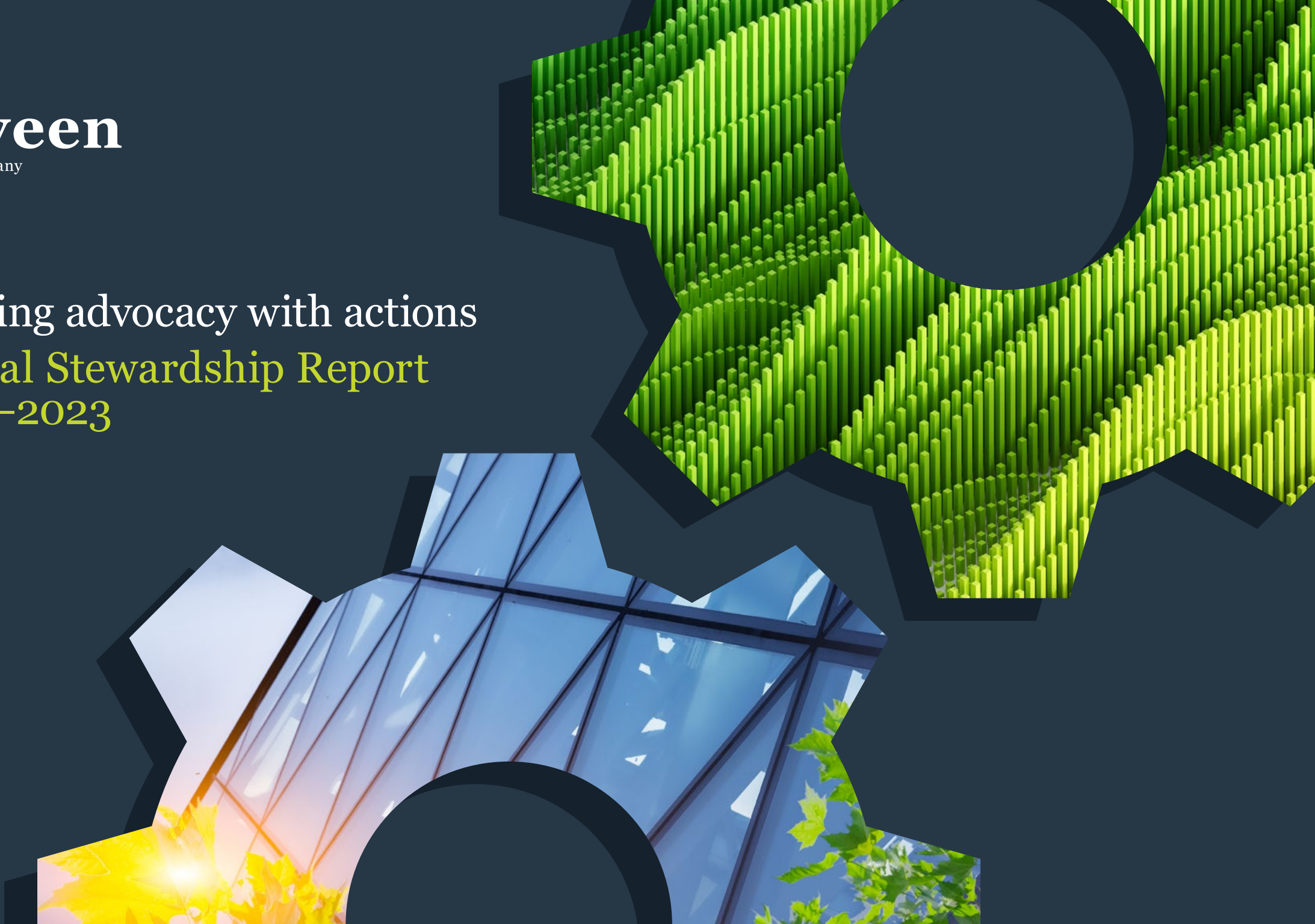


The logo for nuveen, featuring the word "nuveen" in a bold, white, lowercase sans-serif font.

A TIAA Company

Aligning advocacy with actions  
**Annual Stewardship Report**  
2022–2023





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# Resiliency in the face of disruption

2023 was an unprecedented year. Companies and investors were challenged by persistent inflation, rising interest rates, a banking crisis in the U.S., and supply chain issues that sparked fears of a global economic downturn. Conflict in Ukraine and the Middle East further heightened political tensions, and we saw a surge of technological innovation in generative artificial intelligence. As asset managers, we look to achieve resiliency in the face of disruption. We recognize the responsibility we have as stewards of our clients' capital, aiming to protect and deliver on focused outcomes for over \$1 trillion of their assets.

Source: Nuveen, 30 June 2023.





## Despite these challenges, we remain dedicated and focused on advancing responsible investing practices, with preserving and enhancing long-term shareholder value at the center of our approach.

In this report, we recap our efforts to remain diligent in our ability to produce meaningful outcomes for our clients. Our approach is rooted in our fiduciary duty to maximize shareholder value, and we utilize our relationships and influence with companies through the lens of materiality, practicality and feasibility. We recognize that ‘impact’ in the investing world can take several forms, and we believe that transparency and accountability are necessary foundations for producing real-world outcomes.

Throughout all this disruption, we believe it is important to celebrate our successes and the progress made from our stewardship efforts. This past year, we engaged with over 400 companies\* on topics including:

- **The global energy transition and climate risk**
- **Natural capital and biodiversity**
- **Diversity and non-discrimination**
- **Labor standards and human rights**
- **Product and consumer responsibilities**

We also recognize the need to continue to adapt to an ever-evolving set of complex and interconnected global challenges. In 2023, we engaged companies and industry leaders on emerging issues such as responsible use of artificial intelligence, customer privacy and the importance of a “just transition” to a low-carbon economy. Engaging in these conversations can help ensure that our stewardship program adapts to rapidly changing market conditions.

Institutional investors can employ a variety of tactics to address systemic challenges in the real-world economy and identify investment opportunities that are most resilient to macroeconomic, regulatory and market dynamics. We utilize proprietary frameworks, along with global standards of transparency, to help our investment teams make more informed investment decisions.

## We believe understanding where a company is on its journey and where it will find its next milestone is critical to calibrating where stewardship can be most effective.

At the company or portfolio level, distinguishing between the possibility for improvement and the desired end-state for stakeholders more clearly establishes what can be achieved through stewardship and what is required to be achieved through investment (re)allocation. It is unlikely that every company in a traditional portfolio will adopt a best practice or that a benchmark portfolio will organically achieve a certain stakeholder outcome. The associated investment returns as companies adopt best practices or achieve a particular impact will also vary along the way.



**Jose Minaya**  
*Chief Executive Officer,  
Nuveen*



**Amy O'Brien**  
*Global Head of Responsible Investing,  
Nuveen*

\* Source: Nuveen, 01 July 2022 – 30 June 2023



“Our stewardship program is not designed to impose a set of one-size-fits-all practices for all companies. Stewardship is about resiliency in the face of disruption, partnering with companies on their sustainability journey, offering solutions, tracking progress and creating accountability.”



**Amy O'Brien**  
Global Head of Responsible Investing,  
Nuveen

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In 2020, we developed a three-year escalation strategy that creates a roadmap for pushing companies that significantly lag versus peers and who have been unresponsive to engagement. This strategy has allowed us to connect more directly unaddressed environmental, social and governance concerns to our votes on shareholder proposals and company directors. We continue to evolve and iterate this escalation strategy in our Climate 2.0 program.

Beyond this, we developed a unique framework to organize the ESG information that our stewardship team is collecting from companies and clearly communicate positive outcomes without overstating what they achieve. Our framework buckets key performance indicators (KPIs) based on the objectives they service: transparency, accountability or impact. We have continued to find that distinguishing metrics and results based on where they fall in this framework adds value to our conversations with investee companies, gives us a strong foundation for regular evaluation of progress, and resonates with clients who want to understand the value of stewardship and seek credibility from asset managers.

And so, while disruption was ever-present throughout 2023, we remain encouraged by our ability to produce real-world outcomes for our clients over the long-term. Heading into 2024, we must remain resilient, and continue to evolve and adapt to an ever-changing world.

We are extremely thankful for the trust that our investors place in our process, and we look forward to serving you for years to come.





# Nuveen stewardship house views — transparency, accountability and impact

Global climate  
change ▶

Use of natural  
resources and  
impact on  
ecosystems ▶

Diversity and  
nondiscrimination ▶

Global labor  
standards and  
human rights ▶

Product and  
customer  
responsibilities ▶

Macroeconomic  
and systemic  
issues ▶

Emerging  
issues ▶





## The past year has brought a significant number of new issues to the fore of the ESG space, as well as a growing sophistication on evergreen topics.

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Environmental issues are now expanding beyond climate risks in terms of transition and physical risk to the interconnectedness of climate and natural capital, including land use, water use, biodiversity and more. Social issues have expanded beyond a company's direct workforce to customers and communities from a racial equity lens as well as into the company's supply chain in terms of an increased emphasis on human rights. Governance issues ranging from executive compensation to capex allocation are being put in a new spotlight due to worker wage pressures and interest rate increases. Nuveen's investment stewardship approach is guided by the enterprise policy statement on responsible investing. Nuveen believes it is necessary to take a dynamic approach to materiality and continuously calibrate the internal and exogenous forces that affect risks and opportunities at the market- and company-level.

Notwithstanding our ability to identify and develop expectations around emerging themes, we think it is equally important to maintain a focus on long-term issues and a consistent set of expectations for companies. For certain environmental and social stakeholder themes, there is a growing consensus around materiality, but no generally applicable public policy requirements or clearly defined market best practices on how to achieve a desired outcome. Given the variance in market- and company-level resource availability, execution confidence and the return profile of different stakeholder solutions, there is no single or right assessment of the investment opportunity. As such, part of the stewardship focus on transparency, accountability and impact is intended to parse out the company-specific investment opportunity from the thematic-level investment opportunity.

Generally, we advocate for reasonable disclosure of the environmental or social impact of a company's policies, operations or products, particularly in situations where disclosure is lacking, generic or appears disconnected from the business strategy. Information that is not disclosed by the company can still be estimated, but estimates based on industry averages often hide the company-specific investment risks or opportunities. Outcomes that create transparency are a critical component for aligning capital allocation with the predicted, or desired, market outcome.

In addition, we may advocate that a company better articulate the alignment between stakeholder risks and opportunities with the company's business strategy, operations or products. We recognize the increasing importance of the "double materiality" concept, whereby companies must consider not only the financial materiality of sustainability issues to their business (the 'outside-in' view), but also the impact materiality of their activities on society and the environment (the 'inside-out' view). Generally, a robust corporate strategy will account for both these dimensions to foster long-term business resilience. We typically defer to management's judgment to set corporate strategy so long as there is transparency and evidence of intent to align policies, operations and products with the strategy. In select cases, we advocate for a particular type of impact if we deem it to be the best way to preserve long-term value.

We do not expect a particular company to fully internalize a market-wide externality associated with its operations. Similarly, we generally do not advocate for cessation of operations that may contribute to a market-wide externality. Instead, we believe in a proactive and collaborative approach where companies can balance mitigation with a business model that creates long-term sustainable value through the integration of stakeholder risks and opportunities.

To understand how the framework is put into practice within Nuveen's stewardship program, below is a high-level summary of our enterprise-level views on transparency, accountability and impact expectations before accounting for company- and industry-specific factors and/or the fund- or enterprise-level investment objectives.

The RI Stewardship team has primary responsibility for the ESG-focused engagement detailed in this report. Through engagement, which can take the form of in person meetings, calls or written communication with boards and management, we may seek: a deeper understanding of ESG risks or opportunities which can inform investment or proxy voting decisions and/or to clearly outline expectations and encourage issuers to adopt ESG best practices that support long-term value creation.





# Global climate change

We believe the world's climate and energy infrastructure are in transition, and transition risks present material investment risk. We understand that this is likely to be a multi-decade transition, where the precise timing is unpredictable and the most efficient means of decarbonization may not always be the most practical.

Nonetheless, companies that take steps now to assess, manage and mitigate risks and develop credible strategies in response to macroeconomic, regulatory and market forces will be better positioned to maintain and grow shareholder value over the long-term.

## Stewardship strategy

WE GENERALLY EXPECT:

- Companies to provide disclosure of their carbon emissions, including Scope 3 emissions where a material portion of the company's overall climate risk is intertwined with defined Scope 3 emissions categories.
- That robust climate strategies will address governance, strategy, risk management, and metrics and targets. We prefer that companies organize climate disclosures in line with internationally recognized frameworks such as Taskforce on Climate-Related Financial Disclosures or the in-development International Sustainability Standards Board.
- That companies account for a range of transition pathways, including low carbon transition scenarios such as the International Energy Agency's sectoral pathways to net-zero emissions by 2050. We also expect that companies set targets that align with probable decarbonization scenarios or explain why the company believes its current business model will continue to preserve long-term value even when the company's own emissions are not aligned with the expected pathway.







# Use of natural resources and impact on ecosystems

We believe that resource scarcity and ecosystem degradation can pose systemic risks to the economy, as natural capital is an inherent dependency in many business models. The efficient use of natural resources, remediation efforts that are investments in the sustainability of natural capital, or solutions to decrease resource impacts may provide opportunities for cost savings or the introduction of new products and services.

Although many companies may have limited direct exposure to natural resource impacts, the interconnectedness of natural resource ecosystems means that global supply chains and the physical locations of resource-intensive business activities likely have compounding effects across the economy.

## Stewardship strategy

WE GENERALLY EXPECT:

- That companies with a material dependency on specific natural resources will disclose a risk assessment on how their operations draw on natural resources, generally following the guidance from the Taskforce on Nature-Related Financial Disclosures and the locate, evaluate, assess, and prepare (LEAP) framework.
- That companies will develop strategies around operational and sourcing efficiencies for scarce resources or where there are operations in resource-stressed areas, in particular water and areas subject to land-use conversion.
- That companies mitigate business operations that will cause irreparable long-term damage to ecosystems. Or we expect companies to develop a remediation strategy to protect against potential financial impacts resulting from such damage (licenses to operate, higher cost of resource inputs, regulatory, compliance and litigation costs, and reputational damage from affected stakeholders).





# Diversity and nondiscrimination

We believe talent management is critical to a company's ability to execute its business strategy and compete successfully over the long-term. Company culture, including employee satisfaction, engagement and professional development, is material for optimal workforce performance.

## Stewardship strategy

### WE GENERALLY EXPECT:

- That companies provide disclosure on their board, management and overall workforce demographics, generally including but not limited to gender and racial or ethnic composition such as the framework required for Equal Employment Opportunity Commission reporting (EEO-1). In addition, we believe that companies should provide some disclosure that looks beyond demographic snapshots and address diversity in relation to hiring, retention, as well as promotion policies, strategies and opportunities.
- That companies will address diversity risks and opportunities beyond nondiscrimination and provide policies and performance indicators related to equity and inclusion. In particular, performance indicators related to pay parity, promotion parity and workforce engagement are material indicators of equity and inclusion.
- That companies consider risks and opportunities related to diversity, equity and inclusion beyond their workforce and address material issues connected to customers, communities and other company-or industry-specific factors that impact racial equity.





# Global labor standards and human rights

We believe resilient business models require companies to safeguard the health, safety and welfare of their employees and those engaged in their supply chain. This involves several aspects, including mitigation of short- and long-term occupational health and safety risks, efforts to support health and well-being, adherence to fair labor practices, enforcement of anti-harassment policies and avoidance of forced labor and human trafficking.

## Stewardship strategy

WE GENERALLY EXPECT:

- That companies adhere to internationally recognized standards for human rights and labor practices, including employee health and safety, and disclose the means of overseeing company operations and supply chain for potential risks, in particular in areas of weak governance standards.
- That companies are able to evidence enforcement of their standards and substantiate how supplier labor practices are integrated into the company's supplier strategy.
- That companies will consider how their commitments on material stakeholder issues are impacted by the environmental, social and governance practices of its suppliers and the extent to which the company can have influence over supplier practices to mitigate misalignment between the company and its supply chain.





# Product and customer responsibilities

We believe the long-term value of a company is intertwined with the quality, safety and impact of a company's goods and services on the customers and communities it serves as well as how the products and services are produced, marketed and sold to customers, including both the access and affordability of products across the total addressable market.

## Stewardship strategy

WE GENERALLY EXPECT:

- Companies to provide transparency regarding material issues around the production, quality and safety of a product, in particular for products that pose hazards and can cause harm.
- That companies address how innovation of their products and services can create positive stakeholder benefits or mitigate, to the extent practical, potential hazards. To the extent there are externalities that cannot be fully mitigated, we expect companies to address the long-term sustainability of their business model based on regulatory, customer and market forces in terms of acceptance of the negative externalities.
- That companies substantiate how their marketing and sales practices facilitate customer engagement opportunities and mitigate intent or appearance of discriminatory or predatory business practices or reducing access to and affordability of essential goods and services.





# Macroeconomic and systemic issues

We believe that companies' products and services, and the means by which the products and services are created and sold, can contribute both positively and negatively to systemic issues. While companies cannot foresee or positively influence all systemic issues, we believe that over the long term companies cannot generate sustainable value through exploitation of market or regulatory factors that have a direct, negative external impact on macroeconomic or systemic stakeholder issues.

## Stewardship strategy

WE GENERALLY EXPECT:

- Companies to acknowledge operational or growth effects associated with material systemic issues. While the disclosure expectations will vary based on the probability, duration and company- or industry-specific exposure, companies should be able to explain the risk oversight processes to monitor relevant risks.



# Emerging issues

We believe that the current market environment presents material risks and opportunities for companies to address various emerging topics. In many ways, these are not “new” stakeholder issues, but rather distinct applications of the broader themes described above for which we seek to offer a more specific viewpoint.

Our stewardship strategy for these issues is to scope the risks, opportunities and stakeholder impacts throughout the value chain and then focus on the different spheres of influence where companies face the most material financial risks and/or the most feasible opportunities to advocate for improvement.

## Stewardship areas of focus



### NATURAL RESOURCE RISK

- Beyond GHG emissions, there are other measurements of natural resource usage as an input to production or a measurable non-product output of business activity. These impact drivers of natural risk include: freshwater ecosystem use; marine ecosystem use; water use; water pollutants; terrestrial ecosystem use; soil pollutants; solid waste; non-GHG air pollutants; and other resource use and disturbances.
- These impact drivers can be associated with a range of impacts that are interconnected and self-fulfilling. While much of modern industry has an impact on the natural world, Nuveen has focused on impact drivers related to water and land to complement the established work primarily addressing GHG emissions.





## JUST TRANSITION

- Sustained emissions reductions require appreciating the balance of supply and demand, where demand is inherently people-focused in terms of energy or product shortages, energy costs and related issues of economic hardship such as individual job loss and community economic impacts.
- The climate transition from a just transition perspective is challenging because there is discontinuity between: i) the physical locations of natural resources, such as whether a country has large fossil fuel reserves, metals reserves that may increase in value as part of an electrification of the economy, or available wind and solar for transition to more renewable energy sources; ii) the types of companies that may own or operate various natural assets; and iii) the stakeholders and policy markets influencing the supply, demand and overall cost of those resources in a particular region and/or globally.
- The just transition perspective changes the approach of addressing the climate transition from solely the supply-side perspective. Nuveen is taking a multi-dimensional approach to just transition stewardship that brings companies, their customers, their financiers, their regulators, and their industry groups or policy stakeholders into a single sphere of influence to identify the conditions and enablers of multilateral solutions to just transition obstacles.



## ARTIFICIAL INTELLIGENCE

- As artificial intelligence (AI) applications are built in-house, there may be less centralized oversight on unconscious bias and/or AI ethics than exist within the technology industry. The technology industry must expand its sphere of influence beyond the legal protections of terms and conditions to ensure customers are educated and trained on ethical deployments of AI.
- In addition, outside of the technology industry the applications of AI need to be balanced with their influence and interaction with employees and customers to ensure there is acceptance and confidence in its output. Companies must calibrate investments in AI that can produce long-term value alongside more short-term issues of employee acceptance and/or upskilling and customer adoption.





## CHILDREN'S RIGHTS

- In the real-world economy, children regularly are held out as a protected class of stakeholders. In the virtual economy, the traditional mechanisms of protection are less established and even harder to enforce. Given the increase in value of social network companies as well as the amount of time children spend in virtual environments, Nuveen believes that companies must establish an appropriate balance between customer privacy and customer protection to address the specific risks associated with the protection of children.
- Companies whose business models are centered around content distribution must balance the legal protections afforded by a hands-off approach to content moderation to avoid censorship risk with the growing regulatory environment that places strict limits or bans on children's access to platforms due to controversial content that may be accessed through the platform. Even outside the regulatory environment, companies must calibrate the rate to which negative platform engagements correlate with customer retention and whether there will be material market share loss from the accumulation of negative experiences beginning at earlier stages in life.



## CUSTOMER ACCESS AND AFFORDABILITY

- For much of the prior decade and the low interest rate environment, companies were able to finance a subsidized product or service as part of a growth-focused business strategy. As these companies mature, in combination with the higher interest rate environment and inability to finance subsidies, they must now recalibrate access and affordability of their products and services.
- Over the long term, companies must learn how to pivot a business model from growth to value and top-line to bottom-line focus. This pivot may have impacts on customer access and affordability. As such, companies must consider what costs should be passed on to customers and which expenses could be internalized by the company. Relatedly, companies must consider succession planning in terms of when in a company business cycle there may be a need for different skills and experiences at both the board- and management-level to guide the company through its next phase of maturity.







# Engagement by the numbers

Overall, Nuveen engaged with **53%** of its global corporate equity assets under management.

All Nuveen equity AUM as of June 30, 2023. Excludes AUM in entities such as funds where exposure is not directly to a corporate issuer that can be engaged. Percentages will not add to 100 as more than one issue category may be discussed.

Nuveen's active portfolio management includes multiple touchpoints with portfolio companies and those discussions may include questions related to ESG themes or context to support ESG integration into the investment process. The engagement activity described here is specific to ESG-focused engagement activity where the discussion included explicit expectations being set by Nuveen in accordance with either enterprise- or fund-level ESG investment objectives. These advocacy-focused engagements and the expectation set are then tracked by Nuveen for outcomes in line with its transparency, accountability, and impact stewardship framework.

**564**  
TOTAL ENGAGEMENTS

**417**  
COMPANIES ENGAGED

## Engagement activity by category

### Environmental

Climate Change	65%	283
Natural Resources	6%	29

### Social

Diversity, Equity & Inclusion	31%	156
Communities	5%	28
Product Responsibility	3%	16
Talent Management	9%	51
Customers	9%	59
Employee Health and Safety	2%	7

### Governance

Shareholder Rights	9%	48
Business Ethics, Transparency and Accountability	32%	166
Board Structure and Operation	10%	57
Executive Compensation	33%	160
Board Quality	16%	88





# Transparency, accountability and impact in practice

[RI case studies](#) | [Calibrating stewardship priorities](#)

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Identification of stakeholder risks and opportunities, as well as of the materiality of those risks and opportunities, is a dynamic process that must account for new regulatory developments, macroeconomic environments and customer preferences. The case studies below evidence how Nuveen approaches emerging stakeholder themes, sets clear expectations on thematic initiatives and conducts industry-level reviews to identify materiality or model disclosure examples that can be practical guidance for similarly-situated companies.





EMERGING TOPIC CASE STUDY

## Just transition

### Materiality

A company's ability to execute on a climate transition strategy inherently requires the buy-in from its stakeholders. Within a company, workers whose jobs may be displaced due to the transition may resist unless the company addresses worker reskilling or other labor issues such as health and safety.

### Summary of stewardship activity

Nuveen engages companies on the social and governance aspects of climate transition strategy. Many companies have climate transition strategies that expect workers to increase their regular interactions with technology while down-skilling the role of human labor to only address the hardest to remove operations.

Even where Nuveen assesses a company's climate strategy to be feasible, there is an inherent limitation if the long-term strategy creates material short-term risks from labor force turnover, business continuity risks, or parallel material costs of capex for R&D technology solutions and increased worker pay or benefits.



THEMATIC TOPIC

## Climate change and asset retirement obligations

### Materiality

The low-carbon transition is poised to significantly reshape the energy sector and the infrastructure that underpins it. While the rate of transition is uncertain, some assets used for hydrocarbon production and distribution are likely to reach a point where continued operations is uneconomic. Many jurisdictions require these assets to be decommissioned, which includes the dismantling of the facility and restoration of the surrounding areas to the pre-production condition. The expense of decommissioning generally falls on the asset operator, but in some jurisdictions the previous asset owners or other local operators may be held jointly or severally liable if the current operator is unable to complete the decommissioning to avoid taxpayers bearing the costs. For some projects, such as offshore drilling in Australia, estimated costs of decommissioning are as high as \$60 billion.

### Summary of stewardship activity

Notwithstanding the materiality of these significant end-of-life liabilities, the investment risk is often obscured by accounting standards that allow companies to keep the liability off their balance sheets by choosing not to set a decommissioning date (implying continued operations in perpetuity) or otherwise claiming there is uncertainty on when the decommissioning costs may become balance sheet liabilities.

Nuveen continues to engage companies on decommissioning liabilities and supported shareholder proposals during the 2023 proxy season requesting the expanded disclosure of related costs. Nuveen also emphasizes in engagements that companies consider the sustainability strategies of any acquirers in an asset transfer that could result in future trailing liability risk despite the company seemingly reducing its exposure to transition risk.





# Supply and demand perspectives for raw materials

## Materiality

Nuveen shares case studies from across the value chain as well as across sectors to help demonstrate some of the economic forces that may not be accounted for in company- or industry-level projections. Through engagement, Nuveen seeks to identify and share supply and demand signals across a value chain to help catalyze decarbonization solutions as well as educate companies on market-wide challenges that may exist regarding their current transition assumptions.

In many cases, the assumptions regarding supply and demand projections are not consistent across industries within the same value chain. Furthermore, the strategy may be overly focused on current technology solutions which have meaningful but limited long-term impact or may be predicated upon a breakthrough technology that has not been validated beyond its conceptual phase.

## Summary of stewardship activity

Many manufacturing processes are relying upon electrification to meet climate transition goals that will require metals such as copper, nickel, lithium and cobalt that currently are in limited supply. Similarly, manufacturing or construction assumes that green steel will be readily available at a standard commodity-level price. Nuveen has engaged companies to understand the extent to which a company strategy has accounted for current and projected future availability and price points for these raw materials to ensure the strategy is feasible for the long-term. Nuveen may also engage the company on operational locations, supplier partnerships, etc., to see if companies that are more proactive may have been able to lock in competitive advantages.

Another example involves the assumptions and realities of the shift in energy sources. Natural gas is typically identified as a transition fuel in the low carbon transition pathway. The usefulness of natural gas as part of just transition requires a balancing of its environmental and economic returns in displacing more carbon-intensive energy sources as well as the environmental and economic returns of its use in lieu of renewables such as solar, wind and/or hydrogen energy sources.

One opportunity to improve the environmental benefits of natural gas usage involves hydrogen blending. Hydrogen can be produced and consumed with nearly zero emissions and generally can be integrated into the pre-existing natural gas infrastructure that currently accounts for nearly one-third of U.S. energy consumption. However, the environmental returns of a “green hydrogen” strategy are not necessarily aligned with the economic returns accounting for the variety of use cases and demand for limited hydrogen supply.

Nuveen generally believes that sectors with the hardest to abate emissions will have the highest demand for solutions that can keep them aligned with market and regulatory forces associated with a low carbon transition. For example, sectors such as air transportation are likely to put a higher premium on hydrogen

for sustainable aviation fuel and be able to pass along the premium to customers due to regulatory requirements and/or lack of transport substitutes relative to what a utility company can bid and pass along to ratepayers. Additionally, the energy grid may have other sources of renewable energy such as solar, wind and hydroelectric available that further reduce the competitiveness of a hydrogen-blending strategy relative to peers.

On the other hand, Nuveen may engage both airlines and aerospace manufacturers on the long-term prospects of different sustainable aviation fuels and on whether the industry should focus on near-term improvements or spend more capital toward long-term solutions. Hydrogen use for hydrotreated esters and fatty acids fuel (HEFA) could reduce flight emissions materially by as much as 80% relative to traditional fuels; however, power-to-liquid as a solution is a less viable technology currently but has over 99% emissions reduction. Over the long-term, power-to-liquid will require less in-demand raw materials like hydrogen and may have stronger price-competitiveness potential compared to traditional fuels whereas HEFA has more limited potential for price improvements over the long-term.





# Addressing climate risk across the enterprise, asset classes, and RI-thematic funds

## Materiality

Methane, a greenhouse gas that is 80 times more potent than CO<sub>2</sub> over a 20-year period, is often released during oil/gas production and transportation, as it is the largest component of natural gas, as well as in the process of mining coal. As many economies look to decarbonize their energy systems, including via coal to gas switching, it has become paramount to ensure this transition maximizes decarbonization potential. Natural gas certainly releases far less CO<sub>2</sub> at the point of combustion compared to coal, but its lifecycle emissions can be significant considering the methane emissions released throughout the supply chain. Many options to monitor and address these emissions are affordable and available at scale — the International Energy Agency estimates that, based on gas prices from 2022, over 60% of oil/gas methane could be reduced at no net cost. Given the feasibility of these reductions, methane emissions from the oil/gas sector have become a focus for regulation: in 2022, the U.S. announced its first-ever greenhouse gas fee attached to excess methane emissions from oil/gas operators; in Q2 2023, a collection of major economies, including Japan, the EU, Australia and the U.S., pledged to tighten methane monitoring and

to accelerate emissions mitigation from the LNG value chain; and in Q3 2023, the EU announced that it will require gas imports to reliably measure supply chain methane emissions and, beginning in 2030, achieve a certain methane intensity.

## Summary of stewardship activity

Nuveen has prioritized methane abatement advocacy in direct conversations with companies by advocating that oil/gas firms join the Oil and Gas Methane Partnership 2.0 (OGMP), the UN-convened initiative that guides companies toward leading practices in monitoring, reporting and target-setting for methane emissions. In addition to simply representing best practice, membership in OGMP also increasingly represents an opportunity for differentiation, particularly as buyers look to find short-term options to reduce their Scope 3 emissions. For example, Con Edison recently announced a program to seek out gas produced by operators with low methane intensities, such as those produced by OGMP members.

Nuveen has actively encouraged utilities, particularly those included in Nuveen's Global Clean Infrastructure Impact Strategy, to consider similar strategies. As this differentiation opportunity continues to materialize and methane management emerges as essential to a firm's social license to operate, Nuveen has successfully pushed companies toward methane best practices: following engagements with APA Corporation and ExxonMobil, two of the 100 firms included in our Climate Risk 2.0 initiative, both announced that they would join OGMP. Nuveen continues to push oil/gas companies to join the group, including via engaging National Oil Companies (NOCs) primarily through fixed income investments. NOCs represent the majority of current production and global reserves, making them a critical component of the global push to reduce methane emissions, and have typically been sluggish to implement certain best practices.

Nuveen has also participated in site visits to oil/gas facilities to better understand how best practices are implemented on the ground. In the fall of 2023, Nuveen visited the Permian Basin to see facilities owned by Pioneer Natural Resources, another

Climate Risk 2.0 company. During the visit, Pioneer exhibited how continuous monitoring, improved vapor recovery technologies, and frequent flyovers had enabled the company to significantly reduce methane emissions, minimize lost product and maximize revenue. Shortly after Pioneer's demonstration of its sophisticated operational practices, Exxon announced their acquisition of the company, as well as their commitment to advance the operational Net Zero target for the acquired Pioneer assets from 2050 to 2035.

Nuveen has also recognized the significant role that financiers and insurers can play in moving their clients toward best practices. Via "nudge" policies that establish operating norms for oil/gas customers, financial institutions can significantly de-risk their client portfolio, pursue decarbonization of their financed emissions and send a strong signal to energy sector participants. Nuveen has engaged with Chubb, one of the largest global providers of property & casualty insurance and a top-10 insurer worldwide for oil/gas producers, many times in recent years and has advocated for enhanced engagement with carbon-intensive clients. In 2023, the insurer announced a first-of-its kind policy for clients in the oil/gas industry: clients must now "implement evidence-based plans to manage methane emissions including, at a minimum, having in place programs for leak detection and repair and the elimination of non-emergency venting." While these efforts are increasingly table stakes for responsible operators, this policy represents a strong signal that these practices may also become a precondition for access to financial services.

Methane abatement work, however, has been plagued by reporting inaccuracies. Many reporting systems rely on emissions factors, which are defined by the EPA as "representative values that attempt to relate the quantity of a pollutant emitted with an industrial activity." In other words, methane emissions are reported via desktop calculations rather than real-world observation and monitoring. Studies indicate that this has led to significant under-reporting, particularly because emissions factors do not accurately capture "super-emitting" events.



More accurate reporting of these emissions, especially as the EPA investigates options for more observation-based reporting, will likely impact existing figures reported by oil/gas operators. As such, we supported shareholder proposals in 2022 and 2023 at multiple energy companies requesting disclosure on how direct measurement would impact stated emissions and related targets. Nuveen also supported other proposals in the 2023 proxy season that had direct or indirect connections to methane reductions, including proposals that requested more ambitious mitigation efforts in cases of business disruptions such as those caused by extreme weather events, as well as proposals that better calibrate the real-world outcomes across the value chain, where some companies are overly selective about the sources of emissions that are accounted for as part of Scope 3 target-setting.



STEWARDSHIP SOLUTIONS

## Nuveen Core Impact Bond capital markets engagement

### Materiality

Nuveen’s approach to impact investing through its Fixed Income Impact Investing solutions relies on a use of proceeds analysis and transparent, relevant impact measurement and reporting frameworks in order to create a clear line of sight into the anticipated and real-world outcomes from the financed projects and initiatives.

Given the emerging nature of stakeholder-focused investment solutions and the lack of a regulatory standard for whether a security is “green,” “blue,” or “impact” aligned, Nuveen engages with the issuers and financial intermediaries to ensure that our investments provide the appropriate incentives and accountability mechanisms to deliver on the impact objectives and show proof of concept to both potential issuers and large institutional investors that accessing public fixed income markets can be a powerful way to finance innovative impact opportunities.

### Summary of stewardship activity

Nuveen participated as an anchor investor in the Barbados Blue Bond issued in 2022. Barbados is economically reliant on tourism (40% of GDP) tied primarily to its beaches and fisheries. Despite this dependence, only 1% of the water surrounding Barbados is currently protected. Nuveen invested in the deal to support the conservation of at least 30% of marine space over the next 15 years.

While the 30% conservation threshold is becoming an industry-norm for blue bonds or conservation programs, Nuveen has engaged with the financial partners to ensure straight guarantees from reputable counterparties involved in the transaction instead of the transaction being structured based on default insurance. Additionally, Nuveen engaged to require a Marine Spatial Plan (MSP)/management plan as part of the transaction that recognizes areas with unique biodiversity along with areas that can sustainably support different levels of activity. The MSP Steering Committee, a separate body made up of representatives of The Nature Conservancy, government officials, and key local stakeholders, will monitor the progress of the protection, along with disbursing grants that support implementation of protection activities identified in the planning. The oversight body will receive annual reports on the progress toward the 30% milestone and will be required to make the progress reports available to investors.





STEWARDSHIP SOLUTIONS

## Nuveen Green Capital policy engagement

### Materiality

Broad-based and consistent legislative policy is a critical component to maximizing the investment and impact opportunities for emerging financial solutions such as C-PACE. Nuveen Green Capital is the pioneer of C-PACE policy and the development of capital markets solutions to fund improvements that create reductions in energy and water use and increase improvements in building design over and above minimum mandated standards.

### Summary of stewardship activity

We use engagement with policy makers to educate on the gaps in current building standards at the state- and local-level and opportunities to use policy to incentivize impact. Additionally, we advocate for the expansion of C-PACE to include new categories of building technologies, which are becoming front and center in a changing climate and energy transition — such as electric vehicle charging, low-emission building materials, and climate and environmental resilient infrastructure. Finally, we work with key partners across banking, capital markets and real estate to ensure C-PACE can have maximal impact.

For example, Nuveen participated in the policy process for C-PACE adoption and introduced legislation in multiple states as well as expansion of C-PACE policies to cover climate resiliency and environmental hazard mitigation. Nuveen also participates in multiple industry groups to ensure investors are providing a clear and consistent message to other stakeholders regarding C-PACE opportunities.



STEWARDSHIP SOLUTIONS

## Nuveen Real Estate and Nuveen Natural Capital tenant engagement

### Materiality

Through Nuveen’s ownership of real assets, we recognize there is a need and opportunity to engage on the ground with our tenants to ensure the impact opportunity we expect from our investments is realized in the communities. Real-world community impacts can have a compounding effect that both creates long-term resiliency for our investment as well as a proof-of-concept supported by stakeholders to replicate and expand the playbook in future investment opportunities.

### Summary of stewardship activity

Within our affordable housing investments, Nuveen has partnered with third-party services such as Esusu to help tenants establish a financial identity and overcome the systemic challenges of being unbanked. Through the partnership, Nuveen provides residents access to services such as credit reporting and 0% interest rate relief as well as the ability to report on-time rental payments to credit bureaus.

In addition, we have partnered with Veritas Impact Partners to provide relationship-based community support and programming for residents including tutoring services, virtual doctors appointments and financial literacy guidance. These services include health, education and economic advancement activity to help build equity and improve outcomes for residents.

Nuveen Natural Capital has similarly developed a soil capital trial that aims to advance both regenerative practices and asset performance. In Stołęż in northeast Poland, we launched a trial project to design a Measurement, Reporting and Verification (MRV) system for soil health and soil organic carbon with two new tenants who joined the project in 2022. The tenants demonstrated a strong commitment to implementing Soil Capital’s recommendations, including establishment of cover crops, executing crop rotation and practicing strip tillage. Additionally, they plan to convert the farm to organic production while integrating livestock into the farming system. Nuveen helped tenants employ a smartphone app that simplifies the process of collecting data on factors such as worm count, infiltration rates and soil structure which will support Nuveen’s transparency on results from the trial as well as identify opportunities to further expand soil projects.



# Case studies

The examples below articulate why Nuveen focused its influence on the particular topic and how the influence contributed to a positive outcome within the investment process. Where relevant, we have noted the impact, actual or projected, that the outcome may have from a real-world stakeholder perspective.

 Transparency ▶

 Accountability ▶

 Impact ▶





## CASE STUDY: CLIMATE CHANGE — TRANSPARENCY

# Caterpillar Inc.

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### MATERIALITY

Innovation and technological enhancements are key elements of climate solutions for companies in carbon intensive sectors such as industrials. Caterpillar is a leading manufacturer of large-scale industrial machinery that has a significant market-share opportunity to meet customer demand for lower emissions products, including the market-share from its U.S. government contracts. The U.S. government has adopted requirements that Federal contractors publicly disclose their greenhouse gas emissions and climate-related financial risks and set science-based emissions reduction targets.

### ENGAGEMENT SUMMARY

Nuveen has regularly engaged Caterpillar in relation to its climate change risks and opportunities and identified Caterpillar as one of its material investments with climate change exposure through the Climate Risk 2.0 initiative.

Nuveen has engaged Caterpillar for many years and has been pleased with its many climate-related improvements. Caterpillar has long disclosed greenhouse gas emissions related to its operations and energy use, and it has exceeded its 30% reduction target for these emissions seven years ahead of schedule. However, Nuveen recognizes that Caterpillar's largest source of emissions, and consequently its largest opportunity for impact and differentiation, stems from the use of its products.

### OUTCOME SUMMARY

Following productive engagement between Nuveen and Caterpillar's executive management and board, Caterpillar disclosed its downstream emissions from product use for the first time in 2023. Caterpillar's disclosure provided a lookback to 2018 and demonstrated how its product electrification and efficiency efforts have driven down emissions intensity over time.



## CASE STUDY: CUSTOMERS — ACCOUNTABILITY

# The Kroger Company

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### MATERIALITY

Food deserts are an unrealized materiality in many minority communities where there is a lack of fresh food options and an abundance of traditional convenience stores. Studies show that U.S. counties with above-average Black populations are 25% less likely to have local access to grocery stores but 20% more likely to have local access to convenience stores.

### ENGAGEMENT SUMMARY

Nuveen first engaged Kroger on the issue of food deserts as part of the Nuveen Racial Equity initiative in 2021.

Since the initial engagement, Kroger has tried to address health outcomes for its customers in a holistic fashion, including not only education and nudge strategies for customers to purchase more healthy products but also by bringing health clinic services and supporting local wellness centers in communities where it operates.

Kroger discussed its acceptance of SNAP payments on its e-commerce platform and its monitoring of the e-commerce program and food delivery service to identify opportunities to reach underserved populations. Similarly, Kroger tracks purchasing data through its loyalty card program to identify its stores where shoppers generally appear more price-sensitive and ensure those stores are stocked with a larger variety of product options such as different cuts of meat at different price points to improve customer optionality.

### OUTCOME SUMMARY

A particular strategy that Kroger developed to directly address the food desert and local access issue was to partner with Walgreens on a program where Kroger would stock Walgreens with fresh produce and dinner staple products to provide healthy food options in stores.



## CASE STUDY: DIVERSITY AND INCLUSION — IMPACT

# Recruit Holdings Co., Ltd.

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### MATERIALITY

Board members' diversity of skills and experiences are just a couple of the criteria for a well-managed board; so too are diversity of gender, race, ethnicity and age. As human capital management continues to be a trending societal topic, Japanese companies are increasingly adding female directors to their boards.

### ENGAGEMENT SUMMARY

Nuveen first began to engage Recruit Holdings Co., Ltd. five years ago in relation to the 2018 Women on Boards Initiative that targeted our largest Japanese holdings with no female directors. The company had a successful outcome during the initiative by adding a female director in 2020. The company continued its board diversity improvement by adding a second female director in 2022.

In ongoing engagements with the company, the company laid out a strategy of achieving gender parity on the board of directors by 2030. This commitment has been further expanded beyond the boardroom to senior executives, managerial positions and total workforce.

Recruit Holdings has been very vocal from the top down on how promoting Diversity, Equity and Inclusion contributes to the company's strategy. They strongly support

the concept that various perspectives enable better decision making and risk mitigation, creating products that meets diverse customer needs and fosters business growth and women in the fields of science, technology, engineering and mathematics (STEM).

### OUTCOME SUMMARY

In the past year, Recruit Holdings added their first non-Japanese female director which both increased board gender diversity to 38% as well as brought additional diversity into the boardroom which is aligned with the strategy of further developing its platform business in the U.S.





# Reporting success and targeted initiative outcomes

## Defining success

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We set clear expectations for companies and for ourselves on what we seek to achieve through engagement.

We ask companies to make certain changes or commitments and deliver meaningful progress toward them, such as producing more disclosure, setting a new target or achieving a goal. We keep track of multiple KPIs categorized under our transparency, accountability and impact framework. When the company meets a certain KPI, we consider that to be an engagement success, while recognizing that our efforts are one of many contributing factors. An engagement success translates into an outcome once the company publicly discloses a certain action.

The tables below summarize these engagement successes and outcomes. We achieved concrete outcomes in slightly more than half of the total engagements conducted during the year, with success rates varying among the different categories and targeted initiatives. This reflects both the rigor of our assessment process and the fact that not all engagements deliver immediate results. Implementing change and achieving real-world impacts are complex endeavors which take time and perseverance. This is why our engagement initiatives are multi-year activities.



# Engagement outcomes by category

The table below provides a summary of our engagement outcomes by category in the context of our “Transparency, Accountability, and Impact” framework.



	Transparency	Accountability	Impact
<b>Environmental</b>	<b>67</b>	<b>69</b>	<b>0</b>
Climate Change	64	67	0
Natural Resources	3	2	0
<b>Social</b>	<b>56</b>	<b>49</b>	<b>8</b>
Diversity and Inclusion	25	26	8
Communities	10	9	0
Product Responsibility	0	0	0
Talent Management	5	2	0
Customers	16	12	0
Employee Health and Safety	0	0	0
<b>Governance</b>	<b>23</b>	<b>21</b>	<b>1</b>
Shareholder Rights	0	2	1
Business Ethics, Transparency and Accountability	17	9	0
Board Structure & Operation	0	1	0
Executive Compensation	4	7	0
Board Quality	2	2	0
<b>Total</b>	<b>146</b>	<b>139</b>	<b>9</b>



# Targeted initiatives successes and outcomes

Implementing change and achieving real-world impacts are complex endeavors which take time and perseverance. This is why our engagement initiatives are multi-year activities. Below is a summary of our targeted initiative outcomes and successes since 2020 in the context of our “Transparency, Accountability, and Impact” framework.



	Inception	Number of companies	Description	Transparency	Accountability	Impact	Success rate
<b>Nature Risk</b>	2023	50	Nature and ecosystem services are a material dependency across the economy as well as a critical solution for managing human-induced carbon emissions. This initiative focuses on developing standards for companies to scope, locate, evaluate, assess, and prepare to respond to nature-related risks and opportunities.	—	—	—	Newly launched
<b>Climate Risk 2.0</b>	2022	100	We are raising expectations for companies with significant climate-related financial risk and that comprise the majority of our own portfolio carbon emissions. In addition to indicators set for Climate Risk 1.0, we expect more information, action and verification surrounding company risk management, incentive structures and business strategies related to a low carbon transition. The ultimate long-term objective is to see real decarbonization across this universe (impact).	10	41	—	51%
<b>Racial Equity</b>	2021	98	This initiative is focused on customers and communities. Using a sub-theme approach that spans E, S and G issues, we are asking companies across a range of industries to critically assess, report on and create accountability for the racial equity issues that most directly relate to their businesses.	18	54	—	73%
<b>Climate Risk 1.0</b>	2020	139	We have asked companies to produce reporting that aligns with the Task Force on Climate-related Financial Disclosures (TCFD), the industry recognized standard, and to strengthen board and management oversight and accountability for climate risk. In addition, we are encouraging them to adopt science-based reduction targets that align with the Paris Agreement.	21	105	—	92%
<b>Inclusive Talent Management</b>	2020	75	Related specifically to employees, we asked companies to think critically about how they assess D&I and to produce customized, actionable human capital reporting. We expect them to generate metrics tailored to their own operations, so that they can uncover gaps and opportunities for improvement, identify “root causes” of D&I challenges, drive diverse talent pipelines and address pay equity issues.	26	48	—	99%



# A review of the real-world impacts of Nuveen's engagement activity

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As Nuveen transitions its thematic engagement on climate risk from Climate Risk 1.0 to Climate Risk 2.0, below is a summary of the real-world impacts as well as learnings that we will absorb into our program for moving companies past climate disclosure to development of strategies and solutions that will support the achievement of those targets.

Climate Risk 1.0 generally represented Nuveen's intention to capture the broadest scope of companies who may be exposed to climate risk but had not formally addressed the issue in terms of ESG transparency or oversight. Across physical, transition and regulatory risks, an estimated 68 of 77 industries have material exposure to climate risk and account for nearly 90% of total market capitalization.

While company-specific exposure to climate risk or the company's ability to influence its climate exposure varied, the influence of having companies acknowledge climate risk as material and begin the journey of assessing and overseeing climate is correlated with real-world decarbonization over the 3-year period during which Nuveen actively monitored and engaged companies. Overall, the target companies of the Climate Risk 1.0 initiative had an average cumulative decarbonization rate of 9.2% relative to the MSCI ACWI benchmark average of 3.3% during the active years of the Climate Risk 1.0 engagement initiative. Prior to the initiative, the target companies overall were not decarbonizing at the market-average rate and were not immediately able to pivot in terms of performance; however, over time the CR 1.0 target companies on average did reduce emissions intensity at a rate greater than the market average represented by the MSCI ACWI benchmark.

Similarly, the CR 1.0 leading companies were not decarbonizing at the same rate as the MSCI ESG focused companies but over the long-term did have a higher proportion of emissions intensity improvement even when compared to an ESG-focused benchmark. In this regard, a stewardship focus on climate risk sends a signal to the target company that correlates to above-market improvement in carbon efficiency.

When assessing the Climate Risk 1.0 initiative holistically, there are key takeaways that have informed our ongoing stewardship approach to climate risk, including the development of the Climate Risk 2.0 initiative:

- **Financial materiality exists at the company-level.** The process for selecting target companies for the Climate Risk 1.0 initiative looked at material holdings at the Nuveen enterprise-level where the company lacked standard climate reporting. While the selection process accounted for materiality at both the company- and thematic-level, the Climate Risk 1.0 universe had a bimodal distribution of laggard companies ignoring climate risks and leading companies who had already substantially mitigated climate risks but perhaps due to limited risk were behind the market norms on disclosure transparency. To focus efforts on the most material risks in the enterprise portfolio, Climate Risk 2.0 followed the PCAF standard of assessing portfolio climate risk (using GHG Emissions Protocol) to calculate attribution factors that account for the relative ownership of the company's total carbon footprint.

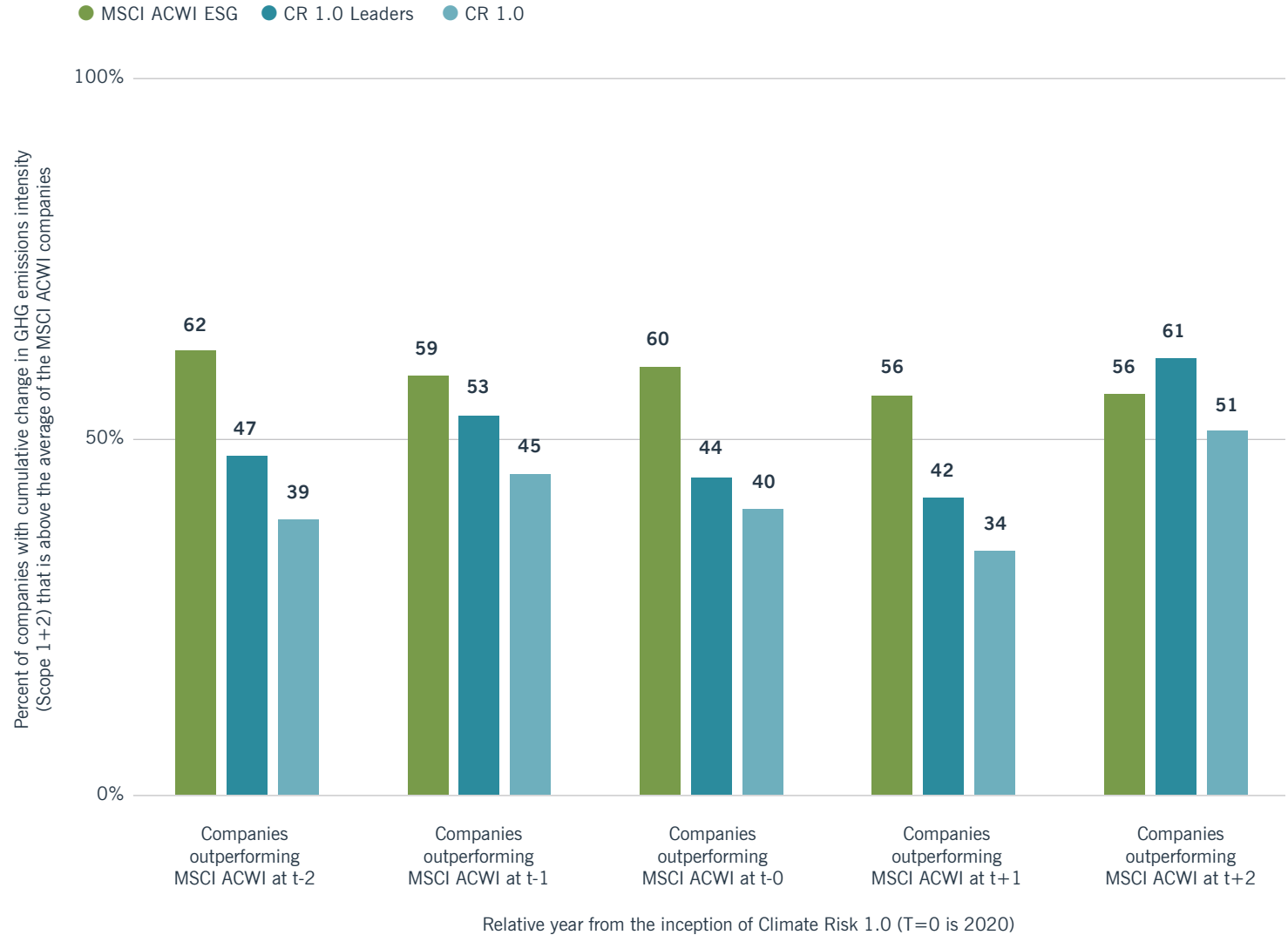


- Opportunities for improvement exist for most companies.** The decarbonization at Climate Risk 1.0 target companies since inception shows continued year-over-year improvement. The significant improvement in the first year after the inception suggests that companies can make quick progress once they develop an oversight structure and strategy for addressing climate risk. In terms of real-world impact, many of these initial improvements are limited. However, giving companies credit for initial decarbonization shows a proof-of-concept as companies begin to develop strategies around more impactful means of mitigating carbon emissions. Climate Risk 2.0 has sought to establish industry-specific strategies for companies to demonstrate the proof-of-concept approach to beginning the process of aligning the business toward the long-term climate transition pathway.

- Emissions intensity is a benchmarking tool but an imperfect indicator of climate transition resilience.** Of the 11 oil and gas companies that were a target of Climate Risk 1.0, 10 achieved a leader status in terms of addressing climate risk transparency and the industry overall showed the highest rate of emissions intensity reduction at nearly two-times the overall average (17.6% versus 9.2%). Nonetheless, those 11 companies account for 80% of the total initiative carbon footprint inclusive of Scope 3 emissions. Climate Risk 2.0 incorporates Scope 3 emissions into the assessment to better capture the macroeconomic, regulatory and market forces that are associated with the climate transition as well as the real-world impacts that stem from carbon emissions.

In addition, Climate Risk 2.0 and Nuveen’s financed emissions are more a matter of enterprise risk mitigation around the climate transition than a benchmarking tool to help inform a particular investment decision comparing efficiencies of Company A vs. Company B.

### PERCENT OF COMPANIES WITH CUMULATIVE GHG EMISSIONS INTENSITY REDUCTION OUTPERFORMING THE EMISSIONS INTENSITY REDUCTION OF THE MSCI ACWI AVERAGE



Source: MSCI ESG Manager, 1/1/2017–12/31/2022. Calculated value from Stewardship Report CR 1.0 data analysis.





While the analysis is merely a correlation and does not necessarily identify a particular stewardship outcome or company-adopted strategy that creates impact, it suggests there is a positive and short-term return on the approach Nuveen takes to climate stewardship notwithstanding the ongoing efforts to develop the stewardship strategy that can effectively move companies from transparency and accountability toward impact.

A takeaway for Nuveen that has influenced the Climate Risk 2.0 stewardship strategy is the recognition that Scope 3 emissions cannot be ignored, but that the approach to Scope 3 emissions must account for both materiality and feasibility as it relates to measuring, managing and mitigating a company's carbon footprint. In this regard, Nuveen balances its expectations on Scope 3 emissions on a company-specific basis considering both the sources of Scope 3 emissions and the company's ability to influence its value chain with regard to those sources. In addition, Nuveen has developed a set of industry-specific strategy indicators that supplement the value chain assessment in order to identify companies most influential in leading value chain decarbonization efforts and/or likely to remain the most resilient in scenarios of climate overshoot.

*Some examples include:*

## Fossil fuel sector

In the fossil fuel sector, strategies focus on management of methane emissions via equipment updates and advanced monitoring technology, as well as emerging opportunities from low-carbon fuels, enhanced geothermal energy, and other energy solutions that leverage the particular expertise of the company for long-term opportunities to pivot human and capex resources into low-carbon solutions.



## Utilities sector

In the utilities sector, strategies have focused on new tax credits, financing options and grid modernization technologies that can simultaneously advance reliability, affordability and sustainability.



## Industrials, machinery and autos sectors

In the industrials, machinery and autos sectors, strategies have included topics like product efficiency and electrification, as well as engagement with materials suppliers in order to support the decarbonization of hard-to-abate sectors.



Overall, one year into the Climate Risk 2.0 program and tracking company progress, there have been significant improvements underneath the headline outcomes of setting or achieving net-zero. While five companies adopted net-zero targets, only one of the five net-zero targets includes Scope 3 emissions. On the other hand, there were ten companies that added near-term targets and eight of those targets added or improved upon the inclusion of Scope 3 emissions into near-term target goals. The table highlights some of the areas where Climate Risk 2.0 has captured improvements over the past year.

	Number of improvements	Details
<b>Transparency</b>		
<b>Climate Risk Disclosure</b>	17	6 improved disclosure of physical & transition risk; 11 added or improved scenario analysis
<b>GHG Emissions Disclosure</b>	14	2 had Scope 1+2 emissions verified; 12 added or improved Scope 3 disclosure
<b>Policy Disclosure</b>	7	3 improved disclosure of direct lobbying activity; 4 added or improved disclosure of indirect lobbying activity
<b>Accountability</b>		
<b>Risk Management</b>	8	8 added or materially improved their process of scenario analysis, particularly as it relates to disclosing quantitative impacts and related strategy decisions
<b>Governance</b>	30	3 formalized board oversight of climate risks; 11 added directors with significant knowledge of climate or decarbonization topics; 16 added or enhanced climate metrics in executive compensation
<b>Target Setting</b>	27	<p><b>Scope 1+2:</b> 2 companies added near-term targets; 3 added long-term targets; 4 added net-zero targets</p> <p><b>Scope 3:</b> 8 added or improved near-term targets; 2 added or improved long-term targets; 1 added a net-zero target</p> <p><b>SBTi:</b> 3 received validation for near-term targets; 4 received validation for long-term targets</p>





## Introduction of new biodiversity stewardship initiative

Economic activity has a direct, and often unpriced, effect on global biodiversity. The ability to reverse biodiversity loss is timely, costly and likely not fully reversible. It is estimated that \$58 trillion of economic value (just over half of global GDP) is moderately or highly dependent on nature and its related services, and that half of the market value of listed companies on 19 major stock exchanges is exposed to material nature-related risks.

Source: <https://www.pwc.com/gx/en/issues/esg/nature-and-biodiversity/managing-nature-risks-from-understanding-to-action.html>



# “Our economies, livelihoods and well-being all depend on our most precious asset: Nature.”

This was the headline message in a recent review on the economics of biodiversity.\*

As this is a nascent field of study for both academics and practitioners, the economics of biodiversity are not well understood, and biodiversity is likely not accurately priced in the market currently.

Meanwhile, economic activity has a direct, and often unpriced, effect on global biodiversity. The same human activities that are so dependent on biodiversity are also contributing to an acceleration in the rate of species extinction and nature degradation that are unprecedented in human history. In other words, humanity is eroding the very foundations of its economies, livelihoods, food security, health and quality of life worldwide. Reversing biodiversity loss requires timely and costly action, while restoration is not always possible and damage is likely not fully reversible.

\*Source: Final Report - The Economics of Biodiversity: *The Dasgupta Review*, August 2021

There is a disconnect between financial exposure, nature dependencies and stakeholder impacts. For example, palm oil is a key driver of deforestation, but listed companies directly engaged in its production account for a small fraction of most institutional investments, due to factors such as value chain complexities and private ownership. For Nuveen, palm oil production accounts for nearly half of all deforestation in the enterprise portfolio of publicly-listed equities, but direct production represents less than 0.1% of enterprise assets under management.

Therefore, a biodiversity stewardship strategy inherently requires a multi-dimensional approach. This approach requires investors to map value chains, consider market forces that may influence competitive dynamics and assess the various risks and impacts such as supply disruptions, shifts in demand and consumer preferences, and regulatory and reputational impacts.

Environmental risk and impacts can affect corporate valuations in both equity and fixed income holdings, sovereign debt in relation to country-level economic activity, as well as commodity prices and other real assets values based on several factors. Unlike for the climate transition where, at the simplest level, carbon emissions can be quantified using a single metric and integrated into various risk models, exposure to nature-related risk is often more nuanced due to commodity- and region-specificities and involves an interconnection between land and sea use change, direct exploitation of resources, pollution of natural resources, natural resource change caused by invasive species, and artificial resource change caused by climate change. Its effects, therefore, are more idiosyncratic at the investment level but also more systemic in terms of the ripple effects, making it more challenging to factor into investment frameworks.

Given the interconnected nature of biodiversity, Nuveen’s nature risk initiative intentionally takes a market cross-section, emphasizing the sectors with the largest negative impacts on nature and the highest potential impact to the value of assets under management.

The cross-sectional approach will hopefully help establish reasonable market-wide expectations for transparency and will also encourage a variety of strategies for nature-related dependencies, impacts, risks and opportunities. In line with Nuveen’s pragmatic stewardship approach focused on materiality and feasibility, the intent of this early-stage initiative is to support companies in strengthening their nature-related strategies, learn about gaps and best practices, and explore ways to further integrate nature-related themes into the investment process through considerations such as:



**Physical risk**, such as continued viability of farmland, timberland, waterways, etc., as a result of continued usage and accumulated contamination.



**Regulatory risk**, such as limitations of use of natural resources, import bans or border adjustment mechanisms, imposed internalization or remediation costs, or other policies that may affect companies’ value chains.



**Technology/innovation solutions**, such as the development of alternative processes to mitigate natural capital usage or protection of biodiversity through sustainable management or treatment to keep local natural resources sustainable.



**Market solutions**, such as the change in customer preferences for more sustainable product consumption and/or alternative products.



In recent years, there have been some significant developments that contributed to increasing awareness on the relevance of nature-related risks for businesses and investors. The ratification of the Global Biodiversity Framework at COP15 in 2022 was a landmark global agreement to guide global action on nature protection through to 2030. The release of the beta version of the Taskforce on Nature-Related Financial Disclosures (TNFD) in 2023 provided a common framework for analyzing and disclosing nature-related risk, alongside the reporting requirements under the European Union’s Corporate Sustainability Reporting Directive (entered into force in 2023) and the Corporate Sustainability Due Diligence Directive (being discussed). In this regard, Nuveen’s initial biodiversity stewardship initiative is focused on promoting transparency and consistency in nature-related disclosure by advocating that companies adopt TNFD reporting with an emphasis on the LEAP framework. Additionally, Nuveen is suggesting that companies disclose material land or water use metrics as well as waste or remediation metrics in current ESG reporting to assist investors in scoping related risks.

To establish an appropriate set of target companies, Nuveen followed a three-step process of quantification of the impact’s nature, portfolio attribution analysis, and prioritization of key themes. First, Nuveen assessed economic activities with the highest impact on land use, water use and pollutants to quantify a company’s revenue-generating activities that are reliant on nature impacts. Second, we followed ESG accounting norms to assign an attribution factor based on the proportional nature impact of our investment in the companies. Finally, Nuveen selected the companies with the 50 largest nature impact attribution across 16 different industries aligned with the three focus themes of use of natural resources, land and water use for agriculture and food, and waste and pollution generated through consumer products. Nuveen also accounted for sector- and industry-distribution across the target list and excluded companies where Nuveen’s current engagement on the climate transition has already evolved to address nature risk. The themes selected address nearly two-thirds of the direct drivers of nature loss and the target companies represent nearly one-quarter of the calculated direct impacts to nature attributed to the enterprise holdings across corporate equity and fixed income investments. This represents a concentrated set of companies with the most significant nature-related impacts and the highest portfolio relevance. The focus is on the intersection of material business risks and impacts to the natural environment, consistent with our stewardship approach of seeking to achieve real-world impacts that have investment relevance.

The tables on the right provides a breakdown by sector and region of the companies in this targeted initiative. Over the coming months and years, we will engage with these companies on a set of expectations and track related KPIs. As we learn more about challenges and solutions, and as market activity develops on the topic, we will refine and reiterate our activities as suitable.

Overall, the company breakdown includes the following sectors and regions:

Theme	APAC	EU	North America	Latin America	Grand total
<b>Use of natural resources</b>	2	3	15	2	<b>22</b>
<b>Land and water use</b>	—	5	14	1	<b>20</b>
<b>Waste and pollution</b>	1	1	6	—	<b>8</b>
<b>Grand total</b>	<b>3</b>	<b>9</b>	<b>35</b>	<b>3</b>	<b>50</b>

Theme	Consumer discretionary	Consumer staples	Health care	Industrials	Materials	Grand total
<b>Use of natural resources</b>	—	—	—	2	20	<b>22</b>
<b>Land and water use</b>	4	16	—	—	—	<b>20</b>
<b>Waste and pollution</b>	2	4	2	—	—	<b>8</b>
<b>Grand total</b>	<b>6</b>	<b>20</b>	<b>2</b>	<b>2</b>	<b>20</b>	<b>50</b>

Source: Nuveen, FactSet and MSCI. Company target universe determined using Nuveen AUM and company EVIC data as of 30 Sep 2023. Utilizes MSCI estimations for the percent of business activities that are involved in high- or medium-risk activities with impacts on land, water and waste generation. Target universe determined from all Nuveen public holdings excluding companies where Nuveen is solely a debt holder; there is no publicly traded corporate parent entity; and where company revenues are zero or negative.





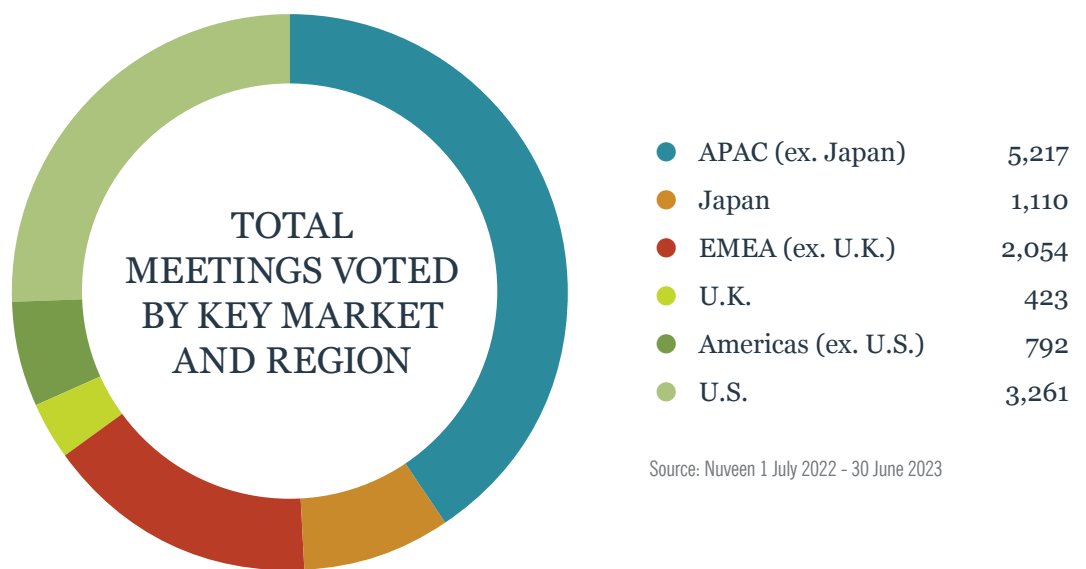
# How we voted



# Scope

TOTAL PROPOSALS VOTED **129,446** TOTAL EXEC. COMP. VOTES **15,676**

TOTAL MEETINGS VOTED **12,847** TOTAL DIRECTOR VOTES **53,752**



Source: Nuveen 1 July 2022 - 30 June 2023

“Proxy voting is a point-in-time reflection of our views on whether the company is taking the appropriate steps to develop a strategy and oversight structure that will support long-term value creation. We use voting as a means to hold companies accountable for developing and executing a strategy that aligns to long-term value creation, but we do not assume that past performance — positive or negative — will always be indicative of future results. Our case-by-case approach to voting takes into account progress made by a company as well as the strategy for identifying and addressing risks and opportunities that may be around the corner.”



**Peter Reali**  
Global Head of Stewardship,  
Responsible Investing

## SUMMARY

In general, we believe all our investments presume implicitly that the boards of directors and company management operate in an ethical, transparent and accountable manner with the intent to preserve long-term value. Therefore, it is a default position to defer to the board and management’s decisions on the specific strategy or most practical means to address a particular stakeholder risk or opportunity. This is most evident in the fact that we support most director elections on an annual basis.

However, in situations where the board and management lack transparency or accountability, or otherwise appear to operate the business in a manner that is disconnected from material stakeholder risks and opportunities, then we may exercise voting rights against management. Voting against management (VAM) may be limited to support for a shareholder resolution requesting additional transparency, accountability, or impact on a material stakeholder theme. It also may include escalation in the form of votes against management proposals, including the election of director(s) responsible for oversight of stakeholder issues, when there is insufficient progress on the company’s ESG commitments.



# Holding companies accountable

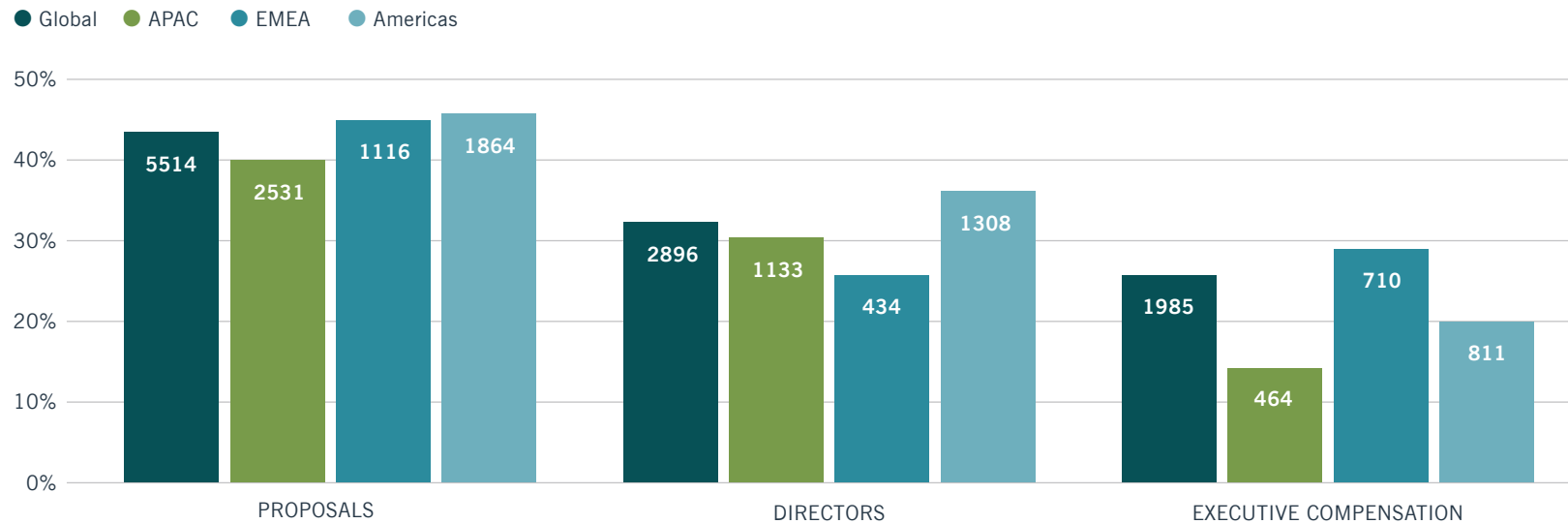
## COMPANY STRATEGY AND OVERSIGHT

Boards are responsible for setting the ethical tone and culture for the company, assuring the corporation’s financial integrity, developing compensation and succession planning policies and ensuring management accountability. We do not expect the board to micromanage the operations of the business, but we do expect the board to be proactive in identifying and addressing forward-looking risks and opportunities that will affect the long-term value of the business. We believe it is necessary for the board to ensure there is transparency into operations for investors to assess the risks and opportunities. In addition, we believe the board should ensure that the company has a clearly articulated strategy and can substantiate its plans to manage the risks and opportunities for long-term performance.

## BUSINESS EXECUTION

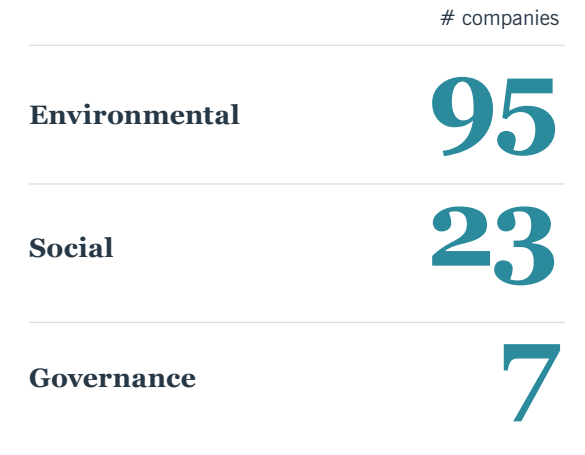
While it is the role of the board to ensure that investors and stakeholders understand the strategy for addressing risks and opportunities, it is management’s function to execute the business strategy in a manner that mitigates risks and capitalizes on opportunities. Management accountability is generally viewed through the lens of compensation and aligning pay with performance. We believe a pay-for-performance philosophy must include both creating the right incentives for management to focus on the long-term value opportunities as well as create accountability for the way in which the business operates to achieve those goals. In many cases, such as a net-zero 2050 economy, the current directors and management teams will not be in their respective positions to be affected by the realization of the risk or opportunity. As such, some level of exogenous pressure to develop the business beyond the term of the current leadership is necessary. A short-term focus or a short-term strategy to align with long-term financial targets will not be sustainable.

### % AND # MEETINGS WITH AT LEAST ONE VOTE AGAINST MANAGEMENT



Source: Nuveen, 1 July 2022 - 30 June 2023

### ESCALATION THEME





# Our voting policy and results

## RATIONALES FOR VOTING AGAINST DIRECTORS

Our proxy voting guidelines offer the high-level themes that we believe are necessary for a well-functioning and forward-looking board of directors. Our votes against directors generally identify misalignment with governance best practices that in our view are aligned with long term performance and no company-specific extenuating circumstances to justify a case-by-case vote with management. These best practices include:

- Board quality such as skills and qualifications, independence, refreshment and diversity
- Board structure and operations such as board leadership, appropriate committees to focus on material issues or ensure management accountability and the evaluation process that informs internal views on board quality
- Business ethics, transparency and accountability that generally addresses the outcomes of the board's actions in relation to strategy and holding management accountable for execution of the business

Boards must also recognize that past performance is not indicative of future results. In fact, one of the benefits of board refreshment is a process that will bring new perspectives into the boardroom to both validate the current strategy and oversight and, where appropriate, identify proactively what will be material for success looking 5 and 10 years into the future.

## ESCALATION OF E&S ISSUES TO DIRECTOR ELECTIONS

Our escalation to votes against directors for ESG issues is built on a lack of strategy or oversight on a material risk for the company.

Our votes against directors are tied to the directors on the committee that are most responsible for strategy and oversight of that particular area. Given our analysis that suggests correlation between director refreshment and ESG performance improvement, our vote is meant to signal that the committee should reevaluate its current approach and bring new ideas and/or persons into the strategy and oversight review. Our expectation is to see a tangible change in strategy and oversight more so than an explicit change in the board or its committees.

In this regard, our director escalations related to environmental issues are based in our analysis of a company's strategy and oversight of climate risk where climate risk is a material issue for the company based on company industry, size and/or the carbon intensity of its operations relative to industry peers. We believe each of the factors justifies oversight at the board level and some level of transparency for the measurement, management and reasonable mitigation strategies associated with climate risk. Our 95 votes against directors range across industries and geographies.

Sector	Americas	APAC	EMEA	Sector total
<b>Communication Services</b>	1	2		<b>3</b>
<b>Consumer Discretionary</b>	8	1	1	<b>10</b>
<b>Consumer Staples</b>	1			<b>1</b>
<b>Energy</b>	16			<b>16</b>
<b>Financials</b>	7			<b>7</b>
<b>Health Care</b>	3	1		<b>4</b>
<b>Industrials</b>	17	4	10	<b>31</b>
<b>Information Technology</b>	1			<b>1</b>
<b>Materials</b>	11		2	<b>13</b>
<b>Utilities</b>	7		2	<b>9</b>

Source: Nuveen, 1 July 2022 - 30 June 2023



Our director escalations related to social issues are based on companies that have not demonstrated a baseline level of transparency regarding oversight of human capital management at the non-management levels of the organization. In particular, we focus on disclosure of basic employee demographic information that is already required to be produced, even if not publicly disclosed, by regulatory bodies that have jurisdiction over a company.

Our director escalations related to governance issues are minimal since many governance expectations are already integrated into the standards that are explicitly outlined in the proxy voting policies. However, we believe that there are instances where a board has been non-responsive to shareholders in a manner that suggests there is a material governance failure at the board level. Given the generally successful and collaborative nature of our engagements with boards, we do not expect to meaningfully increase escalations in the governance area. We will do so where the non-responsiveness extends beyond a strategic activity by the board to act contrary to the opinions expressed by shareholders through engagement or vote outcomes.

<b>Rationale for Votes Against Management (VAM)</b> (# of proposals*)	Global (incl. U.S.)	YoY change %	U.S.	YoY change %
<b>Board Quality</b>	2474	-12%	640	-14%
<b>Board Diversity</b>	1446	-25%	985	-27%
<b>Board Structure and Operation</b>	1302	-3%	780	-12%
<b>Business Ethics, Transparency, and Accountability</b>	879	-22%	635	-13%
<b>Escalation of ESG Risks</b>	170	83%	128	146%

\* % may not add to 100 as a vote against a particular director may be based on multiple factors.  
Source: Nuveen, 1 July 2022 - 30 June 2023

<b>Initiative</b>	Total votes	# of vote escalations	% Escalated based on stewardship targeting	% VAM (total)
<b>Climate Risk 1.0</b>	138	25	44%	47%
<b>Climate Risk 2.0</b>	100	15	83%	25%
<b>Inclusive Talent Management</b>	74	9	70%	20%
<b>Racial Equity</b>	96	—	—	17%

Source: Nuveen, 1 July 2022 - 30 June 2023



## MCKINSEY STUDY — 2023

While investment decision-making regarding the risks and opportunities related to talent management require a more in-depth review than basic demographic disclosure, our initial escalation strategy in 2023 used a cost-benefit analysis where the costs of reporting were minimal, since reporting already exists. We are likely to enhance our expectations on talent management transparency and accountability in future years as industry and market standards for reporting continue to improve or regulatory bodies begin to mandate additional disclosures be available publicly.

As evidence, through our inclusive talent management initiative and review of company progress over the three-year period, 99% of companies made improvements to DE&I reporting. As of the initiative's inception, approximately two out of three companies (64%) were assessed as below our baseline level of DE&I transparency and there were no companies that we assessed as having market-leading disclosure that would support our ability to assess and integrate DE&I into the investment process. As of the last assessment for our inclusive talent management initiative, only four companies (5%) remain below the pre-initiative standards and 22 companies (30%) have met best-in-class standards.



Source: Performance through people: Transforming human capital into competitive advantage, February 2023.



# Shareholder proposal voting

## EXPLANATION OF SHAREHOLDER PROPOSAL VOTES

Our voting on shareholder proposals requires that a proposal meets the foundational criteria of materiality, investor relevance, is appropriate for company responsiveness and is intended to improve company operations, products or services. If the foundational criteria are satisfied, then a case-by-case review looks at the extent to which the company has substantially implemented the proposal's explicit request or whether the company has reporting, strategy or explicit performance that substantially addresses the stakeholder issue that is the focus of the proposal.

In terms of substantial implementation, it is a point-in-time assessment of the company's strategy against the identified or projected risks and opportunities. The company's strategy may prove to be more or less successful than anticipated and the timing and severity of risks and opportunities may require a recalibration in the future. In order to provide companies with additional guidance into our views (either on the current implementation, unaddressed or potential future circumstances that may require recalibration, or to make clear that progress to date is sufficient but achievement of goals or targets beyond current performance is necessary) we have chosen to send post-vote follow-up letters on many of our key shareholder proposal votes from the 2023 proxy season.

These letters align with our overall stewardship strategy of collaborating with companies to make meaningful and practical progress toward the achievement of little "i" impact by keeping our voting record aligned with our investment conviction on the current state of risks and opportunities.

### Nuveen Shareholder Proposal Categories (Only shareholder proposals at U.S. companies)

	Number of proposals	% of proposals supported in reporting year	YoY change in absolute number of proposals supported
<b>Environmental</b>			<b>(+12)</b>
Climate Change	80	53%	+14
Natural Resources	16	31%	-2
<b>Social</b>			<b>(-11)</b>
Diversity and Inclusion	42	57%	-7
Talent Management	26	23%	+2
Product Responsibility	25	20%	-3
Customers	24	38%	+3
Communities	19	11%	-6
Employee Health and Safety	4	25%	0
<b>Governance</b>			<b>(-37)</b>
Business ethics, transparency and accountability	140	19%	-9
Shareholder Rights	95	25%	-16
Board Structure & Operation	86	12%	-8
Executive Compensation	64	9%	-2
Board Quality	11	9%	0
Miscellaneous Issue	1	0%	-2
<b>Grand Total</b>	<b>633</b>	<b>25%</b>	<b>-36</b>

Source: Nuveen, 1 July 2022 - 30 June 2023



Follow-up proxy letters to further address risks/opportunities notwithstanding current implementation:

Nuveen Shareholder Proposal Categories	Too narrowly defined/ personal interest	Lacks direct relevance or does not align to long-term value	Not appropriate means	False/misleading intent	Substantially implemented	% of votes that were based on our conclusion of "substantial implementation"
<b>Environmental</b>						<b>Environmental</b>
<b>Climate Change</b>	—	11	8	—	18	78%
<b>Natural Resources</b>	1	1	—	—	8	63%
<b>Social</b>						<b>Social</b>
<b>Communities</b>	1	3	1	—	13	8%
<b>Diversity and Inclusion</b>	1	—	1	1	15	27%
<b>Customers</b>	2	2	3	—	8	25%
<b>Product Responsibility</b>	—	4	1	—	15	7%
<b>Talent Management</b>	4	2	5	—	9	11%
<b>Employee Health and Safety</b>	—	—	—	—	3	0%
<b>Grand Total</b>						<b>32%</b>

Source: Nuveen, 1 July 2022 - 30 June 2023



## For more information, please visit us at [nuveen.com](https://www.nuveen.com)

Votes included from reporting period July 1, 2022 – June 30, 2023. This report reflects proxy voting for the College Retirement Equities Fund (“CREF”), TIAA-CREF Funds, TIAA-CREF Life Funds and TIAA Separate Account VA-1 (collectively “TIAA-CREF Fund Complex”), the General Account of Teachers Insurance and Annuity Association of America (“TIAA”), and Nuveen Asset Management (NAM), which comprises approximately 94% of Nuveen, LLC equity assets under management as of June 30, 2023. As a result of the One Nuveen proxy initiative, effective 10/1/2022, the TIAA-CREF Fund Complex and Nuveen Asset Management, LLC follow the same voting processes and policies.

Throughout this report, successful engagement outcomes are reported where Nuveen believes that our discussions with a particular company helped to improve or change the company’s ESG management. While we undertake thorough company-by-company research to determine outcomes and seek to only represent those that followed Nuveen engagement, it is important to note that data gaps, inconsistency and the timing of company ESG disclosure can distort the outcome chronology in ways that we may not be aware of. Further, the company’s engagements with other investors, the broader market and/or regulatory pressure may also play a role in any company decisions regarding ESG. In fact, when there is greater market and regulatory coalescence around ESG issues, successful outcomes are more likely. As such, we always encourage company engagement with a wide range of stakeholders and also actively engage policy makers and regulators on ESG best practices.

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.

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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.

### NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

Investing involves risk; loss of principal is possible.

Responsible investing incorporates Environmental Social Governance (ESG) factors that may affect exposure to issuers, sectors, industries, limiting the type and number of investment opportunities available, which could result in excluding investments that perform well. ESG integration is the consideration of financially material ESG factors in support of portfolio management for actively managed strategies. Financial materiality of ESG factors varies by asset class and investment strategy. Applicability of ESG factors may differ across investment strategies. ESG factors are among many factors considered in evaluating an investment decision, and unless otherwise stated in the relevant offering memorandum or prospectus, do not alter the investment guidelines, strategy or objectives.

Nuveen, LLC provides investment solutions through its investment specialists.

