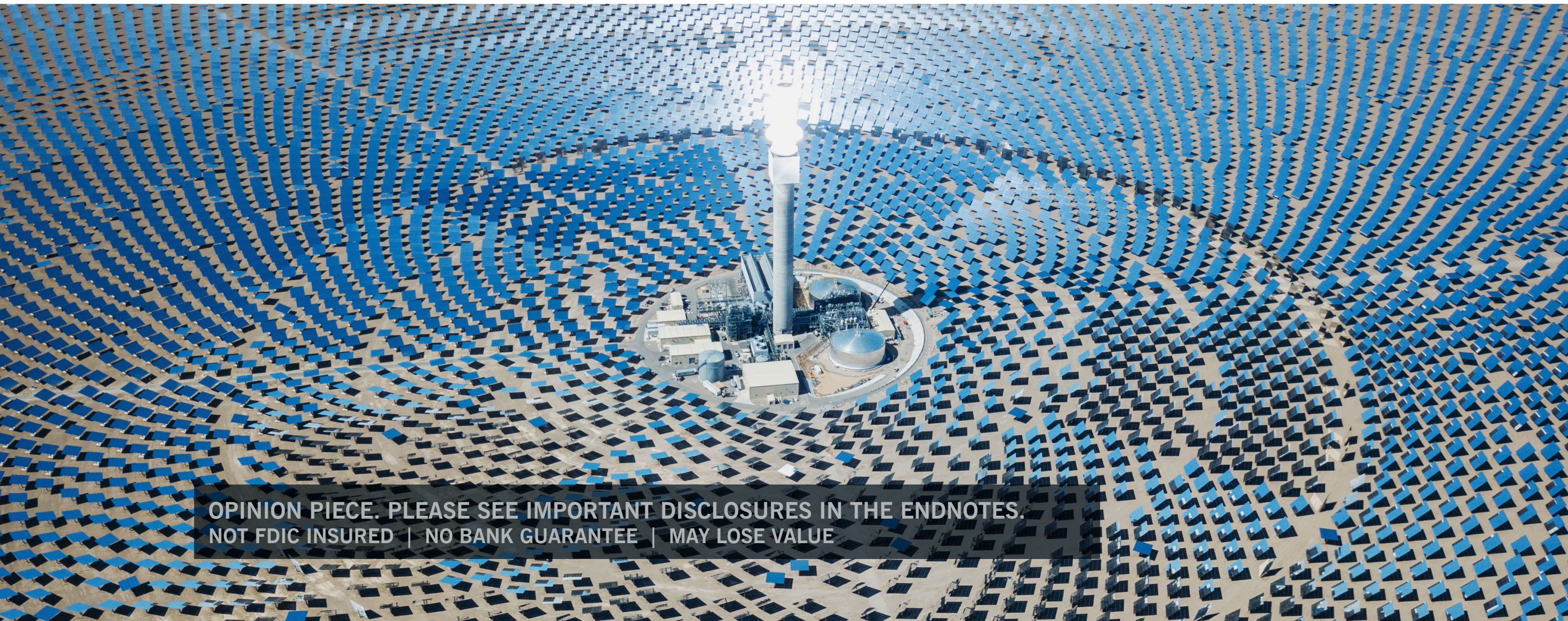
nuveen
A TIAA Company

How Nuveen uses responsible investing across asset classes to seek higher returns and manage risks

Responsible investing (RI) continues to win converts. Yet, whether they are new believers or long-term adherents, many investors looking to incorporate environmental, social and governance (ESG) factors into their portfolios limit themselves to either excluding specific industry sectors or adding a fund at the margin.



We believe the better approach — the one that is most likely to produce optimal financial and societal outcomes — is for investors to seek total portfolio solutions that embed ESG factors throughout investment processes, across strategies and asset classes.

Indeed, successfully forecasting long-term market, sector and entity-specific trends increasingly requires a comprehensive understanding of relevant ESG factors and their potential financial effects. Today, intangible assets, such as brand equity, customer and supplier relationships and public rights, comprise 84% of the total market value of the S&P 500, according to research from the Ponemon Institute. This means that poor ESG management in focus areas, such as human capital, supply chains, board independence, natural resource usage or environmental impacts can have significant implications for a company's bottom line and risk profile.

Yet, while financially material, these factors are difficult to assess solely through traditional financial analysis. As an asset manager with a global, diversified investment platform, we use ESG factors to expand the scope of data and analysis we use to inform decision-making, portfolio construction and management. Through ESG integration, we seek to enhance performance, avoid or ameliorate risks and broaden opportunities.

We believe the better approach — the one that is most likely to produce optimal financial and societal outcomes — is for investors to seek total portfolio solutions that embed ESG factors throughout investment processes, across strategies and asset classes.

CONSISTENT APPROACH

Delivering the investment benefits of ESG integration requires incorporating ESG factors throughout the lifecycle of the investment. Our investment teams follow a consistent framework that drives ESG incorporation across the research/due diligence, portfolio management, monitoring and reporting stages of investment. However, processes can be customized with the tools and data needed for each asset class.

Successfully forecasting long-term market, sector and entity-specific trends increasingly requires a comprehensive understanding of relevant ESG factors and their potential financial effects.

In collaboration with our dedicated RI team, investment analysts and portfolio managers across Nuveen have worked to:

- Map relevant ESG factors across industry sectors
- Deepen their understanding of the connection between ESG and risk/return
- Expand their use of ESG data and insights
- Capitalize on technology-enabled solutions to access expansive ESG datasets and streamline processes
- Develop and share proprietary ESG ratings

EQUITIES

We systematically integrate ESG information across a range of equity investment strategies. In public equities, company ESG risks, such as product quality and safety issues or increased expenses associated with regulatory requirements, are relevant to future projected cash flows and can be captured in analysts' financial models. An ESG lens can also help to identify opportunity. Companies aligned with positive ESG trends, such as clean energy, data security, human capital management or health and wellness may experience above-industry average growth and profitability, which can also be captured in valuation.

Ultimately, each investment team undertakes an approach to responsible investing that best aligns with their investment process, underlying assets and unique strategies for pursuing competitive risk-adjusted returns.

As part of a multi-layered approach to ESG integration, we:

- Incorporate ESG data and information into the investment research process using our in-house Responsible Investing Data Platform (RIDP). This online tool provides our investment teams with access to high-quality ESG data and ratings and facilitates more actionable ESG analysis. The RIDP centers around proprietary data maps that indicate the most financially material ESG factors based on industry and sector (e.g., water use in agriculture, supplier health and safety in tech manufacturing) and aggregates Nuveen insights with a host of third-party ESG data sources.
- Supplement data platform research and insights with ESG information sourced from company reports and direct discussions with a company's senior management.
- Connect ESG data to a range of other investment tools to drive accessibility and streamline processes.
- Capture ESG conviction within investment research by assigning proprietary ESG ratings determined through material ESG analysis. Currently undertaken by a number of teams, internal ratings are being expanded across our active coverage to augment third-party data.
- Produce portfolio ESG reporting that provides portfolio managers with better visibility into the ESG attributes of their holdings.

Through ESG research, analysts can develop conviction around ESG themes or factors and, ultimately, combine these insights with fundamental analysis to inform investment decision-making and portfolio construction.

ESG information cultivated during these stages of the investment process can also be used in monitoring and actively managing portfolio companies. We address outstanding ESG-related issues through direct engagement with company boards and executive management to drive improvement and transparency. These interactions provide further inputs for ongoing investment analysis and support changes that we believe will help to mitigate corporate risks and drive shareholder value.

MUNICIPAL BONDS

We evaluate municipal issuers' ESG performance using a proprietary ESG scoring methodology. Developed jointly between our municipal credit research and RI teams, our ESG municipal scores measure issuers' performance on ESG outcomes specific to their sector. For example, we may assess cities on outcomes like air quality and crime rates, while we would look at water pollution and age of infrastructure assets for water and sewer utilities.

We identify ESG leaders within each sector by comparing outcomes relative to sector peers. Our scoring models generate ESG scores for thousands of municipal credits across numerous sectors, covering over 50% of our overall municipal bond holdings to date. All Nuveen research analysts, traders and portfolio managers have access to these scores through our primary investment research and management systems.

In addition to collaborating on the development and continuous improvement of the ESG scoring models, the municipal investment team considers the ESG score as a factor in the investment process. We believe ESG performance is positively correlated with credit quality, and think it is a unique signal that allows the investment team to distinguish between otherwise similar municipal credits. When paired with Nuveen's in-depth fundamental municipal credit expertise, ESG integration becomes a powerful tool to enhance our investment process.

TAXABLE FIXED INCOME

While responsible investing may have gained traction earlier in public equity, in recent years there has been swift expansion of these RI considerations across all sectors of taxable fixed income. We have been a pioneer in ESG integration across our own fixed income portfolios with research analysts and portfolio managers building conviction through systematic approaches.

- **Corporate bonds.** Our taxable fixed income research team assigned proprietary ESG ratings to over 1,400 corporate issuers across emerging markets, high yield and investment grade corporate debt. The proprietary ESG ratings capture our taxable fixed income views on ESG leaders and laggards within credit sector and industry. By developing ESG expertise within the credit research team, we are institutionalizing the use of ESG factors in our research process.

  To support this process, Nuveen's RI team regularly delivers customized industry-specific training covering over 35 unique ESG topics from a credit research perspective. In addition, analysts take a sector-neutral approach and compare issuers within their own coverage universe, using a scale of leader, neutral and laggard, with accompanying commentary. Analysts develop ratings by combining insights from the RIDP with their in-depth knowledge and direct engagement with issuers.

> *"While responsible investing may have gained traction earlier in public equity, in recent years there has been swift expansion of these considerations across all sectors of taxable fixed income.*

- **Sovereign and structured bonds.** We are expanding our internal ESG ratings beyond corporate bonds throughout 2020, with the goal to rate 100% of actively covered taxable fixed income issuers by the end of the year. In both sectors, the RI team is partnering with investment research teams to develop proprietary frameworks to support the ESG ratings.

PRIVATE MARKETS

ESG integration for private equity and private credit requires a different approach from public markets due to lack of ESG disclosure among private companies. This limits the availability of third-party research and ratings, and requires that we undertake these processes in-house.

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

As one of the first private market managers to develop internal, proprietary ESG ratings, our investment analysts take a data-driven approach to evaluating and influencing ESG performance at the investment and portfolio level. This drives both accuracy and transparency with the investment committee as well as effective oversight and management of ESG issues throughout investment lifecycles that are measured in years, rather than quarters.

As part of our process, we:

- Conduct ESG due diligence using a proprietary scoring and ratings tool, which assesses how well a company manages ESG issues, given its risk exposure relative to peers. Each investment receives an overall ESG rating, as well as individual E, S and G ratings using a leader, neutral or laggard scale. Ratings are based on a custom methodology adapted from MSCI's methodology for scoring ESG factors in publicly listed securities. Ratings and the underlying analysis are included in the memorandum prepared for and reviewed by the investment committee, prior to investment approval.
- Monitor and manage ESG performance of portfolio companies, leveraging ESG ratings as a monitoring tool to track performance over time and against peers. Investment teams undertake regular reviews with company management teams and investment partners to discuss challenges, complaints or legal claims relating to ESG.

REAL ESTATE

We consider incorporating ESG factors in real estate a fundamental requirement, given the needs and desires of owners, occupiers, developers and investors. Green buildings that are resilient to climate change are lower risk and more attractive to tenants and investors alike. Strong investor returns and community socioeconomic outcomes can go hand in hand. By considering the needs of local communities, building owners benefit from overall economic growth and prosperity. Heightened ESG pressures, growing responsibilities and new opportunities in the markets of tomorrow are of primary focus as we seek to future-proof our real estate portfolio.

As part of our overall due diligence and investment process, we:

- Review location-specific ESG issues prior to making a bid on a real estate asset, utilizing internal sustainability expertise, various subscription-based and publicly available data sources, as well as external consultants and experts where appropriate.

> *Heightened ESG pressures, growing responsibilities and new opportunities in the markets of tomorrow are of primary focus, as we seek to future-proof our real estate portfolio.*

- Assess key areas of focus specific to real estate, such as managing the physical risks associated with climate change and responding to the risks and opportunities associated with the transition to the low-carbon economy. This includes commissioning third-party engineering studies to understand the costs associated with reducing physical climate risk or meeting a net zero carbon performance standard.
- Integrate ESG into investment selection by preparing and presenting a complete ESG underwriting paper to the investment committee. This ensures that material ESG risks and opportunities for any investment have been considered and are reflected in pricing. This includes a strong focus on climate change risk and its potential impact on value.
- Enhance the performance of the real estate asset during the holding period by engaging with occupiers investing in building improvements, which can drive cost efficiencies. Improving

tenant satisfaction and building sustainability also adds value at the time of sale.

- Monitor portfolio environmental performance data and ensure that all vendors understand and attest to compliance with ESG policies and procedures, annually.

REAL ASSETS

Investments in real assets can often last 20 years or more. As such, these investments go through rigorous due diligence and monitoring processes that take into account ESG risks and opportunities specific to geography, climate, crop type(s) and agricultural context. Climate risk and other environmental factors are particularly relevant to the performance of assets like farmland, as natural resource use, extreme weather events, rising temperatures and shifting weather patterns can have profound impacts on production. Additionally, assessing and appropriately managing social factors, such as land ownership rights and labor standards, are vital to ensuring our right to operate and ability to drive output.

As part of our process, we:

- Screen for ESG and climate risk exposure using a proprietary tool, which informs the level of oversight and support required to adequately assess and address ESG issues throughout investment due diligence.
- Examine legal ownership rights and the suitability and reputation of third-party managers, joint-venture partners, tenants or operators, prior to acquiring any property. We strive to continuously improve our process for determining land rights, particularly in regions with maturing legal structures.
- Use alternative data sources, such as aerial spectral imagery and satellite imaging to optimize resource use, such as nitrogen and water, assess environmental issues, as well as to understand historic land use and ownership.
- Undertake annual KPI-driven farmland sustainability audits that allow us to promote environmental sustainability, and ensure labor standards and human rights, while upholding high business and ethical standards in our operation and ownership of land holdings.

COMPLETING THE PUZZLE

Interest in responsible investing and demand for ESG-conscious strategies has surged around the world in recent years. However, as conversations about responsible investing increase, it is important for asset managers and investors to understand the value of incorporating ESG data not just in ESG- or impact-focused strategies, but across the entire investment spectrum. Done well, improving existing investment processes by integrating ESG factors can achieve something all investors strive for: achieving greater return potential, mitigating portfolio risks and unlocking new opportunities.

At Nuveen, we have over 50 years of experience in RI, and a proven history of generating returns through all market cycles. But RI is not just part of our history, it is an integral part of our future. Please contact us to learn more about our wide range of responsible investing offerings, spanning both public and private markets.

For more information about RI, visit us at nuveen.com.

Endnotes

Sources

Ponemon Institute, 2019 Intangible Assets Financial Statement Impact Comparison Report.

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell or hold a security or an investment strategy, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with his or her advisors.

The views and opinions expressed are for informational and educational purposes only as of the date of production/writing and may change without notice at any time based on numerous factors, such as market or other conditions, legal and regulatory developments, additional risks and uncertainties and may not come to pass. This material may contain "forward-looking" information that is not purely historical in nature. Such information may include, among other things, projections, forecasts, estimates of market returns, and proposed or expected portfolio composition. Any changes to assumptions that may have been made in preparing this material could have a material impact on the information presented herein by way of example. **Past performance is no guarantee of future results.** Investing involves risk; principal loss is possible.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

A word on risk

All investments carry a certain degree of risk and there is no assurance that an investment will provide positive performance over any period of time. Investing in municipal bonds involves risks such as interest rate risk, credit risk and market risk, including the possible loss of principal. The value of the portfolio will fluctuate based on the value of the underlying securities. There are special risks associated with investments in high yield bonds, hedging activities and the potential use of leverage. Portfolios that include lower rated municipal bonds, commonly referred to as "high yield" or "junk" bonds, which are considered to be speculative, the credit and investment risk is heightened for the portfolio. Bond insurance guarantees only the payment of principal and interest on the bond when due, and not the value of the bonds themselves, which will fluctuate with the bond market and the financial success of the issuer and the insurer. No representation is made as to an insurer's ability to meet their commitments.

The investment advisory services, strategies and expertise of TIAA Investments, a division of Nuveen, are provided by Teachers Advisors, LLC and TIAA-CREF Investment Management, LLC. Nuveen provides investment advisory solutions through its investment specialists.

This information does not constitute investment research as defined under MiFID.

nuveen

A TIAA Company

GPE-RIESGAC-0520P GWP-1177869PR-E0520P 20581