each holding contributes to solutions of pressing environmental and social issues. Furthermore, all holdings meet the firm’s ESG threshold for a “Sustainable” fund.

STRATEGIES

Private Markets Impact
Municipal Fixed Income Impact

¹This is not an exhaustive list of ESG Integrated strategies, nor does this imply that all strategies are “ESG Integrated”.



OUR APPROACH TO ESG INTEGRATION

Proprietary ESG Analysis and Ratings

Neuberger Berman’s ESG strategy is built around the powerful concept of “materiality”—the idea that individual ESG factors can affect the financial values of investments differently depending on industry and asset class. Our research analysts have worked closely with our in-house ESG Investing team to rate corporations on material ESG metrics at the industry level, across public equity and fixed income. The performance of our ratings supports our tailored approach and this analysis is leveraged by private equity as a starting point for diligence, while making it easier to identify what best practice in an industry entails.

These insights are reflected through Neuberger Berman’s very own Materiality Matrix, which identifies specific sustainability issues that we believe are likely to affect the financial condition or operating performance of companies across more than 70 industries. After identifying the material factors, our research analysts and ESG Investing Team, with the help of our Data Science team, set about measuring them in a consistent and comparable way. This can include company disclosures, specialized third-party research data, unique Big Data sets and qualitative analyst inputs on the most challenging factors to measure. The factors are reviewed at least annually to capture emerging issues and the data is dynamic, updated weekly and accommodating real-time insights gleaned from company engagement or new developments.

We use the medical device industry to show in practice how various teams across the investment platform analyzed these factors in 2019 under our NB Materiality Matrix framework and engaged with companies.

Asset Class: Public Equity

Material Factor: Innovation

We believe that product innovation is a critical variable for the operating and stock performance of companies in the medical technology industry, and can have dramatic impact on the well-being of relevant patients. We therefore include a qualitative assessment of this material factor in our ESG ratings for each company in the group. A medical technology company received high marks in this regard and it played out in 2019. The company has made advances in transcatheter aortic heart valve replacement (TAVR) surgery, which is a minimally invasive approach to this procedure in contrast to traditional open-heart valve replacement surgery. In particular, results from the clinical

trial demonstrated that the company’s TAVR system was superior to traditional open-heart valve replacement surgery in lower-risk patients, resulting in a 44% lower rate of death, stroke and re-hospitalization at one year.

In the wake of these powerful clinical trial results and the subsequent expansion in the FDA-approved indication for the company’s TAVR system, the company’s sales growth accelerated to 19% in the third quarter of 2019, while patients are benefitting from the improved outcomes of this minimally invasive technology.

Asset Class: Investment Grade Credit

Material Factor: Product Safety and Integrity

We believe that product safety and corruption-related risks are a couple of the key material factors in our ESG framework for evaluating medical device and equipment manufacturers as they relate to capacity for sustainable and consistent cash flow generation.

In November, a leading medical device manufacturer recalled some of its devices for robot-assisted neurosurgery procedures. The recall was designated as Class I, the most serious type of recall, by the U.S. Food and Drug Administration (FDA).

Product safety is a material factor for medical device and equipment manufacturers. For the company, however, the latest recall was more than a standard manifestation of generic business risk. The company has been grappling with multiple quality-related issues for years and the latest recall is, in our view, indicative of a persistent lapse in its product quality management systems.

EXAMPLE FROM NEUBERGER BERMAN’S MATERIALITY MATRIX

	ENVIRONMENTAL		SOCIAL			WORKFORCE		SUPPLY CHAIN	LEADERSHIP AND GOVERNANCE	
HEALTH CARE SECTOR INDUSTRY	Emissions	Energy Management	Access to Health Care	Data Privacy and Security	Pricing Transparency	Human Capital Development	Labor Management	Product Safety and Integrity	Corruption and Instability	Innovation
Biotechnology										
Pharma										
Health Care Delivery										
Health Care Distributors										
Managed Care										
Medical Equipment										

Asset Class: High Yield Credit

Material Factor: Human Capital Development

Based on our ESG considerations, we passed on the debt financing for a \$4bn private equity transaction that involved the purchase of a medical device division of a large public company. Our ESG analysis identified the issuer had risks in human capital and labor management influenced by the private equity transaction, which led to management turnover and was influenced by high cost savings requirements—both of which we view as material factors in the industry. While these might not be material factors for every company in the medical equipment industry, we often find them to be material for companies exiting private equity ownership.

Within a year of the transaction closing, these human capital risks materialized as turnover caused integration issues that negatively impacted operating results. During this time, we remained engaged with the company's new management regarding opportunities to improve their labor management policies. Over time, we invested in the company's debt after they outlined new commitments to retain human capital, prioritize safe and reinvestment opportunities to expand the capabilities of its medical device portfolio.

Asset Class: Private Equity

Material Factor: Innovation and Access to Health Care

The private equity team evaluated several transactions in the medical device industry in 2019. These companies were at varying stages of growth and in different parts of the value chain. Factors such as product innovation and access to medicine in the form of understanding clinical alternatives in the market and reimbursement coverage were important areas of due diligence. For example, when evaluating a manufacturer of a critical component in the gene therapy value chain, it was important to understand which diseases were being addressed and what the alternatives in the market were to help evaluate the potential growth scenarios of the company.



OUR PERSPECTIVE

Neuberger Berman Insurance-Linked Strategies

The Neuberger Berman Insurance-Linked Strategies (NB ILS) team invests in instruments that help governments and institutions manage their most pressing risks. Natural disasters—especially extreme, climate-related events—often put individuals, corporations, cities, countries and non-governmental organizations (NGOs) on the hook for costs they cannot bear. Neuberger Berman's ILS team offers strategies in an effort to mitigate this risk and ensure adequate funds and liquidity are available when they are needed most.

Since joining the firm in November 2018, the team has closely collaborated with our dedicated ESG Investing team to leverage tools across different asset classes, as well as contributing to the broader ESG analysis framework as it relates to the environment. The team's commitment to ESG is a critical component that drives the analysis and investment decisions on an ongoing basis.

Understanding Insurance-Linked Securities (ILS)

Insurance and reinsurance instruments can be generally categorized into two types of coverage: indemnity and index-based. Indemnity coverage is claim-based and covers the actual loss of an insured. Payments are made only when the losses have been fully assessed. In contrast, index-based coverage defines a specific trigger for payout and payment occurs only if the trigger is met, which is based on third-party reporting. Index-based instruments are a popular choice amongst developing nations as it is a way to provide an infusion of capital without delay as catastrophe strikes. In particular these groups are attracted to parametric index instruments based on observed event parameters, such as wind speed or ground shaking, as they provide for efficient and speedy settlement.

The NB ILS team has built a practice particularly focused on innovative index-based solutions. Within this space, the team invests in private Industry Loss Warranties (ILWs), index-based catastrophe bonds, and other parametric instruments.

ILWs are privately negotiated contracts that provide coverage to insureds based on the total insured loss experienced by the industry rather than their own losses for a particular event. Usually ILWs are structured fully collateralized with liquid funds immediately available to the insured following the event.

Catastrophe bonds work similarly, but by raising funds in advance of a possible catastrophe through the sale of bonds. If the disaster never arrives, bondholders receive both periodic coupon payments and their principal back at expiration; if the event does occur, the principal is available to the issuer—which could be a government or NGO—for recovery efforts.

NB ILS and ESG

ILS investments help governments, NGOs and companies manage the risk of catastrophic climate events, enhancing the resiliency of global reinsurance markets. More resilient markets, in turn, improve access to insurance for all.

ILS advances many of the objectives embodied in the UN Sustainable Development Goals: reducing the human impact of disasters; building resilience against and capacity to combat climate change; and improving access to financial resources for inclusive and sustainable growth.

Incorporating environmental and climate risk, in particular, is essential to NB ILS. The success of these investments depends on a deep understanding of the climate-related risks driving catastrophic events and what is required to protect against them. The NB ILS team includes climate and environmental scientists who bring their experience to bear developing and using detailed models of the intensity, frequency and duration of climate-related events. These models inform the team's investment analysis and risk management approach.



PETER DIFIORE, PhD, CAIA
Managing Director
Insurance-Linked Strategies



CEDRIC DRUI, CFA, FRM, CAIA
Managing Director
Insurance-Linked Strategies



CHARLES MIXON
Managing Director
Insurance-Linked Strategies



INNOVATIONS AND INSIGHTS

Introducing Total Portfolio Impact

There is a trend in the investment management industry that reflects an acknowledgment that every investment has both positive and negative impacts, whether intended or not. The question for investors is whether they choose to understand and incorporate impact into investment decision-making. Just as investors have portfolios with investments across various asset classes with different risk/return expectations, investors can have portfolios with investments across the impact spectrum, which collectively contribute to their total portfolio impact.

“Many individuals 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.”



JENNIFER SIGNORI
Senior Vice President
ESG and Impact Investing

Many consumers are increasingly indicating that they care about how products are sourced and produced, how companies treat their employees, and the overall effect on the planet and their health. Many individuals and institutions want an investment approach that is consistent with the impact objectives they express through their consumption and spending.

NB Impact Spectrum

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. 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 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.

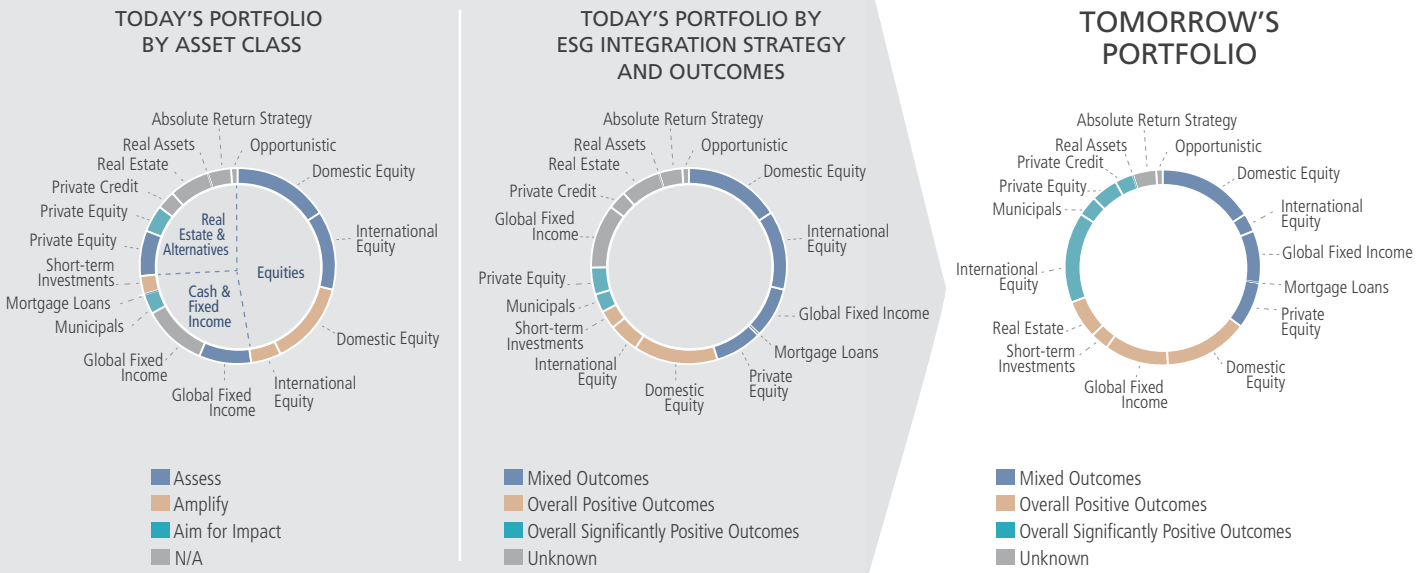
In addition to looking at impact at the company or enterprise level via its products/services and practices, the role of the investor is also an important driver of determining the overall impact of an investment. For example, by making valuation or capital allocation decisions based on the integrated 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.

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. 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 outcomes. They can then choose to 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

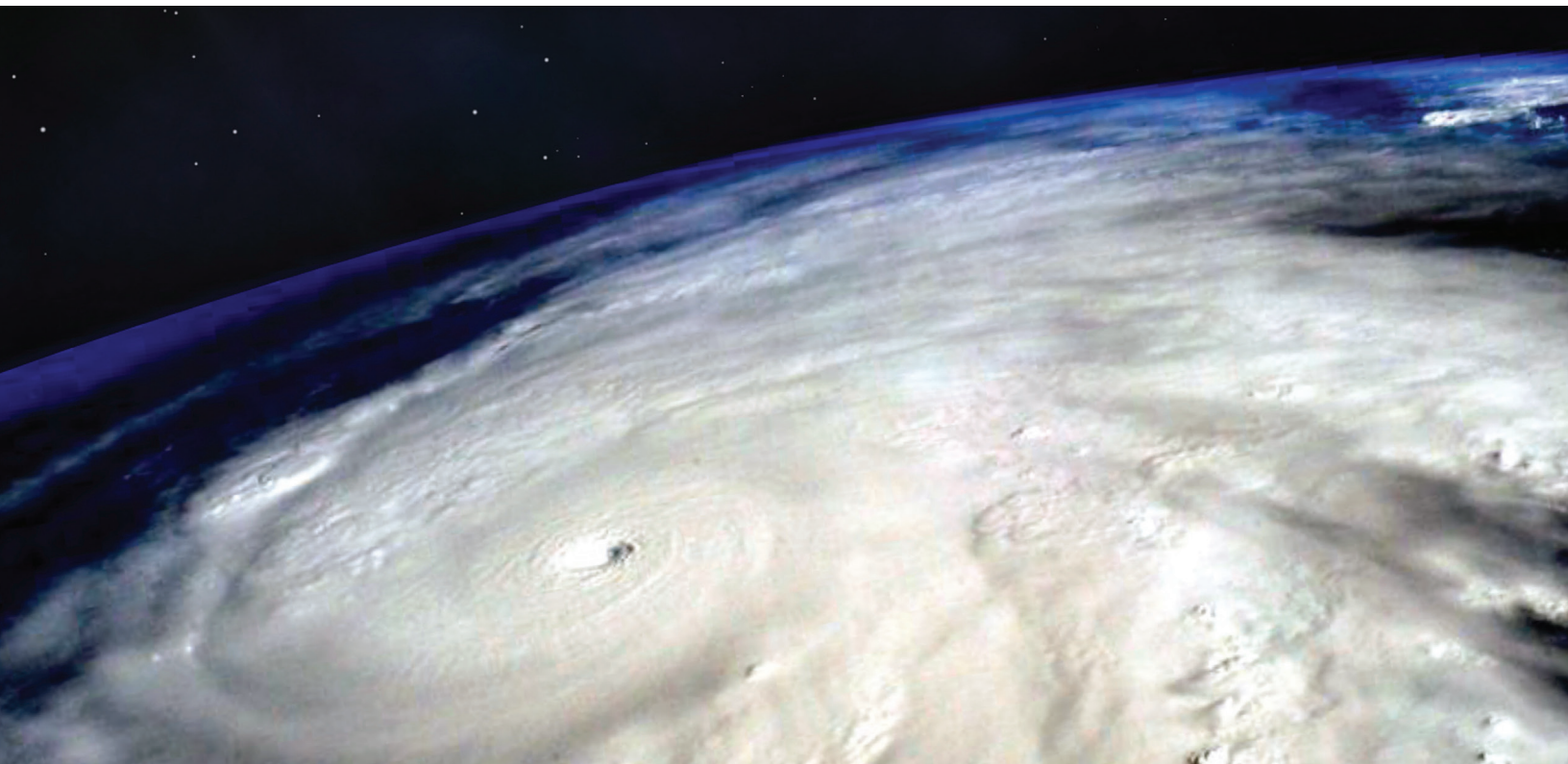
achieve the same or similar investment results where available. The integration of impact into portfolio management need not be all or nothing, but is more likely to be a gradual evolution of the portfolio, especially as more products come to market and investors become more sophisticated in their approach.

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, and 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.



INNOVATIONS AND INSIGHTS

Climate and Data Science

In March 2019, Neuberger Berman released its first-ever comprehensive Climate-related Corporate Strategy in line with voluntary disclosure recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), reflecting climate risk's growing role in our operations and investments. Climate change is, and will continue to be, a critical driver of long-term risk and investment returns. Since releasing that strategy, Neuberger Berman has continued to make substantial investments in data-driven risk mitigation and analytical capabilities.

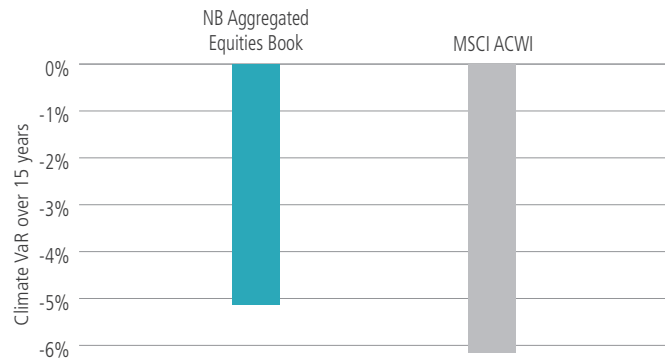
Neuberger Berman's climate policy is built around two core pillars. First, our Board bears oversight of climate risk and addressing attendant issues. Second, climate risk affects all sectors and asset classes, but it affects them differently. Consistent with our focus on materiality for ESG issues more broadly, we assess climate change at a granular level for each investment, within each manager's portfolio, and across asset classes.

Our climate modeling is built around two types of risk: transition risk, arising from the economic shift to a low-carbon economy and regulatory environment; and physical risk, which entails the consequences of damage to physical assets from extreme weather, rising sea levels and the like. Those two types of risk form the basis of our climate value-at-risk tool, a systematic measure of exposure to climate risk across our portfolios under various degrees of warming scenarios.

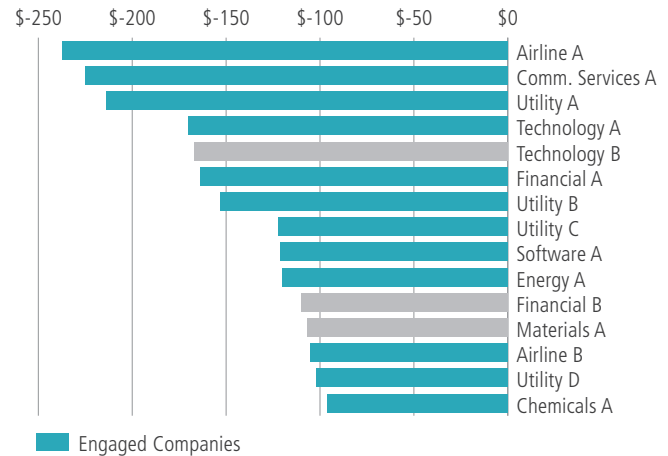
We start with a top-down, systematic scenario analysis of climate value-at-risk for every publicly listed company in our portfolios at least once a year. If the world is successful in delivering the Paris Agreement's goal of limiting global temperature rise to 2°C, our aggregated equity book has an estimated climate value-at-risk of -5.1% over the next 15 years compared to the MSCI ACWI of -6.1%.¹ While our equity book has a climate value-at-risk below the benchmark in this scenario, global equity markets and benchmarks are generally still invested in a business-as-usual scenario that is consistent with 3°C or greater. These metrics evolve as new data is incorporated and we will continue to monitor in the years ahead.

Furthermore, we can use this analysis to identify which holdings are priority engagement candidates across the firm based on their climate value-at-risk and Neuberger Berman's economic exposure. Of our top 15 equity holdings with the highest economic climate value-at-risk exposure as of 12/31/2019, we engaged with 12 of these in 2019 (highlighted in blue). For example, we engaged numerous times with the board and management of Utility A over the last year, including advocating for a much more rapid phase-out of coal power plants in an effort to decarbonize the generation fleet. As a result of these discussions and pressure from other shareholders, the company retired seven coal plants in two years, decreasing CO₂ emissions 42% off a 2010 baseline.² The company has committed to retire an eighth coal plant by year-end 2022 and is investing in an energy transition strategy via battery storage projects and solar.³

CLIMATE VALUE-AT-RISK



HIGHEST WEIGHTED EQUITY CVaR (\$MM)



Source: Carbon Delta an MSCI company. Neuberger Berman equity holdings as of 12/31/19. Climate Value-at-Risk (CVaR) is defined as the present value of the aggregated future policy risk costs, technology opportunity profits, and extreme weather event costs and profits expressed as a percentage of the portfolio's market value should the scenario in question be realized.

¹Neuberger Berman and Carbon Delta an MSCI company, as of 12/31/2019. Equity book defined as all publicly listed equity securities held by Neuberger Berman, excluding ETFs. MSCI All-Country World Index. (MSCI ACWI is a market capitalization weighted index designed to provide a broad measure of equity-market performance throughout the world.) Given the global nature of our equity business and book, we believe the MSCI ACWI is the appropriate comparison for this analysis.

²Utility A, Investor Presentation: Climate Action. October 2019.

³Utility A Press Release, January 2019.

We complement this top-down approach with bottom-up analysis to gain a deeper understanding of what we believe are the risks facing specific companies or the particular event-driven risks that affect our portfolios. This bottom-up approach leverages Neuberger Berman’s unique in-house capabilities, especially those of our dedicated ESG Investing team and Insurance-Linked Strategies (ILS) team, which makes weather and climate risk a core element of its investment strategy.

One example is that our ESG Investing team and Central Research analysts include scenario analysis in our proprietary ESG ratings for the most relevant sectors such as utilities and energy. In the spirit of capturing and most accurately quantifying the environmental risk to these businesses, a few types of scenario analysis were employed. In the Utilities space we leverage the Transition Pathways Initiative⁴ framework to evaluate the forecasted carbon intensity in 2030 relative to levels needed to deliver on the Paris Climate Agreement.¹ We normalized relative to peers and included the results as a factor in our proprietary ESG ratings. Importantly, this analysis goes beyond carbon emissions data reported today and gives us a preliminary view of what the generation profile of each utility under coverage may look like in 2030.

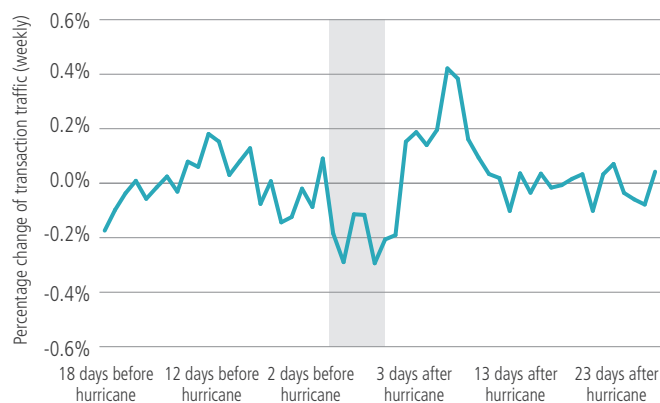
In another case, our Data Science team used credit card transaction data to model the effects of hurricanes on consumer spending. This analysis allowed

us to quantify how the spending at home improvement retailers rose ahead of hurricanes and, after a quick lull during the storm, recover swiftly for a short period of time as consumers undertook hurricane repair work. On the other hand, sales at a coffee house company showed no pre-storm spike, but did see an increase afterwards.

Our Data Science capabilities enable us to use top-down modeling to identify systematic trends across microeconomic data and bottom-up analysis to drill down into the performance of specific companies—like home improvement retailers and coffee house companies—and then to act on that information. These insights can help inform investment strategy and decision-making.

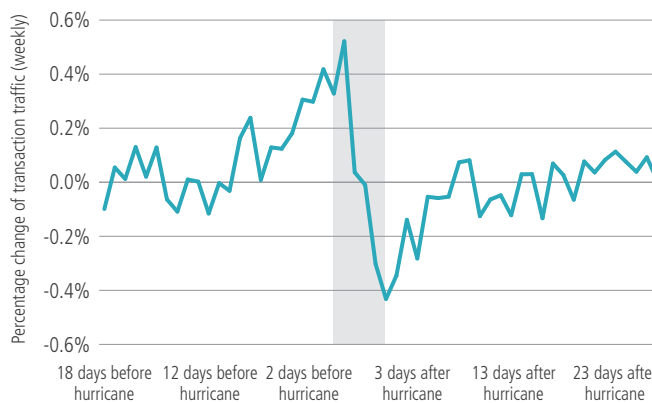
The results of this analysis drive two distinct potential paths of action: First, we can directly engage companies that have significant value-at-risk to determine if they have a strategy to mitigate their exposure. The output of our top-down modeling also informs our participation in the Climate Action 100+, a group of investors working with the world’s 100 largest corporate greenhouse gas emitters to improve their environmental performance. Second, when our analysis shows what we believe are excessive climate risks and limited paths of action to mitigate, we can alter our exposure and rebalance our portfolios by making sector company-specific adjustments.

COFFEE HOUSE COMPANY



Source: Second Measure as of 2/28/2020.

HOME IMPROVEMENT RETAILER



Source: Second Measure as of 2/28/2020.

¹The Paris Agreement’s central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change.



OUR PERSPECTIVE

Neuberger Berman Private Debt Team

In an environment where investors are searching for yield, private debt offers attractive return potential driven by illiquidity and deal complexity. Neuberger Berman's Private Debt team lends directly to private equity-backed companies, leveraging our position as a diversified, multi-asset class manager to integrate insights from our ESG Investing and Private Equity teams and generate value-creation opportunities. We evaluate material ESG factors for both the company and the private equity sponsor leading the transaction to help mitigate risk as part of our investment process.

ESG and Our Investment Process

The Private Debt team's ESG philosophy starts from the premise that ESG integration adds value. First, ESG offers an opportunity to mitigate reputational and other risks through deep diligence. By assessing how private issuers and the private equity firms that own them are managing ESG risks, we believe we are able to reduce overall portfolio risk. Second, ESG offers a lens through which to identify value-creation opportunities. The team seeks to not only avoid or exclude particular industries, but assess the valuation implications of ESG risks alongside traditional factors.

Neuberger Berman's Private Debt team integrates ESG assessments in three distinct ways during the investment process. To start, we conduct a preliminary screen to ensure the investment does not trigger any of our exclusionary criteria. Our team avoids investments in high-risk industries subject to substantial regulation, such as guns and tobacco. We believe that while equity investors can potentially be compensated for these risks through upside, our position as credit investors means we are better served by screening them out entirely.

Once an investment moves past the screening stage and into active due diligence, we conduct a deep analysis of both the ESG characteristics of the company issuing the debt and the lead private equity sponsor. At the company level, our team evaluates material ESG factors consistent with Neuberger Berman's focus on materiality across asset classes. We tailor our assessment based on the ESG factors that drive the most value for the sector and company in question. At the sponsor level, our team leverages the insights of the Neuberger Berman Private Equity team, who evaluates the sponsor and assigns a proprietary ESG rating. This analysis is intrinsically part of the merits and considerations of a transaction, but we have made a point to assess ESG systematically and ensure that GPs work with underlying portfolio companies to consistently and effectively identify and manage material ESG risks.

Our unique positioning as a multi-asset class manager is a distinctive source of value. Our firm's deep private equity industry knowledge enables us to develop nuanced views on the ESG philosophies and practices of the owners driving the companies' growth and strategic direction. This is especially important given the positioning of private debt in the capital stack.

Why ESG Matters in Private Debt

ESG investing intuitively adds value within the private debt asset class, which emphasizes capital recovery above all else. We view ESG considerations as a way to avoid exposure to certain downside risks and underscore confidence in repayment. These considerations allow for greater conviction in the investment decision-making process, including:

- The reduction of overall portfolio risk by taking certain "worst-case scenarios" off the table
- ESG minimizes the chances of reputational harm
- ESG analysis can be used as a lens to identify value-creation opportunities and improve companies' risk profiles

This approach is reflected in our investment decisions and provides an additional layer of analysis, enabling the team to focus on the highest quality companies. For example, the Private Debt team turned down an investment with a chemicals logistics firm after discovering unmitigated risks from the bulk transport of hazardous chemicals and workforce safety concerns. There are many other examples of passing on opportunities based on the view that intrinsic ESG risks were too great or unable to be sufficiently mitigated to justify investment given the capital structure positioning.

"ESG offers an opportunity to mitigate reputational and other risks through deep diligence. By assessing how private issuers and the private equity firms that own them are managing ESG risks, we believe we are able to reduce overall portfolio risk."



SUSAN KASSER, CFA
Managing Director
Private Equity



DAVID LYON
Managing Director
Private Equity



The Brunel Pension Partnership.

Engineering an impactful, whole-portfolio approach to responsible investing

The Brunel Pension Partnership Limited is one of eight U.K. Local Government Pension Scheme pools. It manages around £30 billion of assets for its shareholders—nine pension schemes for local authority workers in southwest England, as well as the pension scheme for the U.K. Environment Agency. We spoke to Brunel’s Chief Responsible Investment Officer Faith Ward and Investment Principal Gillian De Candole about the challenge of investing responsibly across all asset classes for 10 different clients.

Responsible investing can be held back by a lack of common understanding and standardization. How did you combine 10 distinct policies into a single approach?

Faith Ward: Each Brunel scheme implements its own asset allocation by selecting from 25 different portfolios managed at the partnership level, and we do aim to integrate responsible investing into all of those portfolios.

Among the 10, the Environment Agency and Avon schemes were the most advanced in responsible investing and the others were keen to build on

their work. A consistent foundation was put down with our agreement on 12 Investment Principles, which include commitments on long-termism, responsible stewardship and innovation. The schemes look to us to build on those foundations, but we also encourage them to think about the development of their own policies: for those just starting out, we suggest using the U.N. Sustainable Development Goals to stimulate thinking about a wide range of issues that might resonate with their committee.

How do you reconcile the fact that you are not an “ethical investor” with your commitments to “report on the positive impacts” of investments and “invest for a world worth living in”?

Ward: It’s true that “responsible investing” tends to denote risk management and “impact investing” denotes having positive environmental or social outcomes as an objective. While we do not consider ourselves ethical or impact investors, we do take a holistic view of our fiduciary duty. Providing beneficiaries with a good retirement income is a wasted effort if they retire in a social, natural and physical environment in which it is impossible to live comfortably or buy the things they need.

We are committed to report on impact because everything we do has an impact, whether or not it is an explicit objective. There is a lot of work to do to develop tools and accurate, meaningful measurement. Asset managers are getting better, but it is patchy at best, making it much more difficult to aggregate positive impact than to assess negative impact through metrics such as carbon or environmental footprints.

How challenging is it to integrate a responsible investment approach across all asset classes?

Ward: It helps that talented professionals across all asset classes come to Brunel because we are taking a lead in responsible investment and they want to build that into their careers. Our responsible investment and stewardship policies provide a framework for consistency, but they do require nuances for different regional and asset-class contexts. Expectations around board independence are simply different in Japan, for example. In fixed income, the key thing is focusing your engagement on re-financings. In private markets, where one can be a majority owner, responsible investing should be well advanced, but our experience suggests that it has yet to realize its potential.

Gillian De Candole: We prefer private equity strategies that can influence portfolio businesses and their supply chains. That still leaves us with huge variation. Private equity is about helping companies grow, so it’s surprising how few managers measure how many jobs they created while they owned a business. Private debt managers focus on their risk-management approach—so they can avoid the debt of issuers with problematic environmental, social or governance profiles, but many don’t articulate whether they have the skills and capacity to responsibly manage a firm in the event that they become equity owners, which may involve cutting jobs in a restructuring. At the other end of the scale, at least one manager in distressed debt reports on “jobs saved” when they have taken ownership of businesses that otherwise might have gone bust.

We would also like managers of private assets to think more rigorously about the timeframe over which they are exposed and can exert influence. Quite often, private equity impact reporting consists of case studies written years after the investment was made, which are of little use if we want to assess or effect real-time change. Within their exit process, few managers consider what the next owner plans to do with the business/asset. Does responsibility end when investors relinquish ownership, or does it extend to the lifetime of the asset? That’s a big question for a 50-year infrastructure project or a 999-year ground lease on what is today the bank of the River Thames. We would expect managers to consider those questions when they underwrite such risks and capital value assumptions.

Many of the expectations you have of asset managers are set out in your “Asset Management Accord,” which you require all of your investment providers to sign. What was the thinking behind it?

Ward: The AMA was piloted by the Environment Agency Pension Fund. It sets out 13 mutual commitments on long-termism, communication, responsible investing, collaboration and innovation. It is subordinate to the Investment Management Agreement and the usual legal documents and side letters that cover our responsible investing and reporting requirements, but whereas legal documents tend to deal with how things are unwound when a relationship goes wrong, the AMA is where we write down our philosophy for building a relationship. It is genuinely mutual: for example, we ask our partners to invest with an eye to the long term, and we promise not to end a relationship due to poor short-term performance.

De Candole: The collaborative nature of the AMA is helpful. We want to work with asset managers to develop monitoring and reporting that reaches beyond portfolio businesses into the wider stakeholder communities. No one would sign a legal document today promising all of that, but the AMA enables us to make commitments together, and mutually recognize that these are important issues for Brunel specifically and institutional investors in general.

The Brunel Pension Partnership spoke with Neuberger Berman at the NB Sustainable Investment Forum in London on September 24, 2019.



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. 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.

The Neuberger Berman Municipal team manages an impact strategy that applies a three-pillar impact methodology. The team focuses on the bond issuer, the use of proceeds and the place-based potential for impact. Examples include the following:

1. American Municipal Power Solar Electricity Revenue Bonds – SDG 7.2

Bond proceeds will be used to provide long-term financing for purchase of 13 solar photovoltaic facilities for supply to 22 member municipal utilities in Delaware, Michigan, Ohio and Virginia.

2. New Dawn Charter School – SDG 4.1 and 4.5

The bond proceeds provided funding for acquisition, construction, renovation, equipping and furnishing of a 24,000-sq.-ft. school building in Brooklyn, NY, which serves as a charter school for students who have failed in prior public schools or who have passed the age of traditional public high school students.

PERCENTAGE OF MUNICIPAL IMPACT PORTFOLIO HOLDINGS ADDRESSING EACH SDG



Collaborations and Engagements with the Industry

We recognize that we have a responsibility to improve the functioning of capital markets as a whole by encouraging the broader implementation of ESG investing activities. We believe this can best be achieved by working collaboratively with clients and others in the investment industry, including by engaging with individual companies and whole industries, conducting joint research on ESG topics, and supporting the creation and use of industry-standard ESG disclosures.

While we support many highly impactful groups and initiatives, each year we seek to particularly focus our efforts where we feel our leadership can make a unique and significant difference.



We continue to actively contribute to the PRI's work by showing ongoing support for the ESG in Credit Risk and Ratings Initiative and have seen a significant positive response from credit agencies as a result. In 2019, we were appointed as a member of PRI's Private Equity Advisory Committee (PEAC). The PEAC is a group of asset owners and managers at the forefront of exploring the possibilities of ESG integration within private equity investing and advises the development of industry knowledge-sharing and resources. Additionally, in 2019, we were delegated to speak at the PRI in Person Conference in Paris on impact in public equities and the economics of climate change.



Neuberger Berman is a member of the Advisory Board of the IMP, which is a global network facilitating an industry standard for impact measurement and management. We utilize the framework in our impact investing strategies. In 2019, we advocated for the PRI to adopt IMP as its preferred framework for impact management. We also continue to engage in dialogue with the IMP on best practice and implementation, and have applied the IMP framework to our investment processes across a range of strategies.



Neuberger Berman is a member of the Ceres network of investors and companies, who tackle the world's biggest sustainability challenges, including climate change, water scarcity and pollution, and human rights abuses. Through the Climate Action 100+ initiative, we have continued to work with companies as part of the campaign. While much work remains, we're pleased with improvement in both the oversight of climate issues and the reduction of actual emissions. We hope our continued pressure and expertise-sharing will accelerate the progress as the campaign continues.



Neuberger Berman is a proponent of the SASB, which aims to develop and maintain standards for public company ESG disclosures using a rigorous process of evidence-based research. The Standards identify a number of ESG and sustainability topics that most directly impact long-term value creation. As a founding member of the SASB Alliance and the SASB Standards Advisory Group, and as a member of its Investor Advisory Group, in 2019, we introduced three companies to join the Investor Advisory Group (IAG) and now have representatives on the SASB Standards Advisory Groups.



Neuberger Berman is a signatory of the UN Global Compact and is committed to aligning our operations with universal principles on human rights, labor, environment and anti-corruption, and to taking actions that advance societal goals. In 2019, Neuberger Berman submitted its first Communication on Progress (CoP), demonstrating the firm's commitment to implement the Ten Principles, and qualified for the Global Compact Active Level.¹



Neuberger Berman became the first North American Research Funding Partner of the TPI. The initiative seeks to encourage companies to set practical targets and to increase disclosure of companies' progress in the transition to a low-carbon economy. Our support helps the TPI team to broaden coverage and to continue making their important analysis available as a public good. Additionally, we have begun to incorporate the TPI methodology into our proprietary ESG ratings.

¹GC Active CoPs meet minimum requirements including a statement by the Chief Executive expressing continued support for the UNGC and renewing the participant's ongoing commitment, a description of practical actions the company has taken or plans to take to implement the Ten Principles and a measurement of outcomes.

Industry Collaboration: 'ESG Investing Challenge' with Columbia Business School



In the fall, we hosted our first ESG Investing Challenge in conjunction with Columbia Business School, with the goal of engaging with the academic community and empowering students to incorporate sustainability within robust investment processes. We were thrilled with the student interest and the engagement from the firm's professionals as judges and student mentors. While many companies support stock pitch competitions, we believe we are the first to do so specifically focused on ESG.

The theme of the day was income inequality. During the event, business students identified investments with the potential to meet dual objectives: positive impact and financial performance. Ten student teams submitted an investment pitch for a company of their choice, and then worked with assigned mentors from various parts of our firm to solidify their stock pitch/valuation and connect the theme to their investment thesis. After that, the judges met to deliberate and ultimately selected five finalist teams who presented on multiple stocks.

While we were generally impressed by the submissions and presentations, the winning team, which presented on an e-commerce company, stood out. The team centered its thesis on the company's business model as a high-impact platform that solves income inequality through job creation, highlighting its primarily female seller demographic and success in providing this group with access to global markets. The team also quantified the income growth and progression of sellers on the platform using innovative primary research while offering examples of the company's significant investments in the sellers' communities, via training and marketing assistance, to help them become more successful. The winners of the contest each received a cash prize, and an equivalent donation was made to a nonprofit organization based on individual team choice. We were also delighted that one of the winning team members has since been able to join the firm as an MBA intern.

We look forward to continuing this effort next year, potentially expanding the competition to other MBA programs.



The winning team of the 2019 ESG Investing Challenge, Team ETSY:

Kyle Campbell, Mingming Wu and K.Y. Wong

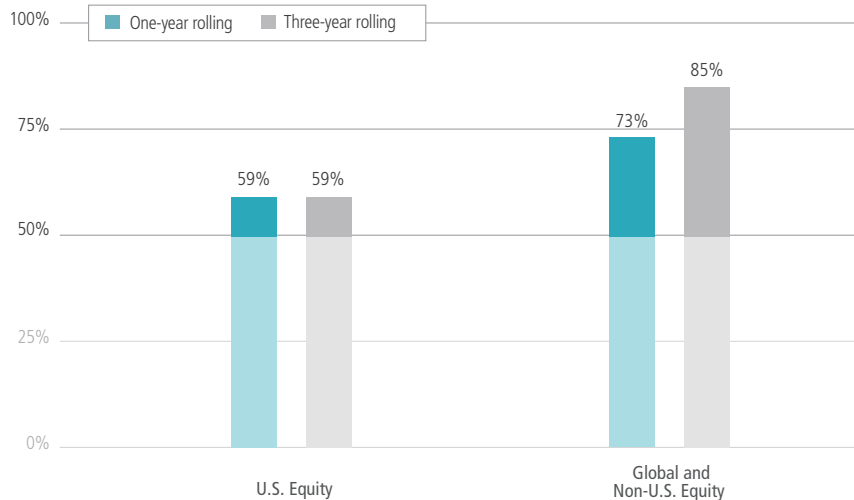
Active Management and ESG

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 to implementing client sustainability or impact preferences. While we understand the appeal of a potential cost savings, we believe the analytical limitations and performance outcomes of passive ESG highlight the importance of active ESG integration.

We looked at rolling one- and three-year monthly returns over the 20 years from January 1, 2000 to December 31, 2019, for both active and passive socially conscious funds.¹ As shown below, 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. From both an impact and performance perspective, our research indicates an active approach has historically been superior.

ACTIVE ESG EQUITY HAS HISTORICALLY BEEN MORE SUCCESSFUL THAN PASSIVE OVER MARKET CYCLES

Percentage of time in which active ESG equity strategies have beaten passive ones after fees, January 2000 through December 2019



CUMULATIVE EXCESS RETURN OVER THE PAST 20 YEARS

75%
Active U.S. Equity

80%
Active Global and Non-U.S. Equity

¹A 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."



ENGAGEMENT AND PROXY VOTING

Approach to Engagement at Neuberger Berman

Over the last several years we have publicly articulated our culture, philosophy and framework on engagement, which has always been rooted in the fundamental analysis of companies by our analysts and portfolio managers. Yet as will become clear through the case studies and statistics we share in the following pages, the tools and techniques we use for engagement are continuing to evolve.

ESG ENGAGEMENTS

PUBLIC EQUITY

TOTAL
ENGAGEMENTS
1,173

ENVIRONMENTAL
39%

SOCIAL
36%

GOVERNANCE
93%

FIXED INCOME

TOTAL
ENGAGEMENTS
1,092

ENVIRONMENTAL
21%

SOCIAL
28%

GOVERNANCE
51%

Much of our engagement with issuers arises organically from the investment diligence process, but we are also increasingly focused on ensuring that the same attention and intensity are sustained throughout our stewardship of the asset. We also recognize that while the core propositions of dialogue with companies—diligence, accountability and the exchange of views—remain important, the practice has also seen the development of new, important dimensions, namely more information about companies from external sources, and the appetite for transparency and reporting around engagement practices.

The first of those developments has meant more of our conversations focus on peer comparisons on external markers, questions like why does the company not provide disclosure on issues its peers do, or why is progress on material risks not as ambitious as those of other companies. On the second point we are working hard to provide our clients and stakeholders with more information about how we engage, on what topics and what our outcomes are. To that effect we have focused our year on ensuring the right infrastructure and assurance are in place to capture all the work of our investment and research teams. We look forward to sharing more of this data, our successes, our areas of needed improvement, and the clear case studies of our impactful engagement program.

What follows are examples of engagements that sought to fulfill a range of objectives we set for our interactions—from replacing CEOs to advocating for disclosure on climate risk. Our work in this area is the best reflection of our investing culture—built around being well informed, with clear views, and ready to use all the tools at the disposal of investors to protect and enhance the value of our clients' investments. While the overwhelming majority of our engagement is friendly and constructive, we strongly believe that the use of shareholder rights inscribed in regulations and company bylaws are part of our responsibility in the pursuit of the protection of our clients' investments.

“Engagement is core to our investment process—whether to inform our investment decision or as part of our stewardship of the asset. We look for companies where we can constructively exchange insights with Board members and management teams.”



TIMOTHY CREEDON
Managing Director, Equity Research

“In 2020, the EM team will continue to address modern slavery in the agricultural space. This is an area where we feel supply chain risks are underestimated and where portfolio holdings have leverage to improve conditions for farm workers who are vulnerable to forced labor.”



CONRAD SALDANHA, CFA
Managing Director
Emerging Markets Equities



MARCO SPINAR, CFA
Managing Director
Emerging Markets Equities

OUR PERSPECTIVE

Neuberger Berman Emerging Markets Equity Team

We believe that the developing regulatory and financial environments in many emerging market countries, create particularly powerful opportunities for ESG analysis to add value to Emerging Markets Equity (EME) investing.

In 2019, the EME team has focused our ESG efforts on supply chain risks. Our process starts by identifying potential risks through dialogue with management teams and rigorous monitoring of industry publications, news sources and corporate reporting. We engage with companies early on with three objectives: (1) to help the company recognize that unmitigated risks are larger than they realize, (2) to enhance the company's understanding of broader supply chain risks, and (3) to assist the company in formalizing a supply chain management process that enables them to find and resolve risks on their own.

As part of our supply chain emphasis, in 2019 the Neuberger Berman Emerging Markets Equity team became a signatory of KnowTheChain's investor statement. In doing so, we joined \$4.3 trillion in AUM in a commitment to engage in human rights due diligence to address modern slavery issues. The initiative scores companies in high-risk sectors and assesses their performance and progress in addressing forced labor risks. Investors use this information to drive engagement with companies to resolve their supply chain issues. One valuable resource is KnowTheChain's set of benchmarks, which enables companies to improve their standards and procedures by sharing leading practices. In one case, we engaged with an emerging-market convenience store chain who embraced our suggestions of improved supply chain oversight, but wanted to manage the reform process on their own. We connected them with KnowTheChain, whose resources will help the company to systemize their approach for eliminating modern slavery from their supply chain.

In another example, we recently encouraged a Polish food retailer to strengthen its anti-slavery protocol by including language against forced labor in its supply contracts. As of early April 2020, the board approved the inclusion of the revised into its supply contracts. While this has not been formally implemented, the company is considering this at the board level. We expect to continue the dialogue throughout this process with the goal of driving corporate action.

Being caught with violations on an issue like modern slavery can harm a company's stock price and increase its cost of capital. In the worst cases, firms can become "uninvestable" due to the reputational harm. Our ESG experience and dedicated expertise enables us to manage the most serious risks while respecting the needs of companies operating in challenging market environments.



Using Data Science to Assess the Quality of a Company's Working Environment

ENGAGEMENT CASE STUDY

ISSUE: Labor Management

CATEGORY: Social

SECTOR: Communication Services

ANALYSTS



Michael Recce
Chief Data Science



Tina Ding
Associate
ESG Investing

Background: Conflicting Evidence

For the third straight year, in 2019 a U.S. telecommunications conglomerate was named to LinkedIn's Top Companies list, ranking 15th. In the same year, Fortune ranked it third in its list of "Best Big Companies to Work For." In 2018 the firm was named a Leading Disability Employer by the National Organization on Disability.

At the same time, however, MSCI was pointing to its "multiple labor controversies" and scoring it a 2.8 on Labor Management—much lower than the sector average of 6.2.

Whom to believe? It is tempting to trust the professional rating agencies over the awards. But we know there are often severe discrepancies between different agencies' ratings of the same companies.

Scope and Process: Qualitative and Quantitative Data

Alternative data can give us a new, proprietary perspective environmental, social and governance (ESG) factors, many of which are not standardized or covered in traditional company reporting. These challenges are particularly acute when it comes to "softer" social factors such as human capital management.

One source of qualitative data is the ratings employees leave on the recruitment website Glassdoor.

A more objective, qualitative source is active job postings. We can now collect almost three-quarters of all the job advertisements in the U.S. When we compare the proportion of a company's workforce that is represented by currently live job postings with subsequent growth in Selling, General & Administrative expenses, we believe it gives us an insight into how many of those job postings relate to genuine expansion of employment and how many are due to churning of the same role. A high rate of churn implies that employees don't believe the firm is a good place to work.

Outcome: Scoring Above Average

When we scraped Glassdoor ratings for the telecommunications sector, we found the company ranking well above average. Its job-postings churn ratio also compared well with its peers, putting it seventh out of 22 companies.¹

Case studies like this show how alternative data and data science techniques can help resolve discrepancies in traditional ESG data, and contribute to a more holistic view of a company's exposure to ESG risks.



Preempting a Proxy Fight with Solutions

Background: Move Away From Core Strengths

Ashland Global Holdings Inc. has been a part of Neuberger Berman portfolios since 2012. Its appeal was based on its potential for transformation—from a collection of cyclical, largely commoditized businesses to a higher-margin, true specialty chemical company.

Although generally pleased with its progress, we grew more concerned about capital allocation with Ashland's 2017 purchase of a nutraceutical ingredients producer; we felt the purchase was inconsistent with its stated goal of moving toward a less complex business. In late 2018, an activist investor initiated a proxy fight, calling for the replacement of four directors.

Scope and Process: Constructive Dialogue

Although we had voiced concerns privately with Ashland in the past, the new proposals caused a shift in our approach. In our view, a protracted proxy fight could prove distracting and lead to a suboptimal outcome. Moreover, we doubted that the company's investor base would agree to install the dissident slate of nominees. Consequently, we proposed a separate agreement with Ashland that we felt could lead to better results for all stakeholders.

Outcome: Progress on Governance, New Voices

In early 2019, Neuberger Berman and Ashland finalized an agreement to enhance governance, increase board-level oversight of capital allocation decisions and more closely tie executive compensation to returns. The agreement called for the addition of a total of three new independent directors: one already included among the management-side slate of nominees, and two additional yet-to-be-named board members that would be jointly agreed upon. The activist investor dropped its proxy battle and signed onto the agreement as part of its own settlement with the company.

In our search for board candidates, we were able tap to into our extensive network of contacts throughout the industry. Notably, one of our board recommendations, who joined the board in the spring, was ultimately named Ashland's new Chairman and CEO as part of a leadership transition.

Continuing our past practice, we have maintained our dialogue with the company on multiple issues. For example, we sponsored an Ashland executive's candidacy for SASB (Sustainability Accounting Standards Board) Standards Advisory Group; her participation should prove valuable as the company continues to assess and manage its environmental and social impact.

ENGAGEMENT CASE STUDY

ISSUE: Representation, Capital Use and Compensation

CATEGORY: Governance

ASSET CLASS: Equity

STRATEGY: Kantor Group, Greene Group

SECTOR: Chemicals

ANALYST



Jared Mann, CFA
Senior Research Analyst
Industrials and Materials Group



Driving Enhanced Disclosure through Positive Dialogue

ENGAGEMENT CASE STUDY

ISSUE: Lack of publicly disclosed ESG information

CATEGORY: Governance

ASSET CLASS: Fixed Income

STRATEGY: Non-Investment Grade Credit

SECTOR: Energy

ANALYST



Kelly Weber, CFA
Senior Research Analyst
Investment Grade Credit

Background: Low Visibility Hides Positives

With the growth of U.S. energy production, we believe that the full disclosure of ESG policies and performance standards will be key in assessing the sustainability risks of companies involved in the transport and delivery of oil and gas reserves. Some issuers in the midstream sector have poor track records in relation to safety and community relations; others face heightened threats from climate change. The transition to low-carbon assets could result in stranded fixed assets and significant financial costs if not properly managed. As a result, we believe that companies in this sector will face increased scrutiny regarding their ESG disclosures.

We are a long-term holder of a midstream issuer that has trailed its peers in terms of ESG disclosure. Its lack of publicly disclosed ESG information has resulted in poor ratings by third-party assessors such as MSCI. However, our generally positive view of the company has been driven by its conservative management, strong operating performance and moderate leverage. In addition, from our meetings with management, we believed the company had a strong ESG track record and policies, but that a lack of disclosure made it difficult for the market to evaluate.

Objective: Better Information Flow

We sought to leverage our long-term relationship with the issuer to advocate for more robust ESG disclosure.

Scope and Process: Dialogue of Best Practices

We had several discussions with senior management regarding ESG topics over the years and expressed our concerns about the lack of disclosure. At their request, and in collaboration with our equity research department, we developed a list of what we considered material ESG-related subjects that could be used as a guide for future discussions and disclosures. Consistent with the Sustainability Accounting Standards Board (SASB) industry guidelines, topics included the company's carbon footprint, community engagement, health and safety, and approach to managing transition risk.

Outcome: More Documents, More Work Ahead

Shortly after our engagement, the company updated its website to provide greater public disclosure on ESG. Many of the topics addressed on the new website directly addressed our concerns. Additionally, the company has recently published its inaugural Sustainability Report, which expanded its disclosure of ESG policies and performance. While we are pleased with this progress, the report stops short of fully aligning with SASB guidelines for the midstream industry. We intend to continue discussions with the company to advocate for further disclosures. Ultimately, we believe that performance improvements, and not just disclosure, must be the goal of management, and our engagement efforts will continue to focus on the achievement of sustainable success in the future.



Turning Metal Into Gold

Background: Opportunity Tied to Recycling

Our team has built a position in a leading metal beverage can packaging company over the past two years, as we believe the company could be a major beneficiary of the trend toward environmental sustainability by consumers and packaged-goods companies. More than 75% of all aluminum ever produced is still in use, while approximately 90% of plastics have never been recycled. We believe that producers of metal could have tremendous runway to take market share from plastic packaging as recyclable beverage container demand grows.

Scope and Process: Comprehensive Capital Allocation Analysis

Over time, we engaged with the company on a range of ESG-related issues, including aluminum recycling, plastic waste and pollution, supply chain improvement, manufacturing footprint and energy usage. As is typical with our process, we also sought the views of competitors, suppliers and customers to gain perspective. We learned that the company was more focused than its peers on promoting environmental sustainability, and had more insights on the role aluminum cans may play in the evolving landscape.

Although the company's priority was to return substantially all of its free cash flow to shareholders, we believed that its forward-looking orientation

would make it amenable to new ideas for profit generation. In our discussions with the company, we emphasized that investing in high-return, long-term initiatives would have the potential to create more value than dividends and buybacks—a position that was quite different from the narrower focus of many shareholders. As its plans evolved, we supported the company's decision to reinvest in its core business by enhancing specialty can production, which would align with customers' increasing demand for more sustainable products.

Outcome: Positioned for New Demand

Over the past year, two dominant beverage manufacturers have announced that they will begin to package water in aluminum cans. With our support, management is taking advantage of this robust demand environment with the development of a new facility, line expansions, faster throughput and conversions, in North America, South America and Europe. The company continues to innovate and has announced meaningful investments to create new "infinitely recyclable" lightweight aluminum cups. Leveraging an extensive patent portfolio, the company could prove to be a disruptive force in a world that is increasingly focused on sustainability. All these elements, coupled with our ongoing engagement, has reinforced our confidence in its business plan.

ENGAGEMENT CASE STUDY

ISSUE: Sustainable Products, Recycling

CATEGORY: Environmental

ASSET CLASS: Equity

STRATEGY: Multi Cap Opportunities

SECTOR: Containers and Packaging

ANALYST



Richard S. Nackenson
Senior Portfolio Manager
The Nackenson Group

Addressing Climate Change in the Technology Sector

ENGAGEMENT CASE STUDY

ISSUE: Measurement and Reduction of Carbon Emissions

CATEGORY: Environmental

ASSET CLASS: Equity

STRATEGY: Sustainable Equity

SECTOR: Financial Technology

ANALYSTS



Andrew J. Pritti, CFA
Research Analyst
Sustainable Equity
Team



Dina Ciarmatori
Research Analyst
Sustainable Equity
Team

Background: Processing Consumes Energy

Emissions generated from energy use represent a material environmental issue for technology companies. Industry-wide, as of 2017, data centers accounted for roughly 2% of total U.S. electricity usage. As processing power grows, energy use is likely to increase. Information and communications technology could represent up to 14% of global emissions by 2040, rivaling the impact of the transportation sector. As a result, it's becoming more important to tap renewables for energy-intensive data centers.

We have engaged with a leading provider of business and financial management solutions on a variety of issues for the better part of two decades. The company has been a standout on ESG, recognized for the quality and diversity of its work environment. For example, it successfully conducted a gender pay gap analysis, which helped to identify and close compensation differences between men and women. This has supported its ability to attract and retain talent, and underscores its meritocratic culture.

Scope and Process: Dialogue, Measurement Focus

As part of our ongoing engagement, we have communicated regularly with the company regarding its environmental strategy, including emissions reductions, use of renewable energy and setting improvement

targets. Given our understanding of its business and the evolving competitive landscape, we made the case for why we believe management should seriously consider setting explicit science-based targets—not only to meet environmental goals, but to generate competitive advantages in the transition to a low-carbon economy.

Specifically, our outreach on this issue took the form of a letter to the CEO and lead outside director. This led to a series of calls and meetings where we engaged in a dialogue and explained what we believe are the advantages of this more precise form of measurement and control.

Outcome: Science-Based Targets

Company management decided to take a closer look to better understand this process. In early 2019, it agreed to set science-based targets and seek approval for those targets with the Science-Based Target Initiative (SBTI), which administers the standard.

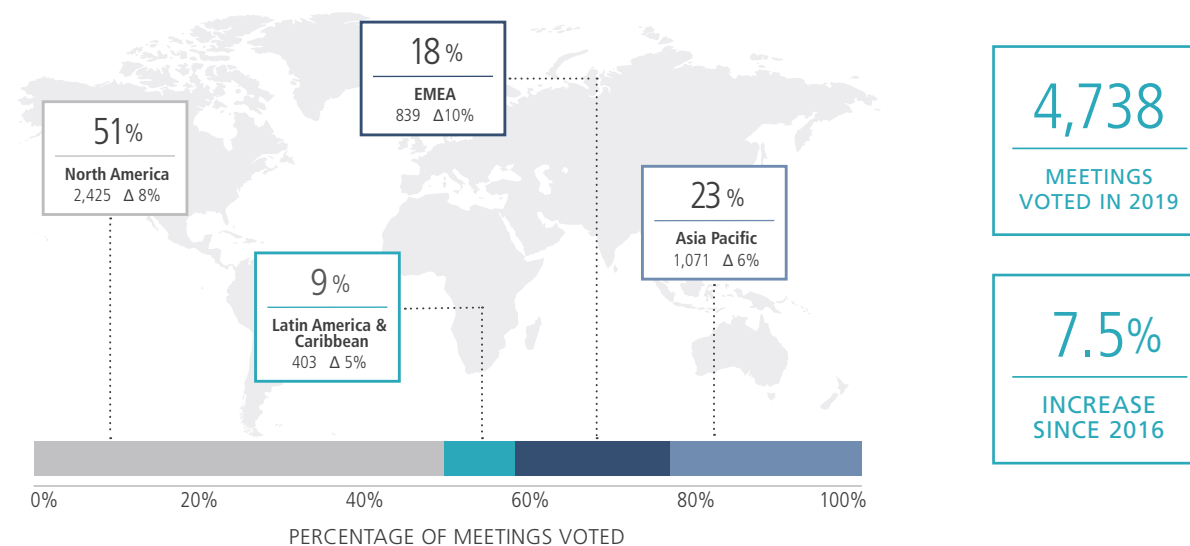
Subsequently, in April 2019, the SBTI approved the submission, which included a commitment to reduce absolute “Scope 1, 2 and 3” greenhouse gas emissions 50% by 2025 from 2012. The company also agreed to increase its annual sourcing of renewable electricity from 32% in 2015 to 100% by 2030. Both goals are consistent with the global goal of limiting global warming to 1.5°C, as articulated in the Paris Agreement.

ENGAGEMENT AND PROXY VOTING

Meetings Voted

In 2019, the number of meetings voted on behalf of our clients is consistent year over year, seeing only a 3% decline from the prior year. We continue to see a steady growth in number of meetings voted in the U.S. (up 8% since 2016) and Japan (up 24% since 2016) driven by efforts to diversify risks across new sectors and market capitalizations, as well as reaching into new investing opportunities.

2019 Meetings Voted by Region and Percentage Increase Since 2016



	2016	2017	2018	2019	Δ Since 2016
MEETINGS VOTED	4,407	4,583	4,894	4,738	8%
North America	2,246	2,340	2,423	2,425	8%
United States	2,045	2,101	2,043	2,061	1%
Latin America & Caribbean	385	412	421	403	5%
Brazil	147	163	136	147	0%
Asia Pacific	1,006	1,091	1,134	1,071	6%
Japan	176	193	226	219	24%
South Korea	102	140	220	132	29%
EMEA	762	735	916	839	10%
United Kingdom	181	162	173	176	-3%
South Africa	64	70	65	59	-8%

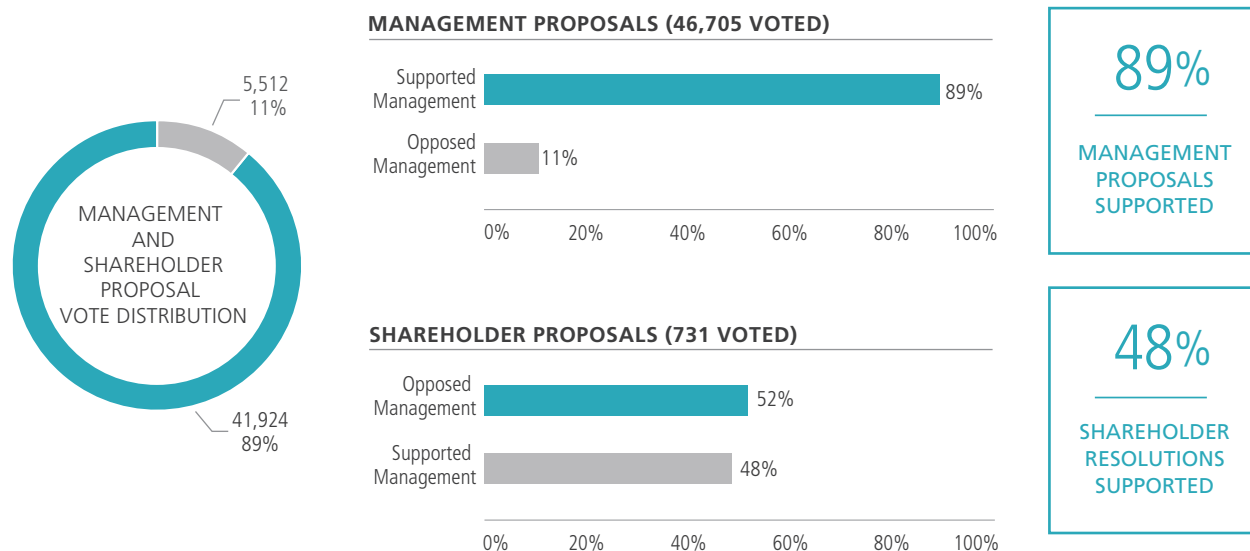
Voting Statistics

In our consideration of the voting decision, we look to balance the expectation that we set a high bar for board effectiveness while acknowledging the information asymmetry between shareholders and company management. This means that we must, at times, begin with the assumption that management and the board are carrying out their duties faithfully; however, it does not mean that we are shy about voicing our concerns through engagement and voting. We feel it is important to reiterate that our public voting policy, and not deference to management, is always our default position.

We find ourselves opposing many proposals that are either unclear in their alignment with shareholder interests or at odds with our judgment of the best course for the company. This is reflected in both the 89% of management proposals that we supported in the last year and the 11% we opposed. Some of the main areas of opposition involved management compensation and share issuances without a clear case for the dilution.

In 2019, we continued to engage in enhanced dialogues with companies and critically reviewed shareholder resolutions. Improved quality of shareholder resolution enabled engagements to prioritize the most material issues.

Management and Shareholder Proposal Vote Distribution for 2019



Source: Neuberger Berman. Data for the calendar year 2019.

Management Proposals

Management Proposals	Supported Management		Opposed Management	
AUDIT-RELATED	6,067	95%	339	5%
Appointment of Auditor	691	95%	35	5%
BOARD-RELATED	24,613	88%	3,261	12%
Election of Directors	21,621	89%	2,728	11%
Ratification of Board Actions	549	94%	37	6%
Related Party Transactions	241	90%	26	10%
CAPITAL MANAGEMENT	2,621	86%	441	14%
Authority to Issue Shares	722	79%	189	21%
Increase in Authorized Common Stock	57	95%	3	0.05%
CHANGES TO COMPANY STATUTES	1,566	94%	106	6%
Adoption of Majority Voting for the Election of Directors	14	100%	0	0%
Amend Articles, Constitution, Bylaws	440	91%	42	9%
Elimination of Supermajority Requirement	61	100%	0	0%
COMPENSATION	4,596	85%	841	15%
Advisory Vote on Executive Compensation	1,352	84%	263	16%
Stock Option Plan	128	74%	44	26%
MERGERS AND ACQUISITIONS	524	94%	32	6%
Divestiture/Spin-off	40	95%	2	5%
Merger/Acquisition	270	96%	12	4%

Source: Neuberger Berman. Data for the calendar year 2019.

The above table profiles broad categories and select examples of our voting activity on management proposals in 2019. Each case is unique, but the high-level picture reflects our views on issues such as director elections, share issuances and executive remuneration, and how often those proposals met our expectations. The particular positions that led to our opposition on these issues are articulated in our Proxy Voting Guidelines, but are most commonly a reflection of concerns on the clarity of disclosure or the structure of executive compensation plan or capital management practices of a company.

Shareholder Proposals

Shareholder Proposals	Supported Management		Opposed Management	
ENVIRONMENTAL	62	72%	24	28%
Climate Change	2	50%	2	50%
Sustainability Report	9	56%	7	44%
SOCIAL	68	44%	85	56%
Race and/or Gender Pay Equity Report	4	27%	11	73%
Reviewing Political Spending or Lobbying	10	16%	53	84%
GOVERNANCE	140	44%	178	56%
Eliminating Supermajority Provision	5	26%	14	74%
Improving Disclosure	3	23%	10	77%
Separation of Chair and CEO	25	42%	35	58%
Right to Act by Written Consent	2	6%	34	94%
Declassification of the Board	2	40%	3	60%
Majority Vote for Election of Directors	0	0%	15	100%
Linking Compensation to Sustainability	9	53%	8	47%
Board Diversity Policy/Report	2	33%	4	67%

Source: Neuberger Berman. Data for the calendar year 2019.

We were disappointed to see a drop in the number of shareholder resolutions on many key issues on which we were able to opine, particularly ones that are difficult to faithfully capture like climate change risk oversight and various types of sustainability reporting. We continued to support resolutions that are both material across many sectors and have a high level of standardization, such as our voting or review of political spending or lobbying, which saw our support level remain steady at 84%, but represent 20 more actual votes.

To underline our belief in the importance of the shareholder resolution process we responded to the U.S. Securities and Exchange Commission (SEC) proposal to amend the shareholder proposal rule in a series of letters and in person at an SEC Staff Roundtable.

New York State Common Retirement Fund: Fully engaged in sustainable investing

The New York State Common Retirement Fund, at more than \$210 billion in assets, is one of the largest public pension plans in the U.S. We spoke to Liz Gordon, Executive Director of Corporate Governance, about how important shareholder engagement is when it comes to making the portfolio of a universal, long-term investor truly sustainable.

How does the New York State Common Retirement Fund (“New York Common”) think about the link and balance between its sustainability or Environmental, Social and Governance (ESG) objectives and its fiduciary duty?

Liz Gordon: As Trustee of New York Common, Comptroller Thomas DiNapoli’s fiduciary duty to the more than one million members, retirees and beneficiaries of the New York State and Local Retirement System (“the System”) is always paramount. Ensuring strong investment returns is fundamental to providing the more than \$1 billion in benefits that the System pays out each month. We believe ESG factors can have a profound impact on both risks and returns. Evaluating the long-term impact that such factors may have on the performance of a business is vital.

Addressing risks and capitalizing on opportunities are key components of New York Common’s successful investment strategy, and sustainability is integral to that strategy.

As a founding signatory of the UN PRI, you have been actively engaging companies since 2007, sponsoring many shareholder resolutions, particularly in the energy industry. Can you talk about the importance of this level of engagement?

Gordon: As a universal owner investing for the long term in all sectors, New York Common works to promote sound ESG practices at the companies in its portfolio. It is committed to active ownership—using New York Common’s voice and votes to encourage the long-term success

of its investments. New York Common has engaged a wide variety of companies on numerous issues, including energy companies on climate change issues ranging from climate scenario analysis and compliance with Task Force on Climate-related Financial Disclosures (TCFD) reporting to greenhouse gas reduction targets, renewable energy and energy efficiency. Filing shareholder proposals is an effective engagement tool that brings specific issues to the attention of the board, management and fellow investors. In the 2019 proxy season, New York Common filed 47 proposals, of which 25 were implemented. The proposals attracted record votes at a number of companies, including one majority vote and votes of greater than 30% at 10 different companies. Agreements included commitments to diversify corporate boards; disclose corporate political spending; improve executive compensation practices; report on cybersecurity; conduct human rights risk assessments; and set targets on greenhouse gas emissions, energy efficiency and renewable energy. Our engagement priorities for 2020 include diversity and inclusion; executive compensation issues, including pay inequality and tying compensation to sustainability; cybersecurity; and of course climate change, with a particular focus on the transition-readiness of high-impact sectors such as thermal coal mining.

In June New York Common announced a doubling of its commitment to sustainable investing. How does New York Common’s approach affect the way it works with managers?

Gordon: All of our investments are subject to an ESG risk assessment by the Fund. Managers complete annual ESG surveys and are subject to ongoing review of ESG policies and practices. Among the issues we examine in those contexts is the alignment of the manager’s stewardship activities with our own—including, with respect to our public equity managers, voting records, direct engagements and public policy advocacy. External managers are expected to consider the Fund’s ESG principles in investment decision making, proxy voting and corporate engagements, consistent with fiduciary duty. On climate change, specifically, we are ramping up our engagement efforts with managers and index providers, beginning with the simple step of asking our managers how they are aligned or plan to align with our Climate Action Plan. Many index providers are responding to client demand for products that address climate risks and opportunities, and we have been actively engaging with them on those efforts.

How do you address the investment risks presented by climate change? You created an index relating to carbon emissions—how do you measure companies against this, and what is the impact of the ratings?

Gordon: Our Low Emissions Index utilizes the Carbon Disclosure Project’s (CDP) greenhouse gas emissions data as a measure of companies’ climate risk exposure. Companies with the greatest emissions intensities are underweighted. This risk-aware index has resulted in a reduction of more than 70% in the carbon footprint of those holdings when compared to our benchmark, the Russell 1000. Assessing and addressing all types of climate change-related risks, including transition and physical risks, across a \$210 billion portfolio, is an enormously complex undertaking. It requires a multifaceted response. We have developed a 20-point action agenda that falls into three major categories: (1) identification and assessment; (2) investment and divestment; and (3) engagement and advocacy. The top priorities are enhanced assessments, the development of minimum standards for the highest-impact sectors, and the expansion of our Sustainable Investment and Climate Solutions program.

What role do the United Nations Sustainable Development Goals (UN SDGs) have in your investment policies?

Gordon: The UN SDGs have provided thematic guidance to our Sustainable Investment Program, which focuses on nine specific SDGs including: climate and environment; resource efficiency, pollution and waste management; education; demographic empowerment; health and well-being; financial inclusion; sustainable infrastructure; and affordable housing.

Are U.S. investors and companies making enough progress on sustainability?

Gordon: Amazing progress has been made by both investors and companies on ESG policies, processes and practices over the last five years. In order to move the needle more, we need better and more consistent data. We believe mandatory disclosure would facilitate access to that information.

The New York State Common Retirement Fund spoke with Neuberger Berman in New York on December 10, 2019.

NEUBERGER BERMAN

Firm Stakeholder Metrics

As stewards of our clients' capital, we advocate for the highest standards of conduct and disclosure from our investment companies. As a firm, we continually challenge ourselves to raise our own standards, as well. We are committed to the communities in which we work and live, and we value the diversity of cultures, backgrounds and experiences of our employees. In an effort to demonstrate our progress as a responsible corporate citizen across all facets of our work and operations, we will continue to measure and report a variety of relevant metrics associated with our employees, client portfolios, environmental impact and community engagement.



"At Neuberger Berman, we believe in creating an environment in which diversity of all types can flourish. We value listening to disparate voices in order to make better decisions that improve the quality of work life, attract a diverse workforce to join our NB community and drive client satisfaction. By committing to transparency, we hold ourselves accountable to ensuring this initiative is truly impacting our culture."

– **ANDREW A. JOHNSON**
Senior Diversity & Inclusion Leader

Client Portfolio Metrics	2018	2019	Employee Metrics	2018	2019
Teams with access to environmental, social and governance (ESG) research	100%	100%	Global		
Assets managed with consistent and demonstrable ESG integration	60%	60%	Total employees, full-time	2,036	2,178
Shareholder meetings voted ¹ (#/%)	4,894/99%	4,738/100%	Total employees, part-time	44	43
Total number of engagement meetings with corporate management teams			Senior investment professional retention rate ⁴	95%	95%
Number of equity engagements held	1,324	1,173	Employees with access to benefits (full-time)	100%	100%
Number of credit engagements held	1,728	901	Percentage of firm owned by employees	100%	100%
Percentage of UCITS and mutual funds with 3+ Globes on Morningstar Sustainability Ratings ²	50%	73%	Employees with firm ownership ⁵ (#/%)	~500/~25%	~500/~24%
Median stock turnover ratio for equity mutual funds ³	39%	37%	Portfolio Managers whose compensation is tied to multi-year performance	100%	100%
Number of adverse final judgments in legal proceedings relating to marketing communications of investment products	0	0	Employees with access to skills-based training	100%	100%
			Employees with access to promotion opportunities	100%	100%
			Employees with access to educational assistance	100%	100%
			Staff diversity (women %) ⁶		
			Total staff	35%	37%
			Senior staff ⁷	26%	28%
			New hires (% women, three-year average)	39%	40%
			U.S.		
			Total U.S. employees	1,578	1,690
			Employees with 15% 401K firm contribution (no required match or vesting)	99%	99%
			Staff diversity (ethnic minority %) ⁶		
			Total staff	29%	31%
			Senior staff ⁷	20%	22%
			Ethnic minority hiring (% of new hires, three-year average)	35%	38%

Note: As an employee-owned private firm, this report is not intended as a communication to investors, however the Sustainability Accounting Standards Board (SASB) standards for Asset Management & Custody Activities have helped inform this report. The SASB disclosure topics below align closely with our stakeholder metrics as noted.

1. Transparent Information & Fair Advice for Customers
 - i) Number of adverse final judgments in legal proceedings relating to marketing communications of investment products
2. Employee Diversity & Inclusion
 - i) Global Staff diversity metrics
 - ii) U.S. Staff diversity metrics
3. Incorporation of Environmental, Social, and Governance ("ESG") Factors in Investment Management & Advisory
 - i) Assets managed with consistent and demonstrable ESG integration
 - ii) Total number of engagement meetings with corporate management teams including both equity and credit

Data as of December 31, 2019 unless otherwise noted.

¹In limited circumstances we do not submit a vote if trading restrictions or administrative costs outweigh the benefit to the client.

²Excludes funds not rated by Morningstar for sustainability.

³Excludes funds with fewer than five years of history, closed end funds, fixed income, alternative and specialty funds (12 months through 11/30/2019). Data as of December 31, 2019 unless otherwise noted.

⁴SVP and MD level.

⁵Our equity ownership program is voluntary and all employees at the SVP level and higher are eligible to participate and acquire equity at their discretion. Currently, women and minority representation among U.S. equity owners is generally consistent with women and minority representation among employees eligible to purchase equity.

⁶Employees are not legally required to self-identify their race/ethnicity or gender and race/ethnicity data is not tracked in the U.S. Accordingly, the information contained in this chart is provided only as an overview of the estimated race/ethnicity and gender makeup of our current employees.

⁷VP level and above.

Environmental Metrics	2018	2019	Community Metrics	2018	2019
Global			Corporate charitable giving (foundation, gift matching, disaster relief)	\$2,553,479	\$2,965,108
Employees using public transportation	88%	89%			
GHG emissions from business travel (metric tons CO ₂)	5,500	4,927	Firm-Sponsored Volunteerism		
GHG emissions offset from estimated global travel	100%	100%	Employee volunteer hours	5,738	5,759
NY Headquarters			Employee volunteer participation (#) (not unique)	1,861	1,833
Square footage as percentage of total global office space	64%	58%	Unique volunteer participation	64%	58%
LEED certification ¹	Silver	Silver	Firm and regional headquarter locations participating in volunteerism	100%	100%
Total energy used (gigajoules)	40,430	43,003	Number of projects	166	147
Electricity used (gigajoules)	13,449	13,842			
Steam used (gigajoules)	26,991	21,092	Beneficiaries		
GHG emissions from energy used (metric tons CO ₂)	2,773	2,008	Organizations reached through giving	752	614
Total water used (million gallons)	8.6	6.4	Organizations reached through volunteerism	111	115
Waste recycled (diversion rate)	47%	53%	Number of children/youth/students impacted through giving and volunteerism	496,557	1,176,025
			Number of employees sitting on charitable boards	407	246
			U.S. Minority- and Women-Owned Business Enterprise (MWBE) suppliers	5%	5%

¹LEED (Leadership in Energy and Environmental Design) is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Source: Neuberger Berman. Data as of December 31, 2019 unless otherwise noted.

Please Note: Employees are not legally required to self-identify their race/ethnicity or gender and race/ethnicity data is not tracked in the U.S. Accordingly, the information contained in this chart is provided only as an overview of the estimated race/ethnicity and gender makeup of our current employees.

Neuberger Berman’s PRI Assessment Scores

As a result of continued progress over the last several years, Neuberger Berman, for the first time, has received top scores across all categories in the most recent U.N.-supported Principles for Responsible Investment (PRI) assessment report of Environment, Social and Governance (ESG) integration efforts. See below for a summary scorecard by asset class and by year.

	2019		2018		2017	
	Neuberger Berman	Peer Median	Neuberger Berman	Peer Median	Neuberger Berman	Peer Median
01. Strategy & Governance	A+	A	A+	A	A	A
Indirect – Manager Sel., App & Mon						
07. Private Equity	A+	A	A+	C	B	B
Direct & Active Ownership Modules						
10. Listed Equity – Incorporation	A+	B	A+	B	A	A
11. Listed Equity – Active Ownership	A+	B	A	B	B	B
12. Fixed Income – SSA	A+	B	A+	B	A	B
14. Fixed Income – Corporate Non-Financial	A+	B	A+	B	B	B

For illustrative and discussion purposes only. PRI grades are based on information reported directly by PRI signatories, of which investment managers totaled 1,119 for 2019, 1,120 for 2018 and 935 for 2017. All signatories are eligible to participate and must complete a questionnaire to be included. The underlying information submitted by signatories is not audited by the PRI or any other party acting on its behalf. Signatories report on their responsible investment activities by responding to asset-specific modules in the Reporting Framework. Each module houses a variety of indicators that address specific topics of responsible investment. Signatories’ answers are then assessed and results are compiled into an Assessment Report. The Assessment Report includes indicator scores, summarizing the individual scores achieved and comparing them to the median; section scores, grouping similar indicator scores together into categories (e.g. policy, assurance, governance) and comparing them to the median; module scores, aggregating all the indicator scores within a module to assign one of six performance bands (from E to A+). Awards and ratings referenced do not reflect the experiences of any Neuberger Berman client and readers should not view such information as representative of any particular client’s experience or assume that they will have a similar investment experience as any previous or existing client. Awards and ratings are not indicative of the past or future performance of any Neuberger Berman product or service. Moreover, the underlying information has not been audited by the PRI or any other party acting on its behalf. While every effort has been made to produce a fair representation of performance, no representations or warranties are made as to the accuracy of the information presented, and no responsibility or liability can be accepted for damage caused by use of or reliance on the information contained within this report. Information about PRI grades is sourced entirely from PRI and Neuberger Berman makes no representations, warranties or opinions based on that information.

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The Russell 1000 Index is a float-adjusted market capitalization-weighted index that measures the performance of the large-cap segment of the U.S. equity market. It includes approximately 1,000 of the largest securities in the Russell 3000 Index (which measures the performance of the 3,000 largest U.S. public companies based on total market capitalization). The index is rebalanced annually in June.

The United Nations Sustainable Development Goals (UN SDGs) are a common set of social and environmental outcomes that governments, non-profits, companies and investors can work together to achieve.

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