

December 2023

Sustainable Equity: Sustainability and impact report

Putnam Sustainable
Future Fund
(PMVYX)

Putnam Sustainable
Leaders Fund
(PNOYX)

Not FDIC insured | May lose value | No bank guarantee

October 2023

Dear investors, partners, and friends,

Over the past few years, communities, companies, and the stock market have all experienced an unusual mix of shocks, recoveries, challenges, and opportunities. Throughout this period, both strengths and shortcomings have been revealed.

For our team, the investments in time, energy, and resources we've made have become assets we can lean on in all types of circumstances. For example, we've crafted analytical tools like the "Investing for a thriving world" thematic map, sector-based materiality map, and markers to identify sustainable leadership and solutions. These help us to navigate changing conditions with a clear "true north" of process and purpose. Examples of our research process are found throughout this report, including the deep-dive exploration of executive compensation in section 3.

Perhaps most important, we've benefited from the strong collaborative spirit across the entire Putnam investment team. These colleagues and resources have consistently helped us to identify opportunities and risks, complementing Putnam's formal risk management processes and our core fundamental research process.

Despite the sobering realities of the past several years, we've been heartened by the leadership, compassion, and generosity shown by so many. Corporate leaders have created new ways to support and develop their teams. New technologies have increased the effectiveness of many business processes. And innovations to advance the circular economy, improve resource use, develop biological solutions, and decarbonize operating systems and our atmosphere have accelerated.

Beyond the figures on our spreadsheets, we have continued to be encouraged by the candor, humility, courage, and humanity of our conversations with colleagues, clients, and corporate management teams. Being active managers allows us to have proximity to the companies in which we invest, with the opportunity for direct dialogue, ongoing engagement, and improved understanding.

Dynamic circumstances can remind us of what is constant. We believe that companies helping to solve the world's most pressing needs have the chance to develop successful businesses. We believe that companies with relevant, leading sustainability strategies can prove to be more resilient than others over the long term. We believe that active management has the potential to add meaningful context and value to the practice of sustainable investing. We believe that current conditions will illuminate new opportunities and solutions that contribute to thriving people, society, planet, and economy.

We deeply value your partnership and trust. We will continue to work hard and with the highest integrity on your behalf, connecting our investing with the world it is intended to serve.



Katherine Collins, CFA, MTS
Head of Sustainable Investing

“Try to love the questions themselves, like locked rooms and like books that are written in a very foreign tongue. Do not now seek the answers, which cannot be given you because you would not be able to live them. And the point is, to live everything. Live the questions now. Perhaps you will then gradually, without noticing it, live along some distant day into the answer.”

Rainer Maria Rilke, *Letters to a Young Poet*¹

Introduction

We are pleased to share our fifth annual assessment of sustainability and impact for Putnam Sustainable Leaders Fund and Putnam Sustainable Future Fund. Against the backdrop of the funds’ goal of long-term capital appreciation, we aim to generate excellent financial performance that is fueled in part by the strategic sustainability focus of the companies in which we invest. We believe these characteristics can be mutually reinforcing, and that business-relevant sustainability leadership and solutions-focused innovation often also create compelling investment opportunities.

Thoughtful fundamental research is at the heart of our investment process, and the same research-centric approach is reflected in the form and substance of this report. Our intention is for this document to provide meaningful and multidimensional views of our investment process, certain sustainability metrics for the portfolios, and the impact of certain investment themes on company fundamentals and other outcomes. At the same time, we recognize that point-in-time analysis has inherent limitations, especially in a field that is actively growing and developing.

We are intense researchers and eager to share the information and indicators in this report with you, and we are equally eager to share our questions that are still outstanding. Sustainability issues and environmental, social, and governance (ESG) data continue to evolve and develop, and the answers we have are not always complete or matched with simple empirical outputs. Therefore, we view this report as part of an ongoing dialogue with our investors and as part of our research process. For all lines of inquiry, we aim to combine thoughtful analysis with an active and iterative questioning process.

In years to come, we look forward to sharing continued progress with you, so eventually we will “live into the answers.”

Report highlights



INVESTMENT PROCESS AND ENGAGEMENT

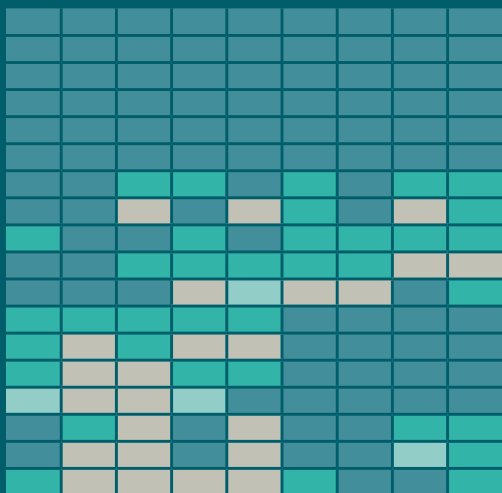
An in-depth look at our investment process, including our integrated fundamental research and our approach to engagement



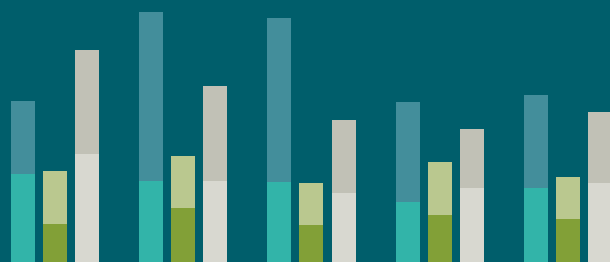
PORTFOLIO ANALYSIS AND ESG METRICS

Analysis of our portfolios according to a number of ESG-related metrics

MATERIALITY MAP



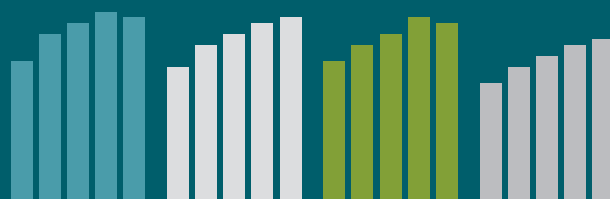
CARBON INTENSITY



SUSTAINABLE INVESTING LANDSCAPE MAP



WOMEN AT LEAST 30% OF BOARD



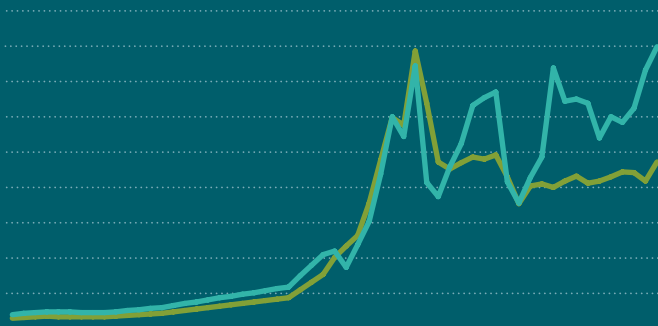


INVESTMENT THEMES AND IMPACT ASSESSMENT

A description of our investment themes and related company examples, and how this research translates to a more complete investment understanding

This year, we comment on management incentive compensation trends and their value to fundamental research.

CEO PAY COMPARED WITH TYPICAL WORKERS



A DIVERSE SET OF COMPANIES INCORPORATES ESG IN COMPENSATION



A note on metrics and measurements

The field of sustainable investing continues to develop at a rapid pace. This means the data and tools we have available to analyze relevant sustainability issues are also developing, and they are not yet fully standardized or complete.

For the purposes of this report, we have chosen several portfolio-level metrics that give an indication of our funds' sustainability characteristics, recognizing the range of reportable measures will continue to improve in quality, specificity, and usefulness over time. We believe the metrics reported here to be as accurate as possible, and we have provided extensive commentary on how and why we use the measures noted so readers have additional context for interpreting the information presented. In this regard, the report reflects the nature of our fundamental research, where we always aim to understand data within its relevant setting, not in isolation. It is also important to note that all investing involves risk, and favorable sustainability or ESG metrics for a portfolio do not guarantee positive investment results.

In order to provide the most straightforward sustainability analysis with the most complete underlying data, we have chosen to compare certain metrics for our portfolios with the same measures for the S&P 500 Index. Please note that the financial performance benchmark for Putnam Sustainable Leaders Fund is the S&P 500, and the benchmark for Putnam Sustainable Future Fund is the Russell Midcap Growth Index.²

Please note that this report is not meant to review the funds' investment performance, performance of our individual holdings, or the financial performance of our portfolio benchmarks. Content in this report is not intended to be comprehensive and does not reflect all relevant or recent developments. For comprehensive information on the funds, their financial characteristics, and performance, please also refer to the shareholder reports and prospectuses available at putnam.com.

SECTION 1

Investment process and engagement

Research is the foundation that supports our products and process. Here we discuss the context for sustainable investing at Putnam and for our integrated fundamental research process.

Over the past six years, our team has continued to grow and now includes:



Katherine Collins, CFA, MTS
Head of Sustainable Investing and Portfolio Manager



Stephanie Dobson
Portfolio Manager



Alexander Rickson, CFA
Portfolio Manager, Quantitative Analyst



Samuel Alpert
Fundamental Analyst



Devin Ahearn
Research Associate



Mary Catherine Landy
ESG Integration Analyst



Michel Boulos, CFA, CAIA
Senior Investment Director, Global Investment Strategies

Sustainable investing at Putnam

Putnam Investments is an active manager with \$178 billion in assets under management as of December 31, 2023, with more than 85 years of investment heritage. In May 2017, Putnam formed the Sustainable Equity team and appointed Katherine Collins, CFA, MTS, to the newly created role of Head of Sustainable Investing.

Importantly, our Sustainable Equity team is part of the core equity team, not separate from it.

We are investors first and foremost, and an integrated part of Putnam's investment group. In addition to the dedicated team members, we include the entire research department and our fellow portfolio managers as colleagues and collaborators.

The Sustainable Equity team works daily with the broader 45-person equity research and portfolio management team. Our investment process incorporates sector analysis, stock recommendations from the core research team, and insights from other portfolio managers. Activity that supports Putnam's collaborative research process includes daily morning meetings, company management meetings, investment conference attendance, and company visits. We are supported by the same risk oversight processes, trading platforms, and compliance procedures as the broader team.

Likewise, our own thematic and company-specific work is shared with the entire investment team, with a goal of benefiting the whole. We focus on research that highlights investment-relevant ESG issues and forward-looking thematic trends, as identified through our materiality map and our "Investing for a thriving world" thematic map. Our company-specific research is intended to complement and extend the fundamental work of the core research team. Activity that supports our sustainable investment team's work includes all the elements noted above, plus ongoing dialogue with issue-specific experts, early-stage companies with a sustainability focus, academic researchers, and peers who are focused on ESG analysis and sustainable investing. In addition to the supports noted above, our work is also augmented by a series of internally developed tools that help us to assess ESG data and sustainability performance in a fundamentally relevant way.

OUR SUSTAINABLE INVESTING WORK INCLUDES THREE KEY PRIORITIES

1

**Research and
ESG fluency across
all of Putnam**

2

**Development of
dedicated Sustainable
Investing products**

3

**Contributions
to the field**

Research integration

Our greatest priority is to extend Putnam’s long-standing strength in fundamental research to produce deeper insights in context-specific, forward-looking ESG, sustainability, and impact analysis.

As noted in Putnam’s ESG policy, we believe that certain environmental, social, and governance factors are relevant and material to long-term business fundamentals and, therefore, important to all investors.³ Relevant issues vary by sector, geography, asset class, and company context. Therefore, fundamental research that is tailored to different settings has potential to add meaningful value to the investment process.

Given this philosophy, our ongoing ESG and sustainability research is guided by our internally developed materiality maps, which were inspired and directly influenced by the work of the Sustainability Accounting Standards Board (SASB), now incorporated into the International Sustainability Standards Board (ISSB) and governed by the International Financial Reporting Standards (IFRS) Foundation.⁴ We believe this kind of integrated, long-term research focus has the potential to mitigate risk and to generate alpha. In addition to information from company sources; government, non-profit, and scientific organizations; industry experts; and investment research providers, we also utilize ESG data from several third-party resources, including MSCI and Sustainalytics, as inputs to our research process.

Our belief in the power of context-specific analysis is illustrated in the map below, which shows that our equity research focuses on context-relevant issues for different types of businesses. We believe this kind of tailored and forward-looking research focus can be a key contributor to long-term investment results.

Putnam equity materiality map

	Consumer	Health Care	Financials	Tech (hardware)	Comm and Tech (software)	Industrials	Materials and Energy	Utilities	Real Estate
GOVERNANCE	Board structure and composition	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Management incentives, ownership, and comp alignment	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Systemic risk management and leadership	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Corporate purpose, culture, and mission alignment	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Diversity, equity, and inclusion	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
SOCIAL	Employee well-being and development	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Product impact and customer well-being	Most relevant	Most relevant	Often relevant	Often relevant	Most relevant	Often relevant	Often relevant	Often relevant
	Supply and distribution network management	Most relevant	Most relevant	Less relevant	Most relevant	Less relevant	Often relevant	Less relevant	Often relevant
	Privacy, data security, and data use	Often relevant	Most relevant	Most relevant	Often relevant	Most relevant	Often relevant	Often relevant	Often relevant
	Marketing and selling practices	Most relevant	Most relevant	Often relevant	Often relevant	Often relevant	Often relevant	Less relevant	Less relevant
ENVIRONMENTAL	Pricing philosophy and access	Most relevant	Most relevant	Less relevant	Often relevant	Less relevant	Less relevant	Most relevant	Often relevant
	Climate change mitigation and adaptation	Often relevant	Often relevant	Often relevant	Often relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Physical climate change risk	Often relevant	Less relevant	Often relevant	Less relevant	Less relevant	Most relevant	Most relevant	Most relevant
	Greenhouse gas (GHG) emissions	Often relevant	Less relevant	Less relevant	Often relevant	Often relevant	Most relevant	Most relevant	Most relevant
	Energy intensity and renewable energy use	Often relevant	Less relevant	Less relevant	Most relevant	Most relevant	Most relevant	Most relevant	Most relevant
	Materials sourcing, intensity, and lifecycle management	Most relevant	Often relevant	Less relevant	Most relevant	Less relevant	Most relevant	Most relevant	Often relevant
	Water intensity and stress	Most relevant	Less relevant	Less relevant	Often relevant	Less relevant	Most relevant	Most relevant	Often relevant
Biodiversity and ecosystems impact	Often relevant	Less relevant	Less relevant	Less relevant	Less relevant	Often relevant	Most relevant	Often relevant	

Source: Putnam Investments, adapted from SASB Materiality Map, as of 12/31/23.

■ Most relevant ■ Often relevant ■ Less relevant

Portfolio management

Our two equity mutual funds with a dedicated sustainability focus are Putnam Sustainable Leaders Fund and Putnam Sustainable Future Fund.

Fund conversion and investment mandates

In March 2018, Putnam repositioned two existing mutual funds into Putnam Sustainable Leaders Fund and Putnam Sustainable Future Fund. Combined strategy assets are \$7.8 billion as of December 31, 2023, making Putnam one of the largest active managers of dedicated sustainable retail equity assets in the United States. Both portfolios seek long-term capital appreciation. Putnam Sustainable Leaders Fund pursues its goal by investing mainly in common stocks of U.S. companies of any size, with a focus on companies we believe exhibit leadership in financially material sustainable business practices. Putnam Sustainable Future Fund pursues its goal by investing mainly in common stocks of U.S. companies of any size, with a focus on companies whose products and services we believe provide solutions that directly contribute to sustainable social, environmental, and economic development. In both approaches, we aim to identify companies whose long-term business prospects are potentially enhanced by their excellence in sustainability. *(Note: These strategies may result in the funds investing in securities or industry sectors that underperform the market as a whole, or may underperform other funds that do not invest with a similar focus.)*

The **Sustainable Leaders** portfolio invests in companies that have demonstrated **leadership in the sustainability issues that are financially material** to their businesses. Our investment thesis is that companies that exhibit this type of commitment also often demonstrate potential for strong long-term financial performance. The stocks of these companies are often, but not always, considered to be growth stocks, and often are large cap in size.

The **Sustainable Future** portfolio invests in companies whose products and services provide **solutions to essential sustainability challenges**. Our investment thesis is that solutions-oriented companies with potential to create positive social and environmental impact also demonstrate potential for strong growth and long-term financial performance. The stocks of these companies are typically, but not always, considered to be growth stocks, and are often mid cap or small cap in size.

The investment process for both portfolios incorporates deep fundamental analysis and valuation assessment combined with the sustainability strategies noted above.

Putnam sustainable equity framework

LEADERSHIP IS:

Material

Is the sustainability leadership relevant to long-term business success?

Proactive

Does the activity go above and beyond compliance or sufficiency?

Progressing

Is reporting transparent and analyzable?
Can we chart progress over time?

Effective

Can we identify meaningful positive impact both for the company and beyond?

SOLUTIONS ARE:

Needed

Is the solution contributing to a thriving world?

Improving

Does the solution offer meaningful benefits vs. prior options?

Advancing

Are the positive impacts increasing over time?

Effective

Can we identify meaningful positive impact both for the company and beyond?

Where our portfolios fit in the sustainable investing landscape

The field of sustainable investing offers a range of different approaches and products.

- Exclusionary approaches focus on avoidance of certain companies or industries.
- Integrated approaches seek to combine ESG data and analysis with other investment considerations.
- Inclusionary approaches use ESG and sustainability analysis as a significant part of the investment process.
- Impact approaches seek explicit goals for both financial return and social or environmental benefits.

In Putnam’s case, our equity research process focuses on the value sustainability analysis can add to fundamental research (an integrated approach). Our sustainable equity portfolios extend this emphasis by using sustainability analysis at the heart of our investment process (an inclusionary approach), as described in the prior section.

Investment process

Both portfolios rely on Putnam’s well-established fundamental research strength to identify companies with attractive sustainability, fundamental, and valuation characteristics. We aim to utilize ESG data within the relevant context of each company and industry, and to incorporate more qualitative research in areas where new issues are emerging or data is not yet available or standardized. Throughout the research process, our goal is to identify companies with excellent investment potential that is linked to excellent sustainability performance, which results in portfolios with meaningful active weights by industry and sector. We do not use a priori exclusionary screens for the Sustainable Leaders or Sustainable Future portfolios; rather, we focus on what deserves to be *included* in our holdings.

Sustainable investing landscape map

	EXCLUSIONARY	INTEGRATED	INCLUSIONARY	IMPACT
Investor intention	“Avoid xyz”	“Sustainability is relevant”	“Sustainability is central”	“Impact is a primary goal”
Investment practice	Screening out	ESG consideration	ESG focus	Impact analysis
Research intensity	Lower	→		Higher
Tracking error*	Lower	→		Increased
Alpha† and impact potential	Bounded	→		Open-ended
		▲	▲	▲
		PUTNAM'S RESEARCH APPROACH	PUTNAM SUSTAINABLE LEADERS	PUTNAM SUSTAINABLE FUTURE

* Tracking error, also known as active risk, measures the difference between a portfolio’s return and that of a benchmark or index.

† Alpha is a measure of performance on a risk-adjusted basis. Alpha takes the volatility of a mutual fund and compares its risk-adjusted performance to a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund’s alpha.

Contributions to the field

We recognize the field of sustainable investing is actively growing and evolving, and each organization in this community has an opportunity to contribute to the field's advancement. There are three major ways that Putnam and our Sustainable Equity team are helping to advance the field: engaged ownership, thought leadership, and collaboration.

Engaged ownership

Ongoing dialogue

We believe active managers have a particular role to play in working with company management teams, since we are long-term investors and our fundamental research process means we are already in regular dialogue with company leadership about strategy and execution.

CEO letters

In addition to ongoing research-related conversations, we send annual, individually tailored letters to the CEOs of all companies held within Putnam Sustainable Leaders Fund and Putnam Sustainable Future Fund, acknowledging efforts to date and encouraging future progress on key sustainability issues specific to each company. Similar letters will be sent in 2023 to the CEOs of Putnam's overall top equity and corporate credit holdings, representing approximately 50% of equity assets under management.

Proxy voting

The voting process for Putnam's mutual funds is administered by our Compliance department under direction provided by our proxy committee. We collaborate closely on relevant proxy-related issues, and Stephanie Dobson joins other Portfolio Managers and the Head of Sustainability Strategy on the proxy committee.

Advocacy for improved disclosure

Our ongoing dialogues with company management teams and board members include discussions of corporate strategy, board oversight, and external reporting, and we specifically support disclosures that align with the SASB and TCFD (Task Force on Climate-Related Financial Disclosures) frameworks. A number of companies in our portfolios have published inaugural sustainability reports, increased communications on relevant ESG metrics, or made significant progress in identifying material sustainability issues after work with multiple stakeholders, including Putnam's team.

Learn more about [Putnam's engagement and stewardship activity](#).

Leadership

Research

We share reflections on relevant sustainable investment trends in several different formats. Some of our publicly accessible research can be found in the Sustainable investing section of putnam.com under the “Research” and “Blogs” tabs.⁵ Additionally, we are members of the Applied Complexity Network of the Santa Fe Institute (SFI), where we are especially engaged with research on the “complexity of sustainability” — examining the interconnections between financial systems, social systems, and ecological systems. Putnam’s Head of Sustainable Investing, Katherine Collins, currently serves as board chair of SFI.

Public speaking and media

We participate in many field-building events, contributing the perspective of active managers in sustainable investing. Over the past six years, we have participated in dozens of guest lectures and other academic gatherings, spoken about the investment and strategic relevance of ESG considerations in numerous investment and corporate settings, and addressed similar topics for a number of nonprofit organizations. Our sustainable investing work has been featured by *Barron’s*, *Forbes*, *Investor’s Business Daily*, *Bloomberg*, *Ignites*, *GreenMoney Journal*, and *The Investor’s Field Guide* podcast.

Collaboration

As noted above, Putnam is an advocate for improved and relevant ESG disclosure. We are members of several organizations that support similar goals.

United Nations Principles for Responsible Investing (UN PRI)

Putnam has been a signatory to the UN PRI since 2011. As a signatory, Putnam is committed to sustainable investing, including a focus on understanding how ESG factors may influence performance, generate alpha, and/or mitigate risk in client portfolios. Our Head of Sustainability Strategy, Jackie VanderBrug, is the chair of Putnam’s ESG Leadership Committee, which also includes senior members of the firm’s operating committee.

Sustainability Accounting Standards Board (SASB)

Putnam joined SASB as an alliance member in 2018 and has been part of SASB’s Investor Advisory Group. Additionally, Putnam’s Head of Sustainable Investing, Katherine Collins, chaired SASB’s Corporate Engagement Working Group in 2021. SASB’s mission is to connect businesses and investors on the financial impacts of sustainability. Its work includes the development of an industry-specific taxonomy of financially material sustainability issues. SASB has recently become incorporated into the International Sustainability Standards Board, governed by the International Financial Reporting Standards Foundation.

CDP (formerly Carbon Disclosure Project)

Putnam joined CDP as an investor signatory in 2020 and joined the organization’s non-disclosure campaign in 2022. CDP manages a global disclosure system on environmental metrics for investors, companies, cities, states, and regions.

Task Force on Climate-Related Financial Disclosures

Putnam became a supporter of the TCFD in 2021. The TCFD provides a framework for the voluntary disclosure of climate-related information.

Ceres

Putnam became a Ceres affiliate in 2022. Ceres is a nonprofit organization that focuses on the financial business case for sustainability as a way to transform the economy and build a just and sustainable future for people and the planet.

Boston Association of Institutional Investors

Putnam chaired the ESG working group for this association from 2018 to 2020.

A week in the life of an active manager

As noted throughout this report, our sustainability and impact analyses are interwoven with our core investment process. This type of integration can be difficult to explain, as we are not simply adding separate sustainability analysis to Putnam’s core fundamental research. Rather, we are combining the two elements throughout the investment process. In doing so, we aim to create a holistic approach that is greater than the sum of its parts. Here we offer some additional detail from a week of our team’s meetings in November 2022, as a way to bring these processes more vividly to life. This summary represents a small subset of the total research and investment activity for our team within the given week and also reflects a small portion of such activity for our broader equity research team during the period. Our integrated approach to sustainability research helps us to ask better questions, understand the strategic importance of various ESG issues, and engage on relevant ESG topics.

NOVEMBER 2022	MAJOR SECTOR	CATEGORY	THEMES
SUNDAY			
Participated in Santa Fe Institute's research symposium on Emergent Engineering, with applications to analyzing innovation across many arenas.	Utilities, industrials	Public	Shared infrastructure
MONDAY			
Discussed sector-wide growth drivers and trends across natural resources and utilities in an internal equity team update, specifically impact and investment opportunities from the energy transition.	Utilities/energy	Planet	Decarbonization
Discussed employee investments (wages, benefits, training) and the link to an improving store experience and revenues for a large coffee retail chain.	Consumer discretionary	Public	Stakeholder wellness and equity
Toured facilities and met with management teams of several public and private restaurant companies. Discussed approaches to labor acquisition, training, and retention as well as automation opportunities, among other topics.	Consumer discretionary	Public	Stakeholder wellness and equity
Met with management of the largest U.S. pure-play water infrastructure company. Discussed how the company helps customers reduce energy consumption through pumps, sensors, and AI.	Industrials	Planet	Resource stewardship
TUESDAY			
Met with an information services company that provides research and analysis across many industries to discuss their competitive advantages in training, hiring, and retention, and how these link to future growth and cost advantages.	Information technology	Public	Stakeholder wellness and equity; Business processes
Discussed capital allocation strategy and its impact on customer access and financial returns with a cable services provider.	Communication services	Public	Access and opportunity

NOVEMBER 2022	MAJOR SECTOR	CATEGORY	THEMES
TUESDAY			
Met with management of a waste and recycling company. Discussed several human capital issues and how technological advancements on trucks have opened up new recruitment and labor opportunities, such as the opportunity to hire more women.	Industrials	Public, Planet	Stakeholder wellness and equity; Access and opportunity; Circular economy
Met with a large rental car company to discuss supply/demand, fleet optimization, growing demand in electric vehicles, and other elements driving higher utilization of the existing fleet.	Consumer discretionary	Public, Planet	Shared infrastructure; Decarbonization
WEDNESDAY			
Met with a large industrial enzyme company. Discussed the diversification of their bioenergy business into biomass, biodiesel, and renewable diesel applications.	Industrials	Planet	Biological solutions
Met with the management of an industrial distributor of water infrastructure products. Discussed potential impact to the business from the Infrastructure Investment and Jobs Act, in particular the expansion of access to drinking water.	Industrials	Planet	Water quality and access
Visited the headquarters of a large e-commerce retailer to discuss improvements to the buyer and seller experience on the platform and opportunities for continued innovation, including product, marketing, and infrastructure investments.	Consumer discretionary	Public	Business processes; Access and opportunity
THURSDAY			
Hosted a very large e-commerce retailer to discuss human capital issues, namely investment in warehouse workers and related churn/retention dynamics, plus growing career development programs across the organization.	Consumer discretionary	Public	Stakeholder wellness and equity
Met with a leading residential solar installer to discuss the positive impact from regulation like the Inflation Reduction Act of 2022 on demand for solar panels, balanced with the potential headwinds to the business from higher financing costs.	Energy	Planet	Decarbonization
Participated as the keynote speaker for the annual gathering of a women's investment group, focused on trends in sustainable investing and the relevance of focused sustainability analysis to long-term financial returns.	Financials	Public	Stakeholder wellness and equity
FRIDAY			
Met with a jewelry company to discuss secular trends toward consumer preference for branded, digital, and sustainable options in the industry.	Consumer discretionary	Public, Planet	Business processes; Circular economy
Throughout the week, met with or attended presentations for 15+ industrial companies at an industry conference, discussing a variety of issues including: training for specialized skills within an engineering and construction company; securing quality sourcing from suppliers with an electric power and engine manufacturer; investments in waste to energy projects, efficiency, and impact of recycling systems with several waste companies; improving efficiency of industrial equipment and water systems with several diversified industrial and water companies; development of an innovative team culture with a flow control company; and strategy to retain customers and employees with a specialty chemical company.	Industrials	Public, Planet, People	Stakeholder wellness and equity; Decarbonization; Circular economy; Resource stewardship; Business processes

SECTION 2

Portfolio analysis and ESG metrics

We provide analysis of several key issues that have relevance for our portfolios and our investors.

Analytics related to ESG data continue to develop, with data availability and accuracy steadily improving. For some topics, information is fairly complete, and metrics are well established, while for others, the questions and information are still at an earlier stage of development. As researchers and active investors, our team views this varied analytical landscape as being full of opportunity.

This analysis explores several important measures of our portfolios' ESG and sustainability characteristics, noting why we've chosen these measures, what they show with respect to our portfolios, how we use each metric, and where we aim to focus future research and attention.⁶

Please reference our shareholder reports and regular performance updates on the portfolios to obtain details on the financial characteristics of the portfolios and a more complete view of the funds.

Before exploring the details, we'd like to emphasize the principles we embrace regarding analysis and data representation

We recognize this type of analysis is ongoing and evolving — for us and for the whole field. Even with perfect data availability, there is always more nuance to explore, and new questions are constantly emerging.

We are researchers. We add context and analysis to data. We seek to understand the “how” and the “why” that are underneath the “what.”

We embrace unanswered questions. We recognize that getting to a better question or to a partial answer is an important form of advancement.

Metric #1: Carbon intensity

Why is this relevant?

Carbon dioxide and other greenhouse gases (GHGs) trap thermal radiation from the earth's surface, sustaining natural life. However, human activities, such as burning fossil fuels, are increasing the concentration of greenhouse gases and leading to rapid increases in climate-related risks.⁷ Environmental impact is an important topic for our sustainability analysis, and a key focus of the UN's Sustainable Development Goals (including SDG 7: Affordable and Clean Energy and SDG 13: Climate Action).⁷ The data involved in company- and portfolio-level environmental analysis is complex and often incomplete.

Standard disclosures for metrics like GHG emissions and carbon intensity offer important insights, particularly when combined with company-specific context and an understanding of potential future change. For example, lower or decreasing carbon intensity means a company is generating fewer emissions per unit of revenue, which is better for the climate than higher or rising carbon intensity.

The aggregate emissions data for any investment portfolio often depends heavily on sector allocation, as one would expect: Companies in utility and energy sectors inherently have higher direct emissions (scope 1) when compared with less energy-intensive sectors like healthcare or financials, for example. Taken together, the four largest emitting sectors (utilities, energy, materials, and industrials) account for more than 80% of the S&P 500 Index emissions, though they only constitute 20% of the index weight.

When we assess potential investments in carbon-intensive sectors, a key consideration is our analysis of the rate of change in those metrics and the magnitude of improvement we expect given individual company strategies. For the purposes of this report, we focus on carbon intensity, which measures the ratio of carbon emissions (scopes 1 and 2) to revenues. This is one important element of environmental efficiency.

What does this measure show, and why?

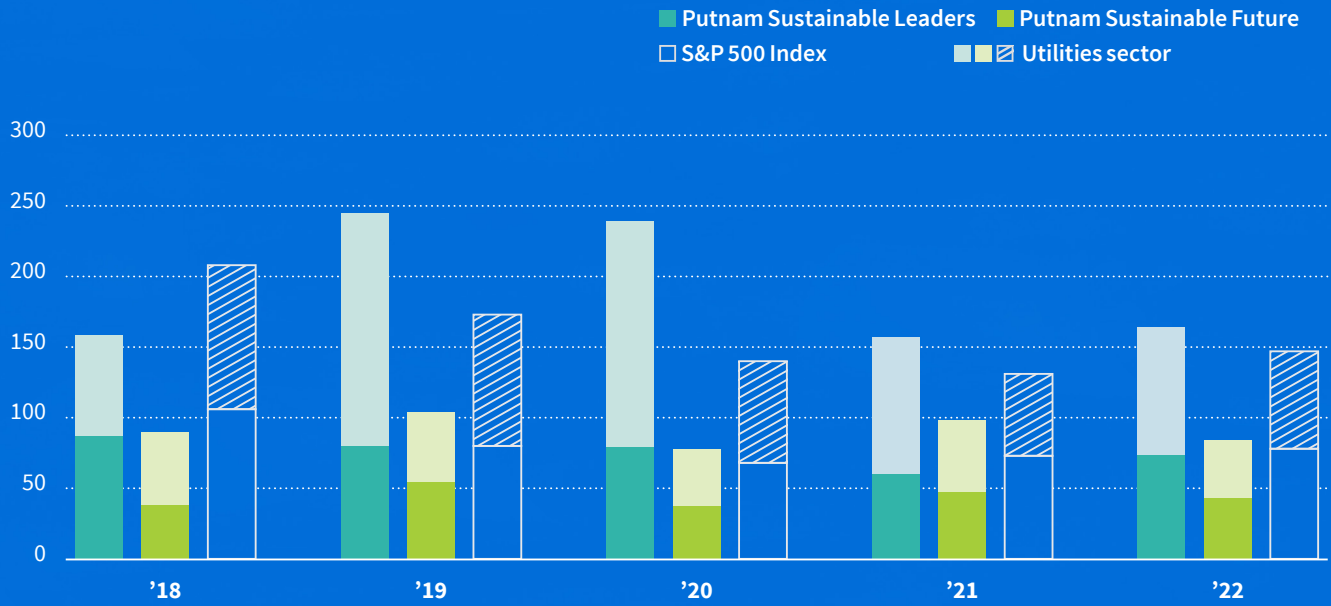
The carbon intensity measure shows the ratio of the total of scopes 1 and 2 emissions to revenues. Scope 1 emissions are direct emissions from owned or controlled sources, and scope 2 emissions are indirect emissions from the generation of purchased energy. The portfolio-level calculation aggregates the company-level intensity measures for all held securities. This metric offers the benefit of normalizing for company size, but in doing so, it necessarily obscures the absolute level of emissions, which is also important when considering a company's impact on our climate.

The carbon intensity of the Sustainable Leaders portfolio is moderately higher (more intensive) than the S&P 500 Index, which we use as a representation of the broader market. This metric is considerably lower (less intensive) for the Sustainable Future portfolio. Over the past year, the carbon intensity for Sustainable Leaders increased by 4%, and for Sustainable Future, this measure decreased by 14%. In both cases, the changes were mainly due to differences in portfolio holdings from year to year.

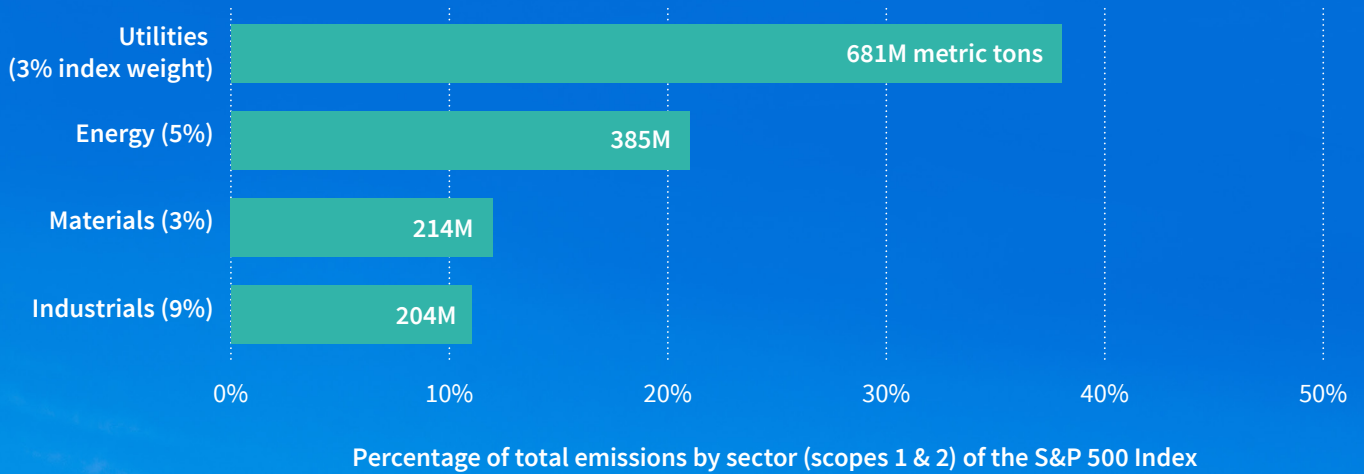
The higher carbon intensity of Sustainable Leaders versus the S&P 500 Index is primarily due to our investment in three utility companies, as detailed below. Though two of these companies are currently large producers of hydrocarbon-fueled electricity, they are also leading the way in replacing hydrocarbon-derived power generation with renewable energy generation, and therefore, their carbon intensity is expected to fall in the years ahead.

The lower carbon intensity of Sustainable Future versus the S&P 500 Index is primarily due to holdings in technology and healthcare, which tend to have low emissions. The decrease in this metric for the portfolio over the past year is mainly due to a modest increase in exposure to technology and to reduced carbon intensity of our utilities positions.

Portfolio carbon intensity



Just 20% of the S&P 500 Index accounts for more than 80% of total emissions



Sources: MSCI ESG Research LLC data as of December 31, 2022, and Putnam analysis. Carbon intensity is measured as a ratio of scopes 1 and 2 CO2e metric tons to sales (USD millions). Portfolio carbon intensity is calculated as the weighted average of the carbon intensity for the stocks held, with uncovered assets dropped and holdings rescaled to 100%. Uncovered assets refer to cash held in the portfolio and holdings for which there is no carbon intensity score available. Some data may be estimated.

How do we use this measure?

We do not explicitly exclude or screen out energy or utility holdings (which have high carbon intensity) in our investment process, though it is typically unusual for companies in these sectors to meet our investment criteria. As active managers, we have the ability to selectively own and engage with companies that are committed to transitioning away from carbon-intensive energy sources in ways that benefit their business prospects. Therefore, when we assess potential investments in carbon-intensive sectors, key considerations in our analysis include the future rate of change in those metrics, the magnitude of improvement we expect given individual company strategies, and the potential implications of these changes on company fundamental prospects and valuation.

For example, Sustainable Leaders Fund invests in three utilities: AES Corporation, NextEra Energy, and Constellation Energy Corporation. While these holdings make up less than 5% of the portfolio as of December 31, 2022, they constitute around 60% of the fund's aggregate carbon intensity exposure. Said another way, if these holdings were not held in the portfolio, the fund's aggregate carbon intensity would be below that of the S&P 500.

Why have we chosen to invest in these companies?

We believe that climate change is the most pervasive risk of our era, as it is inherently linked to almost all other risks, including food supply disruptions, economic loss, and social instability. And, as noted above, fossil fuel use is a key contributor to greenhouse gas emissions and to climate-related risk. One option for investors is to avoid all exposure to fossil fuel generation and use, and this approach has some merits. As active managers, though, we believe that part of our opportunity is to identify companies that are essential in leading the systemic shift to renewable sources of energy. Some of the most impactful ways to support this shift involve investing in companies like the ones discussed here, companies that are most actively changing the sources of global power generation. We have three main conditions for our selective investments in carbon-intensive businesses: first, there must be a demonstrated and meaningful commitment to shift away from fossil fuels; second, there must be regular reporting on progress, with transparency on relevant metrics; and third, the company must also meet our other investment criteria.

From an analytical perspective, historical emissions data is useful, but it is inherently backward looking, while our investment research is forward looking. Both AES and NextEra have meaningful strategies underway to reduce their carbon intensity, and we believe these plans represent important improvements in environmental impact, are positive for the companies' long-term financial prospects, and are well aligned with the UN SDGs referenced above (7 and 13).

As of September 30, 2023, AES Corporation accounted for 0.85% of Putnam Sustainable Leaders Fund assets and was not held in Putnam Sustainable Future Fund; NextEra Energy accounted for 0.28% of Putnam Sustainable Leaders Fund assets and was not held in Putnam Sustainable Future Fund; and Constellation Energy Corporation accounted for 1.92% of Putnam Sustainable Future Fund assets and 2.38% of Putnam Sustainable Leaders Fund assets.

For example, AES signed over 5 GW of renewables agreements in 2022, has an additional 14–17 GW planned for 2023–2025, and 95% of its development pipeline is renewables and energy storage.⁸ NextEra’s energy resources business has 30 GW of clean energy already in operation and expects to add 12 GW in 2023–2024. Additionally, its FPL business already manages the largest portfolio of solar power generation of any utility in the United States.⁹ Both AES and NextEra are also leaders in investing in energy storage. Energy storage is a crucial missing link for many potential renewable energy projects, and solutions in this area may help to accelerate their deployment. The third utility holding in the Sustainable Leaders portfolio is Constellation Energy, which has very low carbon intensity since its assets are nuclear powered. For all these holdings, the shift to renewable and low-emissions energy is a core part of overall business strategy, providing affordable, reliable power supply to customers with attractive expected financial returns.

A closer examination of the high carbon intensity of these holdings illustrates our investment philosophy: We recognize historical data is most useful when it is linked to understanding potential future performance, and that engagement and research of companies in the midst of strategic shifts is one way for an active manager to have impact. We will selectively own companies with optically poor current metrics if — and only if — our research has convinced us of the commitment to positive change and of the potential investment value of the shift.

Where are there opportunities for future research and focus?

We expect to see continued improvements in the accuracy, breadth, and timeliness of environmental data, which will provide new opportunities for relevant and accurate analysis. For example, we are increasingly able to consider the vital metric of scope 3 carbon data, which incorporates assessment of a company’s supply chain, investments, and the use of products sold. However, scope 3 emissions for one company often overlap with scope 1 emissions for another company. We therefore find that scope 3 analysis is more useful at an individual company level than at an aggregated portfolio level.

Additionally, improved metrics on water use are now more broadly available for certain sectors, and focus on assessing biodiversity impact is also increasing. Many companies are beginning to disclose more complete environmental metrics and to set explicit goals for improvement, while others are moving forward with thoughtful and detailed climate change analysis and early disclosures on biodiversity impact. Additionally, the U.S. Securities and Exchange Commission has proposals about climate-related disclosures under discussion. All these developments will likely give investors more opportunity for analysis and engagement over time.

Metric #2: Gender diversity on boards of directors

Why is this relevant?

Numerous studies of gender diversity on boards have shown that diverse boards are associated with higher financial returns, higher firm value, higher profitability, increased investment in research and development, and lower volatility.¹⁰ Gender diversity is also an important goal addressed in several of the UN’s Sustainable Development Goals (for example, SDG 5: Gender Equality; SDG 8: Decent Work and Economic Growth; and SDG 10: Reduced Inequalities).

Board-level data is the most complete corporate demographic information available, and gender data is more complete than other measures of diversity. Though we often reference gender diversity on boards due to the stronger data integrity for this measure, we view this narrow, specific indicator as a potential starting point for analysis of deeper questions regarding equity, inclusion, and justice across all types of diversity.

What does this measure show, and why?

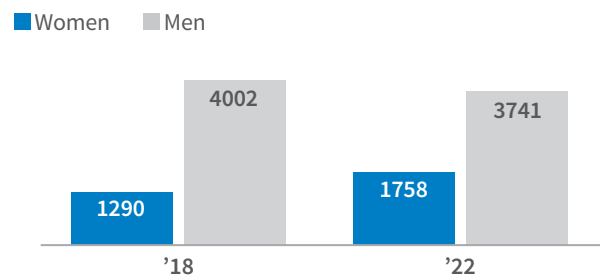
While most of the boards of companies in which we invest have not reached gender parity, the level of gender diversity is increasing. Holdings in the Sustainable Leaders portfolio had a weighted average of nearly 35% female representation, and the Sustainable Future portfolio had a weighted average of 33% as of December 2022. As shown below, both measures are higher than their respective benchmarks, and all measures — both portfolios and benchmarks — have steadily improved over the past five years. The asset-weighted averages for the Russell Midcap Growth Index remain significantly lower than those of the S&P 500 Index, indicating the boards of larger companies generally have a higher level of gender diversity.

Additionally, our portfolios have a higher-than-market representation of companies where women comprise 30% or more of total board membership. This level is important because once women comprise 30% of a group, the inputs they might give shift from being perceived as “a woman’s point of view” to “an added point of view.”¹¹

In short, this level of participation allows women’s inputs to be more fully incorporated into corporate governance, which allows the potential benefits of diversity to be realized. As shown in the charts, this measure improved for both of our portfolios in the past year, with 73% of our Sustainable Leaders holdings and 61% of our Sustainable Future holdings with available data above the crucial 30% threshold. Perhaps even more important, this metric for the S&P 500 has improved from 25% to over 60% since 2018, a strong progression.

Despite the improvement in the metrics above, more than 3,700 S&P 500 board seats are held by men and fewer than 1,800 are held by women. Progress is notable over the last five years, yet U.S. corporate boards are still far from gender parity.

S&P 500 company board seats by gender



How do we use these measures?

Our research process extends beyond the specific metric of women on boards, with an aim of understanding how companies prioritize diversity in all forms and at all levels of the organization. Teams with diversity of perspective and experiences have stronger decision-making ability, particularly when facing dynamic and complex problems, and therefore, this is a relevant set of issues for all types of companies and all investors.¹²

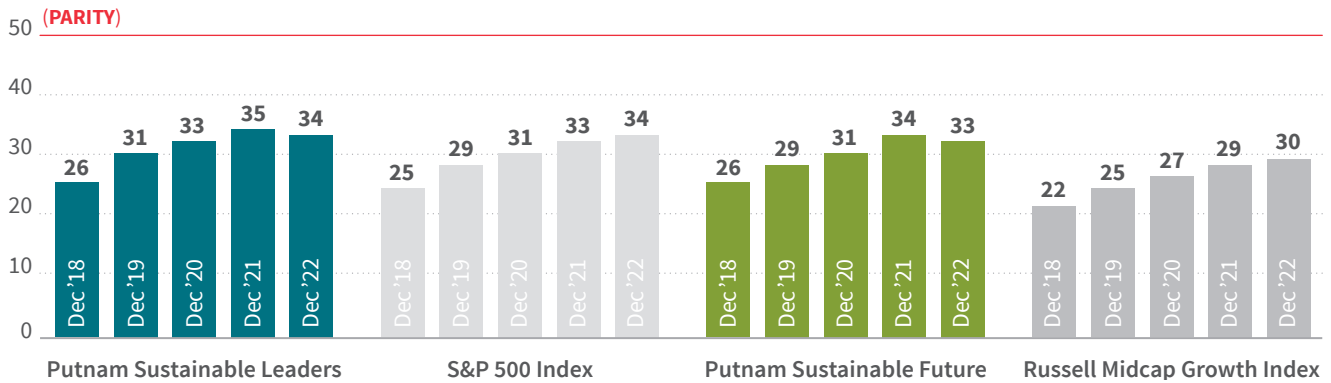
In addition to this direct business benefit, we view diversity as a step toward equity, equity as a step toward inclusion, and inclusion as a step toward an ultimate goal of justice.

Where are there opportunities for future research and focus?

These metrics combine with other aspects of board health — including diversity of perspectives and skills, accountability to stakeholders, and transparency — to help investors assess governance. The association between diverse boards and strong financial outcomes highlights potential benefits of investing in diversity and serves as a starting point for a more complete assessment of team composition beyond the boardroom. For example, availability of information on executive and team composition is improving, and these statistics often show different patterns than observed at the board level. As data continues to advance, investors will be able to analyze related questions in a more complete and useful way.

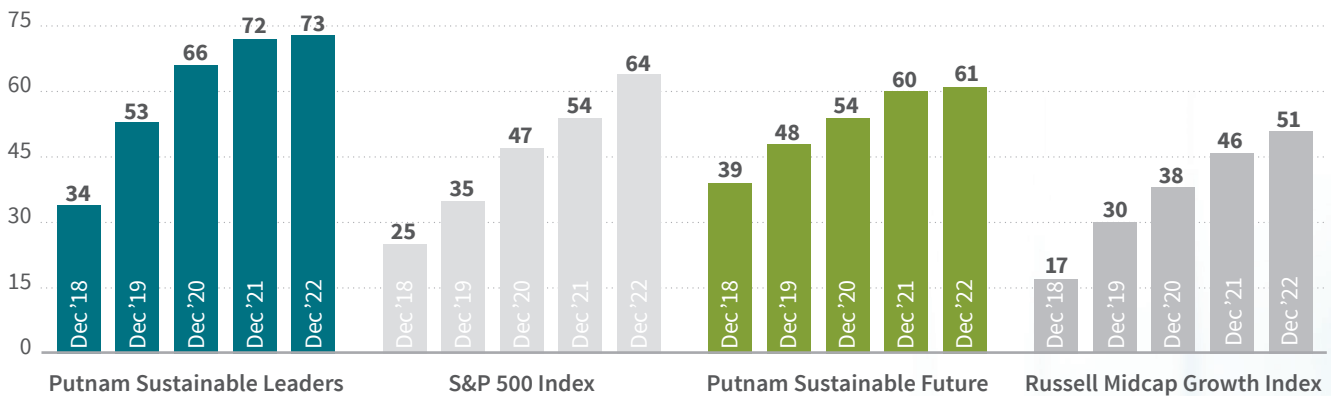
Percentage of board members who are women

Weighted average percentage; 50% represents parity



Source: Data from MSCI ESG Research LLC, as of December 31, 2022. Calculations by Putnam.

Percentage of portfolio/index companies with women comprising at least 30% of board



Source: Data from MSCI ESG Research LLC, as of December 31, 2022. Calculations by Putnam.



SECTION 3

Investment themes and impact assessment

We describe our forward-looking thematic research, which focuses on conditions that allow people, systems, society, and the planet to thrive.

One challenge for any point-in-time presentation of data is that it can freeze activity midstream. Writing about this phenomenon in the natural sciences, Goethe said, “The corpse is not the creature.” He was specifically referencing the study of butterflies, noting that you can measure every leg segment and model every wing shape, but if you’ve never seen them fly, you are missing the whole point.

Here, we aim to show our funds in flight.

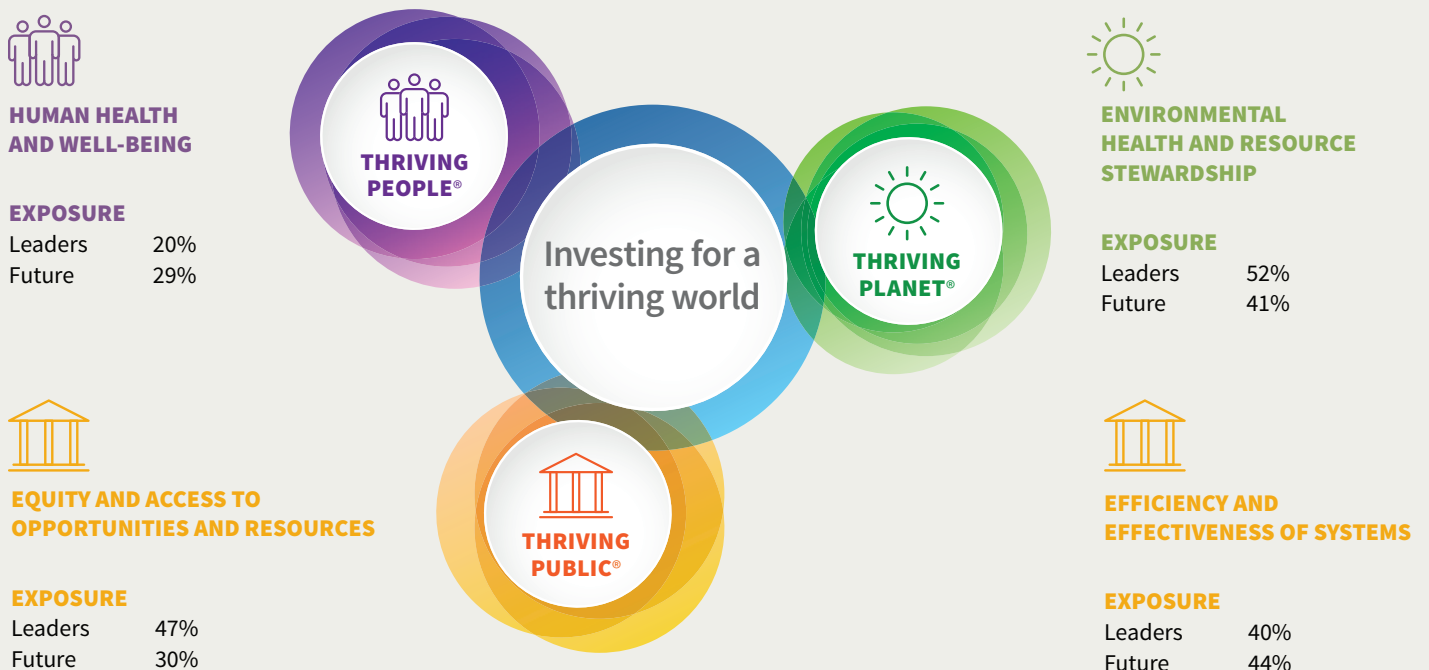
The goal of our investment research is to identify companies whose excellence in sustainability is driving potential long-term outperformance. To achieve investment merit, we believe two attributes are essential: analysis must be context specific, and it must be forward looking. In section 1 of this report, we described the context-specific nature of our materiality-based approach to fundamental research.

Here we describe our forward-looking thematic research, which complements our fundamental work by asking the essential question: What promotes thriving? Our investment thesis is that companies contributing to thriving people, systems, society, and planet may also have the opportunity to create businesses that thrive over the long term.

This year, we share our research on CEO compensation, with examples of how these structures have changed over time and how they vary across different business settings. As an essential component of governance and corporate culture, we view incentive compensation as a foundational element that relates to a number of forward-looking themes. The direct impact of CEO compensation is harder to assess than, for example, the material cost savings from a more circular product design, which was explored in last year’s report. However, it is clear that incentive structures have direct impact and influence on corporate priorities and activities and are therefore relevant considerations for all investors.

Our more complete thematic map shown on the following pages illustrates Putnam’s “Investing for a thriving world” sustainability-related themes, and the appendix to this report shows how our framework relates to the United Nations Sustainable Development Goals.

Our sustainability research focuses on three overarching categories



Some holdings address multiple themes; therefore, exposures do not add to 100%. Data reflects Putnam calculations based on internal analysis and is as of December 31, 2022.

Guide to thematic research

Below is a map of our sustainable equity themes across three overarching categories, Thriving People, Thriving Planet, and Thriving Public. It continues to evolve as our research unlocks new ideas.





Thriving Public®

Equity and access



Management incentive compensation:

Trends, observations, and value to fundamental research

Overview

- Understanding management incentives is an important tool in investors' and stakeholders' toolkits.
- Management incentive compensation has evolved over time. It is higher in terms of absolute dollars and relative to the median worker. It is more performance based. It involves more metrics today, beyond total shareholder return (TSR), and incorporates more ESG metrics.
- We look for thoughtful structure and composition of incentive plans that are long term, performance oriented, reasonable, relevant, transparent, and appropriately ambitious.
- We believe thoughtful incorporation of ESG metrics in incentive plans can be additive, especially when done in a way that emphasizes the key attributes noted above, namely: relevance, additionality, specificity, and ambition.
- Companies held in our sustainable funds are incorporating ESG more often in compensation plans. We highlight some examples that stand out to us here.
- We are paying attention to emerging governance and incentive data that can help us better understand incentives for executives and top-level management. There is growing data available on average CEO pay relative to median worker pay, on broader employee ownership models, and on the effectiveness of stock-based compensation models that we will be watching closely. We are interested in new ways of both assessing stakeholder alignment and fostering improved long-term performance, some of which we highlight here.
- With regard to our thematic map, incentive compensation links to themes such as stakeholder wellness and equity, business processes, and access and opportunity.

“Show me the incentive, and I’ll show you the outcome.”

Charlie Munger

Introduction

Charlie Munger’s famous quote encapsulates one of the main reasons for analyzing management incentive pay structures. Investors can use this analysis to understand how management compensation, and CEO compensation especially, is aligned with shareholder and other stakeholder interests, and the motivations that drive management decision-making. This type of analysis can help inform our view on future investment opportunities and the impact that management teams and compensation plans can have on company success.

As investors, we consider relevant, financially material ESG issues in our research, and management incentives represent an essential governance issue across all types of companies. Incentives, management compensation, and stakeholder alignment are material issues across all sectors. These topics also link to several themes on our thematic map, namely stakeholder wellness and equity. More specific elements connect with subthemes like productivity and quality tools, financial security, and meaningful and decent work. As with certain other governance issues, we view these topics as essential foundational issues that underpin many other themes. We believe that analysis of incentive compensation can help investors understand strategic priorities that impact long-term financial returns.

Well-crafted incentive programs, in our view, can align management teams with the long-term performance interests of shareholders and relevant stakeholders.

For the purposes of this research, we focus mostly on long-term incentive plans (LTIPs) and short-term incentive plans (annual bonus plans, or STIPs). Much of the data used for this analysis is from HOLT, Credit Suisse’s extensive database on CEO compensation plans, which is derived from company proxy statements. CEOs often earn a base salary, a short-term (1-year) incentive or bonus program (often paid in cash), and a long-term (multiyear) incentive program (often paid in shares).¹³ We also look at CEO absolute pay and pay relative to median employees. In our research at Putnam, we consider these factors alongside many other elements of governance, such as a management team’s experience, track record, and diversity in addition to board independence, diversity and experience, board structure, and other company-specific elements.

We also consider incentive compensation and other governance factors within the relevant geographic context. For example, many boards in non-U.S. countries are required to have employee representation, while that is not the case in the U.S. Absolute pay for executives in the U.S. tends to be significantly higher than elsewhere, and a significant percentage of that pay tends to be tied to “at risk,” or variable, metrics.¹⁴ Also, we note that CEO pay only looks at compensation of one (albeit important) individual at the organization. More publicly disclosed data about total employee compensation would further help contextualize CEO pay.

Recently, there has been growth in the number of companies incorporating ESG metrics into their compensation plan. This is potentially a positive trend for investors, so long as the ESG metrics incorporated are relevant to business fundamentals. We consider all of these context-specific elements when considering a company’s incentive compensation plan. Ultimately, our goal as researchers is not to classify some incentive plans as “good” and others as “bad” but, rather, to gain a greater understanding of what drives corporate leadership, with an objective of better assessing long-term risks and opportunities.

Key elements of incentive plan analysis



Structure of plans

Longer time horizon

Typically, longer-term plans (for example, 3 years versus 1 year) have greater potential to align with strategic success and shareholder interests.

Performance based

A significant portion of pay at risk can indicate a true focus on performance, as opposed to just another form of compensation. Relevant peer group selection — choosing logical peer groups — is essential for comparability analysis.

Reasonable compensation levels

This involves assessing how absolute dollar amounts are justified, and how CEO pay relates to that of peers, other executives, and the overall employee population of the company.

Clear structure

Plans that are well constructed should not require much discretion to change terms without notice or justification.



Composition of metrics

Business relevant

Measures referenced in incentive plans should be relevant to the specific business sector and company strategy. For example, a plan might include a combination of TSR (aligning management and shareholders) plus operating metrics that are context specific, such as return on invested capital (ROIC) for a capital-intensive business or growth and profitability for growth-oriented businesses.

Appropriately ambitious

Incentive plans require targets that are sufficiently ambitious, without encouraging excessive risk-taking.

Financially material ESG metrics

When ESG metrics are incorporated into incentive plans, they should align with financially material environmental, social, or governance issues.

Incentive trends over time for the S&P 500

Incentive plan structures in the S&P 500 have shifted notably in recent decades. Performance-based incentive plans generally have become more prevalent over time. In 2020, 94% of the S&P 500 utilized performance-based share plans, up from 88% in 2018.¹⁵ The use of total shareholder return as a metric has also evolved. Increasingly, TSR is not the sole long-term metric used, as companies have added other financial metrics alongside TSR.¹⁶ Overall, CEO compensation has grown significantly. According to the Economic Policy Institute, average realized pay for CEOs of the top 350 U.S. firms was just under \$11 million in 2000, growing to \$25 million in 2020. This represents an 8% compound annual growth rate (CAGR) over 11 years, compared with 1% CAGR for total private sector worker pay and 10.5% annualized return of the S&P 500 over the same period.¹⁷

The Economic Policy Institute has measured an estimated ratio of CEO pay to total worker pay over time. It compares average annual compensation for CEOs at the top 350 U.S. firms ranked by sales with typical worker compensation (wages + benefits) of nonsupervisory workers in the same industries. This ratio had peaked in 2000 at approximately 372:1 (realized pay) and only in recent years surpassed that level, reaching 399:1.¹⁸ This metric varies greatly by sector and company type, and can help provide clues on disparity among a workforce, how aligned management teams are with their employee base, and the potential risk of dissatisfaction or frustration on behalf of employees that could lead to relevant business outcomes like higher turnover or employee-related costs.

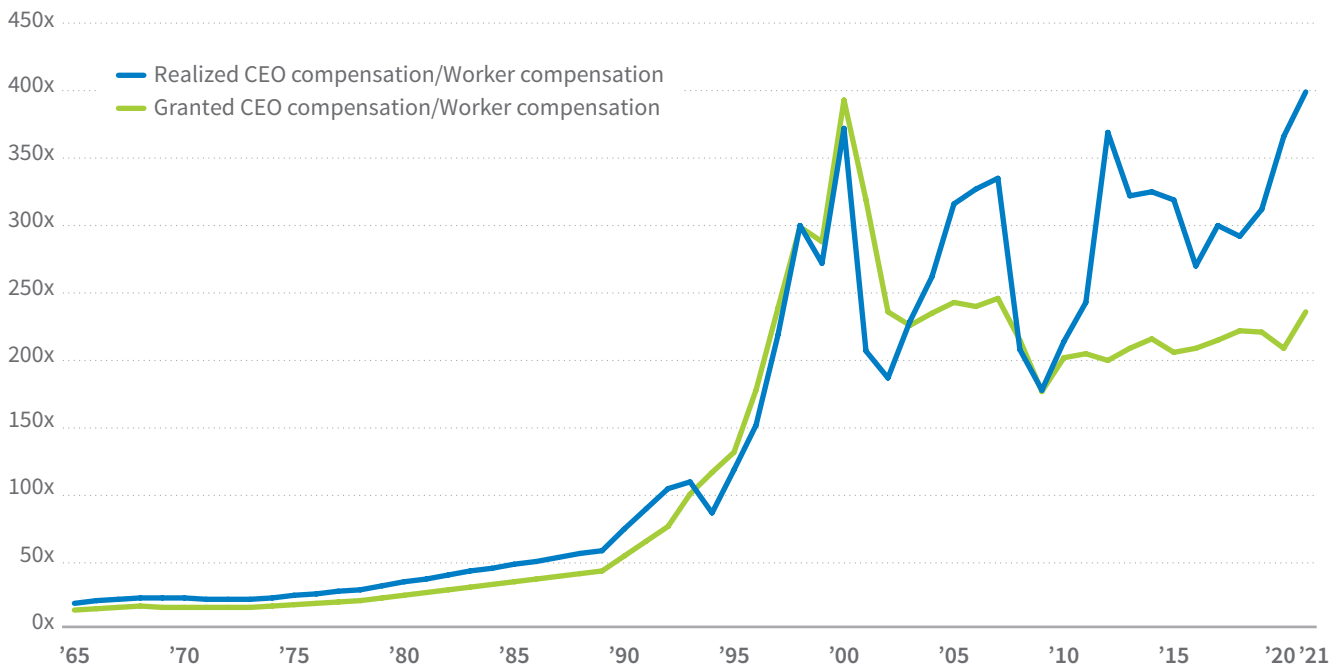
Analyzing CEO pay relative to median worker pay can also provide important insights to researchers, and the data on this topic is improving.

Long-term incentive vehicle prevalence for S&P 500 CEOs

YEAR	PERFORMANCE PLAN	STOCK OPTIONS	RESTRICTED STOCK
2009	50%	70%	46%
2013	76%	61%	50%
2018	94%	52%	68%

Source: Harvard Law School Forum on Corporate Governance, "S&P 500 CEO Compensation Increase Trends," February 11, 2020. Most recent data available.

CEO-to-worker compensation ratio, 1965–2021



Notes: Average annual compensation for CEOs is for CEOs at the top 350 U.S. firms ranked by sales. Typical worker compensation is the average annual compensation wages and benefits of full-time, full-year production/nonsupervisory workers in the industries that the top 350 firms operate in.

Source: Economic Policy Institute, “CEO pay has skyrocketed 1,460% since 1978,” October 4, 2022. Authors’ [Josh Bivens and Jori Kandra] analysis of data from Compustat’s ExecuComp database, the Bureau of Labor Statistics Current Employment Statistics data series, and the Bureau of Economic Analysis NIPA tables.

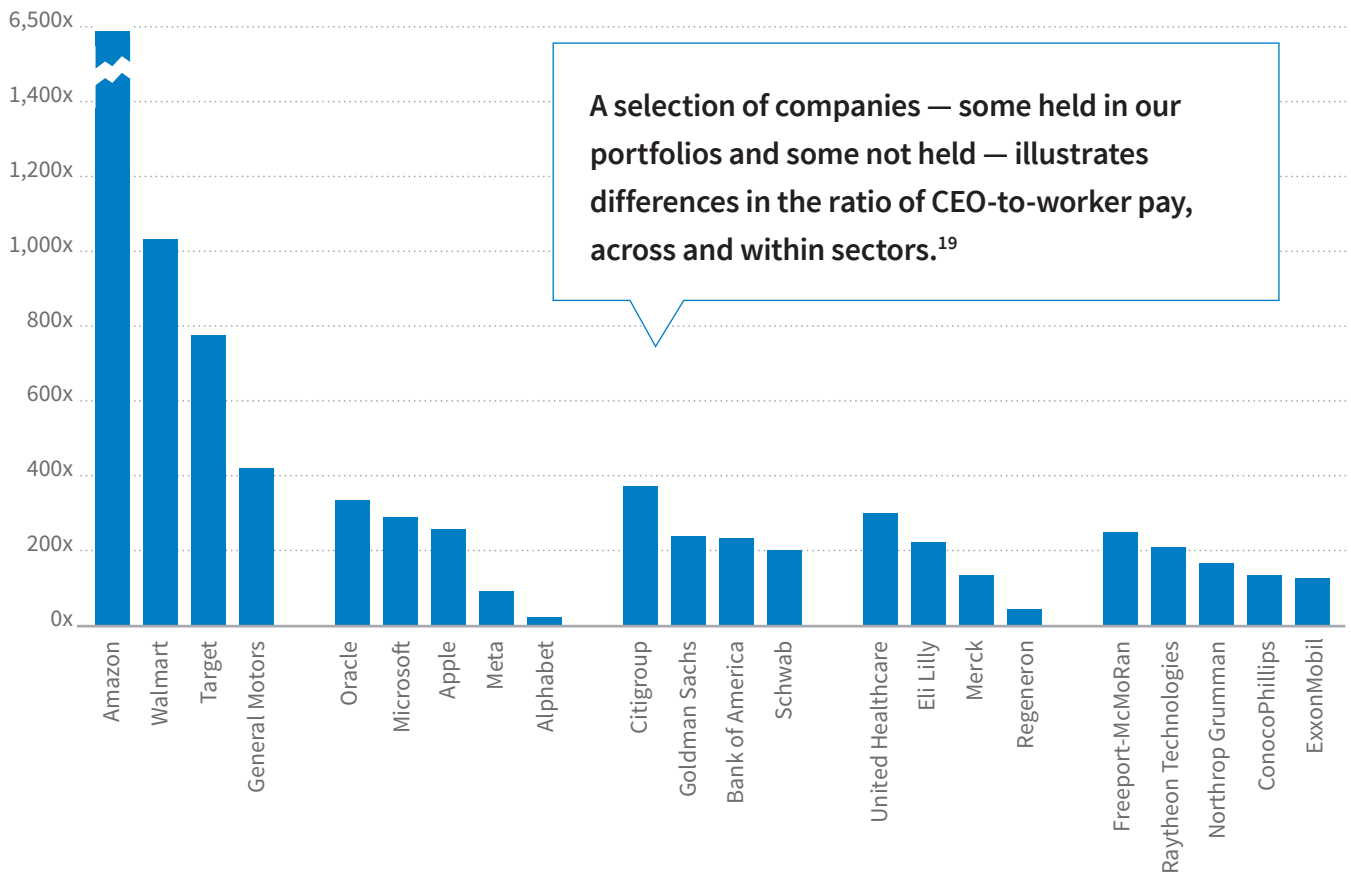
CEO pay: Sector and company-level insights

As noted above, analyzing CEO pay relative to median worker pay can also provide important insights to researchers, and this is particularly true on an individual company level. The data on this topic is improving, and though there is more information available now than in the past, some important caveats to the data and analytics remain. For example, reporting is only required every three years, several different methodologies are allowed, non-U.S. workers are often excluded, and any single year of executive compensation can be influenced by timing of stock awards, shorter-term stock performance trends, and other factors.

Despite these complications, some clear patterns are evident: First, as is intuitive, the ratio of CEO to median worker pay is partly determined by the nature of the business and its workers. For example, at a retail company with a very large workforce, the ratio would tend to be much higher than in a software company with a small number of highly specialized technical workers. Second, even between businesses that are similar, like major financial institutions or large pharmaceutical companies, a wide range of ratios can be observed. Overall, factors like the type of company, its size, and the proportion of the workforce outside the U.S. are important influences on these ratios, in addition to the issues noted above.

For investors, it would be shortsighted to use CEO-to-median-worker-pay ratios in an overly conclusive way. This data can help to identify outliers within a relevant peer set, to illuminate differences in workforce composition that might not be apparent in other analysis, and to highlight idiosyncratic issues like the timing and magnitude of CEO stock awards. Analysis of these issues provides especially helpful insight in a competitive labor market like the U.S. has recently experienced, where employers are particularly focused on cultivating a strong culture, attracting new hires, and retaining valued employees. All of this information is most useful when combined with a fundamental understanding of how employees contribute to company success, and how other elements like employee ownership might influence both the analysis and business outcomes over the long term.

2021 ratio of CEO pay to median worker pay



Source: Proxy statement data.

ESG metrics in compensation plans

Amid these broader trends, environmental, social, and governance metrics have become more common in incentive compensation structures. Topics reflected in these metrics are wide-ranging, including environmental performance, health and safety records, human capital data, regulatory activity, and more.

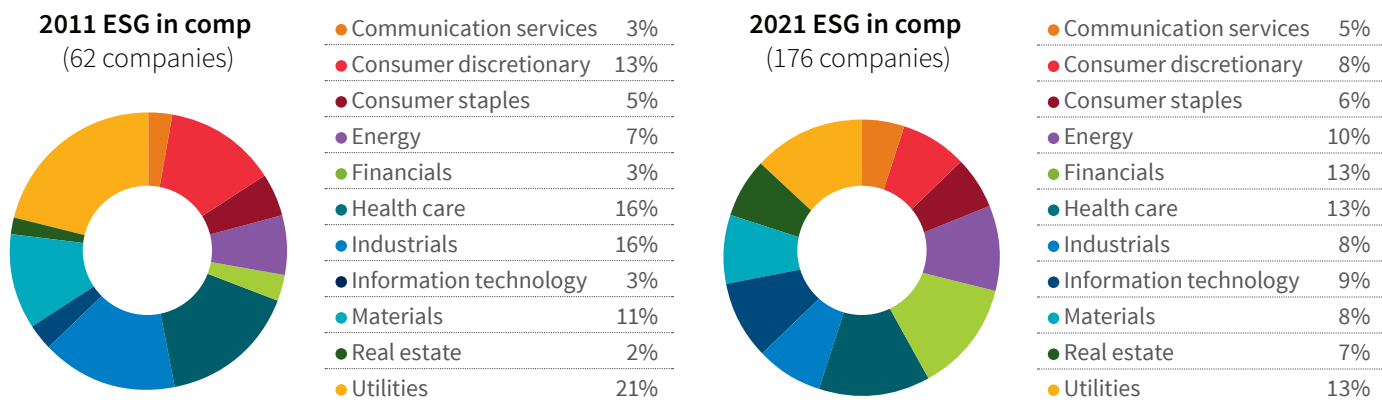
In 2011, 73 companies in the S&P 500 Index incorporated ESG metrics in their incentive compensation plans. In 2022, this number was 179.²⁰

Today, based on observations from proxy filings, we typically see ESG metrics incorporated into annual bonus plans (or STIPs), while inclusion in LTIPs is rarer. This is an interesting dynamic, especially since progress or performance regarding many environmental, social, and governance issues is often best assessed over a longer time period.

The types of companies (by sector) that incorporate ESG metrics into compensation plans have also changed over time. For example, utilities were the most common users of environmental and human capital metrics in 2011, whereas today we see much more diverse sector representation, with a notable increase in financial companies incorporating human capital metrics in their compensation plans.²¹

One challenge with the incorporation of ESG metrics in compensation is the fact that there is sometimes a mismatch between easy-to-quantify data and the most important issues for company success. For example, it is easy to count numbers of employees in different demographic categories, but it is harder to assess team engagement or a corporate culture where diverse expertise and experience are valued. This runs the risk of either less-relevant metrics or lower transparency for shareholders. With that said, we believe that thoughtful approaches to the incorporation of ESG metrics and to the balance between quantitative and qualitative metrics can be additive to compensation plan effectiveness.

A more diverse set of companies incorporate ESG considerations in compensation today



Source: HOLT.

Looking specifically at **environmental metrics**, in 2011, only 10 companies in the S&P 500 incorporated environmental metrics in their incentive compensation; in 2021, that number was 46.²²

A meaningful percentage of that increase has occurred in energy companies. In 2011, one energy company had environmental metrics in its compensation plan. By 2021, 13 energy companies had incorporated environmental metrics.²³ Today, these metrics often reference energy transition planning, including greenhouse gas emissions reduction or recapture, investments in renewable energy, and carbon offset purchases. Environmental safety is a recurring theme, with mitigating pollution and environmental hazards a priority. In several cases, these types of targets have long been priorities for companies; however, including them under an ESG-related heading is a newer trend. Some plans give credit for the development of road maps toward commitments in line with science-based targets (SBTs) or the Paris Agreement or the achievement of interim targets.²⁴

Human capital metrics have also increased in prevalence in incentive plans. In 2011, 46 companies in the S&P 500 incorporated some type of human capital metrics in compensation. In 2021, 112 companies had some type of human capital metric in compensation plans.²⁵

A range of different issues and metrics are referenced in this area, reflecting the variety of business types involved. For example, incentive plans at financial services companies often include employee diversity, employee retention, and references to culture (sometimes measured by employee surveys). For utility companies, notable human capital metrics include targets for increasing supplier diversity, increasing gender diversity within the corporate leadership pipeline, and reducing or eliminating serious safety incidents. For healthcare companies, these targets often emphasize improvements in employee-reported engagement, safety, or health; levels of employee retention; progress toward reaching gender parity; and improvements in training and development programs for existing employees.²⁶

Markers of well-crafted ESG compensation factors

We believe that ESG metrics in compensation plans have the potential to be additive to investors' understanding of management motivations and for incentivizing long-term performance. Putnam's approach to ESG integration within our fundamental research process is rooted in materiality, recognizing that different issues are relevant for different types of businesses. We focus our research on those environmental, social, and governance issues that have the greatest potential to impact long-term financial performance. Aligned with this materiality-based approach, when we analyze ESG performance indicators within compensation plans, we assess these attributes:

Relevance

Are the indicators linked to material business issues?

Additionality

Do these metrics enhance understanding of overall performance in a way that is not already reflected in financial indicators?

Specificity

Are the criteria detailed, clear, and quantifiable to the extent quantification is possible?

Appropriately ambitious

Do the goals incentivize progress without encouraging extreme risk-taking?

As companies incorporate more ESG metrics into compensation plans, and researchers assess the elements noted above, we highlight some key challenges or considerations. In particular, selecting ESG factors for compensation plans that are both *additive* and *specific* can be challenging. ESG metrics, especially with incomplete data and disclosure today, can be less precise and/or quantifiable than financial metrics like TSR versus peers or sales growth. We believe there are many qualitative elements that deserve to be focused on and potentially included in compensation plans, and yet, if not rigorously assessed, qualitative metrics run the risk of leading to elevated payouts without commensurate performance improvements.

As ESG data improves and as more companies include ESG metrics in incentive plans, we will increasingly look for clear goal setting and targets, the same way we do for financial targets, where practical and possible. For example, it is possible to quantify diversity, equity, and inclusion (DEI) metrics and goals that go beyond a simple counting exercise, yet many companies still do not. In this area, we might look for thoughtful, quantifiable targets around overall company diversity, or pipeline diversity, or diversity improvement metrics. Some companies have begun to design scorecards that measure progress on issues such as DEI to be incorporated into performance assessment frameworks, including hiring and representation. In sum, over time we look for more ESG metrics to be clear and quantified when possible and relevant.

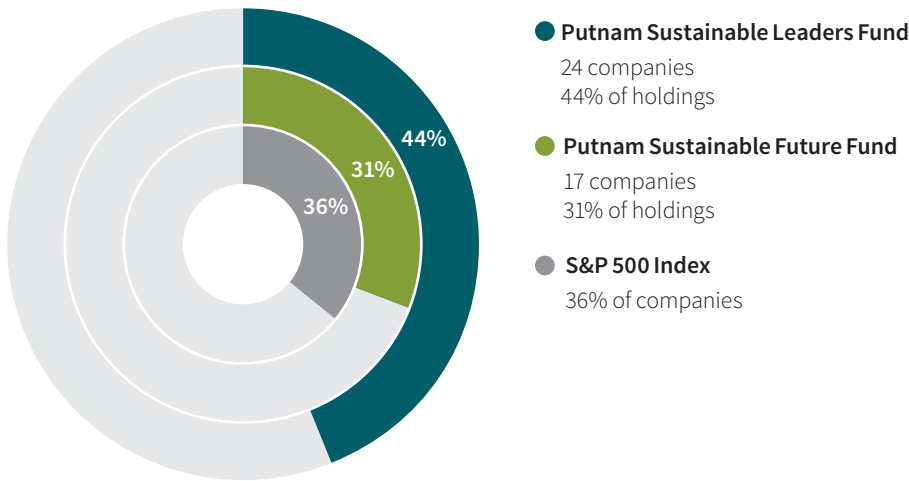
Ultimately, our expectation is that the incorporation of relevant ESG metrics into compensation plans can drive better performance toward appropriate environmental, social, and governance goals, contributing to enhanced financial performance and investment returns.

Portfolio holdings

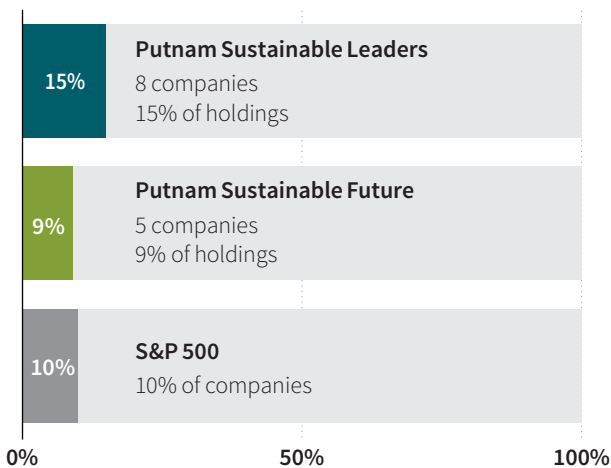
Our research process does not specifically seek out companies that incorporate ESG metrics in management incentive programs. However, as observed in broader market trends, our portfolio holdings reflect the generally rising recognition of tailored ESG considerations as financially material indicators of business performance and progress. With an understanding of how incentive plans have evolved over time, we analyzed compensation plans for certain holdings and make several observations.²⁷

Companies using ESG-related metrics in compensation*

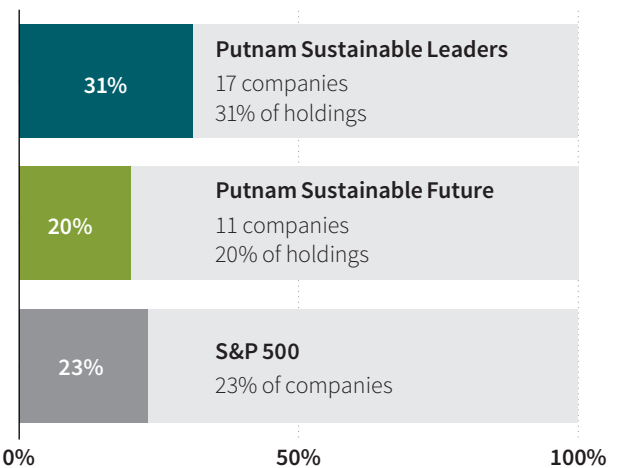
Comparison of holdings in Putnam sustainable portfolios and the S&P 500, by number and percentage, as of 2/24/23



Companies using environmental metrics*



Companies using human capital metrics*



* Based on HOLT data. Some companies incorporate ESG metrics that are not easily characterized as environmental or human capital, so the ESG totals are higher than the sum of those two components.

Portfolio companies with ESG-related metrics in incentive plans (% of portfolio as of 12/31/23)

Sustainable Leaders

Microsoft	9.08%	AMD	1.83%
Apple	7.72%	Thermo Fisher Scientific	1.62%
Hilton Worldwide	2.51%	Chipotle	1.55%
Walmart	2.47%	Regeneron	1.35%
Visa	2.36%	Unilever	1.34%
Boston Scientific	2.32%	Disney	1.18%
Linde	2.07%	Sanofi	1.11%
Fortive	1.88%	Novozymes	1.00%

Sustainable Future

Cintas	3.24%	ASML	1.72%
Mastercard	2.13%	Regeneron	1.65%
Chipotle	2.12%	Quanta Services	1.54%
MSCI	2.12%	Exact Sciences	1.44%
Thermo Fisher Scientific	2.06%	Levi Strauss	1.39%
Palo Alto Networks	1.75%	Novozymes	1.35%

Portfolio companies with environmental metrics in incentive plans (% of portfolio as of 12/31/23)

Sustainable Leaders

Apple	7.72%	Novozymes	1.00%
Chipotle	1.55%		

Sustainable Future

Chipotle	2.12%	Novozymes	1.35%
Palo Alto Networks	1.75%		

AES Corporation (AES) is a power generation company. In 2021, AES's performance-based incentive plan included a 20% weighting tied to the achievement of growth in renewable energy generation. New in 2021 was a performance condition in the long-term RSUs (this is rare, as we often see ESG metrics incorporated only in annual bonus plans), which measures the company's performance on ESG-specific goals (the reduction of gigawatt hours from coal, and diversity and inclusion improvements). AES's annual incentive plan also has performance goals related to safety and other strategic objectives.²⁸

Palo Alto Networks (PANW) is a cybersecurity software company. In 2022, Palo Alto added an "ESG modifier" to its STIP. The change incorporates a 10% modifier to the annual cash bonus based on performance relative to an ESG scorecard with climate, inclusion, and human capital metrics. The specific targets/metrics within these categories are mostly unspecified, and in 2022, no executives benefited or were negatively impacted by the modifier (that is, it was not exercised).²⁹

Apple (AAPL) produces consumer electronic devices and software services. In 2021, it introduced an "ESG modifier" to its annual cash incentive program. This 10% modifier is based on accomplishments and progress toward Apple's values: accessibility, education, environment, inclusion and diversity, privacy, supplier responsibility, and key community initiatives. Environmental metrics were not quantitatively specified and were related to progress toward reaching the company's 2030 carbon neutral goal across the business, manufacturing supply chain, and product lifecycle. In 2022, no executives benefited or were negatively impacted by the ESG modifier (that is, it was not exercised).

As of December 31, 2023, AES Corporation was not held in Putnam Sustainable Leaders Fund or Putnam Sustainable Future Fund; NextEra was not held in Putnam Sustainable Leaders Fund or Putnam Sustainable Future Fund; and Bureau Veritas SA was not held in Putnam Sustainable Leaders Fund or Putnam Sustainable Future Fund.

Portfolio companies with human capital metrics in incentive plans (% of portfolio as of 12/31/23)

Sustainable Leaders

Microsoft	9.08%	AMD	1.83%
Apple	7.72%	Thermo Fisher Scientific	1.62%
Hilton Worldwide	2.51%	Chipotle	1.55%
Walmart	2.47%	Regeneron	1.35%
Visa	2.36%	Sanofi	1.11%
Boston Scientific	2.32%	Novozymes	1.00%
Fortive	1.88%		

Sustainable Future

Cintas	3.24%	Palo Alto Networks	1.75%
Chipotle	2.12%	Exact Sciences	1.44%
MSCI	2.12%	Levi Strauss	1.39%
Thermo Fisher Scientific	2.06%	Novozymes	1.35%

Advanced Micro Devices (AMD) produces semiconductor products and devices. In 2022, AMD added workforce diversity, equity, and inclusion objectives to the strategic milestones for annual cash bonuses (STIP). These strategic goals make up 20% of annual performance goals (80% is performance against financial goals), and diversity is one of three goals in this category. AMD keeps targets confidential, as they believe disclosure would cause competitive harm, and aims for targets to be “challenging yet reasonably achievable.”³⁰

Quanta Services (PWR) provides contracting, engineering, and construction services to electric utilities, telco, government, and other customers. In 2021, safety performance was 20% of Quanta’s overall assessment criteria for short-term compensation, and a composite driver safety rating was 10% of the long-term incentive. In 2021, Quanta adjusted the short-term safety performance metric to focus on the measurement and targeted reduction of significant safety (life-altering) events. In 2021, the company reduced significant safety events by 31%, resulting in a 200% payout. The long-term metric on composite safety measures how average idle time and average composite driver safety improves over the three-year period.³¹

As of December 31, 2023, AES Corporation was not held in Putnam Sustainable Leaders Fund or Putnam Sustainable Future Fund; and Bureau Veritas SA was not held in Putnam Sustainable Leaders Fund or Putnam Sustainable Future Fund.

Other incentive considerations

This analysis has focused on CEO incentive plans because they can be relevant to long-term corporate financial performance, and because there is more data on CEO pay than on compensation practices for broader management teams and all employees. As noted above, we believe a deeper understanding of management compensation incentives can help investors understand how a company's strategy aligns with shareholder and stakeholder outcomes as well as personal rewards for the leadership team. Additionally, it can offer indications of how the allocation of time, attention, and financial resources might be prioritized.

There are several other indicators of incentive alignment that we investigate for the companies researched within Putnam's Sustainable Equity group. While the data on some of these topics is currently incomplete, over time we expect to see added information and disclosure that will facilitate more precise analysis. For now, we incorporate these elements into our company-specific research in both a qualitative and quantitative manner.

Share-based compensation

Using share-based compensation (SBC) for a subset of the employee base has become more common in recent years, especially for technology companies. In the latest fiscal year, share-based compensation expense as a percentage of revenues for S&P 500 companies was 1.6%, but the highest levels of use were over 10%, and 35 of the top 50 users were in technology companies (information technology or communication services).³² For example, SBC was approximately 19% of revenues at ServiceNow (NOW), 11% at Ceridian (CDAY) and Autodesk (ADSK), and 10% at Meta (META).³³

In 2022, the highest use of share-based compensation was among technology companies, which accounted for 35 of the top 50 companies using this tool.

High SBC in and of itself is not necessarily negative, but it warrants particular attention in financial analysis, as it requires adjustments in valuation analysis, is often excluded from adjusted profit calculations, and yet can lead to ongoing dilution for other shareholders. Additionally, qualitative assessment is needed to determine whether SBC is doing what it's intended to do — incentivizing and aligning employees with the company's success. Often tech companies use this tool as a key recruiting and retention mechanism for competitive roles like engineers.

In theory, issuing SBC to employees helps to better align their interests with the company's and with other stakeholders'. In practice, sometimes SBC is a substitute for cash compensation instead of an incentive for strong performance and aligned interests. There are good reasons for potential disconnects. For example, unlike the presumed direct impacts of senior management roles on corporate success, the day-to-day work of many employees might only indirectly influence corporate success and/or share performance, especially in the shorter term.

Employee ownership models

Some companies and investors, especially in private markets, are advocating for even broader share ownership, beyond groups like engineers, software developers, and sales representatives and beyond typical SBC-focused industries like technology. One model that has unique merits is the employee ownership model, which has been advanced by companies like KKR and TPG, and is supported by nonprofit organizations like Ownership Works.³⁴ Employee ownership approaches allow public and private organizations to create a broad equity ownership model that includes all employees. The theoretical benefit of broader ownership like this is twofold: broader incentive alignment across all workers that has the potential to positively impact performance and wealth creation for employees historically left out of most equity-like structures (which, in turn, can drive better retention and talent attraction).

Employee ownership links directly to several areas of our equity team’s thematic map, such as stakeholder wellness and equity, business processes, and access and opportunity.

An example of this approach is the model that Ingersoll Rand (IR) created before going public, which included 6,100 employees as co-owners of the company. The equity grant given to those employees represented approximately 40% of base salary levels. In December 2020, IR, by this time a much larger company, made additional grants to all 16,000 employees at a level of approximately 20% of average base salaries, one of the largest equity grants made by an industrial company.³⁵

Ingersoll’s management team notes the importance of creating a share ownership model that is thoughtful about the specific metrics tied to performance (in its case, net working capital and cash flow) and subsequently emphasizes ongoing training and education. (IR trained all employees to understand net working capital and has strong ongoing efforts to treat and include all employees as true owners.) Programs like this have the potential to improve operating results.

After implementing this program, Ingersoll Rand saw employee engagement scores improve from under 20% to over 90%, experienced a 70% reduction in safety issues, and lowered attrition rates from 19% to about 3%. The company has also lowered working capital as a percentage of sales from around 30% to 20%, and the stock rose 165% from the 2017 IPO through March 2023, roughly double the performance of the S&P 500 Index over that time frame. All told, the company estimates it has created about \$3 billion in value from this \$250 million investment in equity.³⁶

As researchers and shareholders, we are impressed by effective models like these, emphasizing alignment, performance, and transparency, and supported by communication and training to enhance success. Over time, we look forward to seeing more examples of employee ownership models that are tailored to different sectors and individual business models of public companies. These models have the potential to have a positive impact on employees and on business performance over time.

In summary, we offer these takeaways about incentive compensation information for investors.

- Growing data on absolute pay, CEO pay relative to median worker, and the composition of management incentive plans can be useful tools for investors.
- We look for thoughtful structure and composition of management incentive plans reflecting a long-term focus, performance-based metrics, reasonable absolute pay levels, business-relevant metrics, and clear and transparent structures.
- ESG-related goals are increasingly incorporated into management incentive compensation plans across the broader market and for the companies we hold in our portfolios. Thoughtful incorporation of ESG performance can be additive to investor understanding and can help to drive long-term performance benefits, especially when plans consider ESG metrics that are relevant, additive, specific, clear, and appropriately ambitious.
- Other alignment tools that we pay attention to include the use of stock-based compensation and broader equity ownership models. We are particularly interested in the latter and hopeful that more (public) companies work to develop thoughtful equity ownership models that can align incentives, drive operational performance, and create wealth for workers who are otherwise often left out of equity-like structures.

Conclusion: The importance of connection

Putnam's sustainable equity work has developed rapidly and positively over the past six years. We are encouraged by progress to date with respect to our research, investment process, engagement, and impact, and we also recognize our efforts are still developing to meet the changing operating conditions of our profession and our world.

Throughout this report, one essential element shines through: All our endeavors require partnership and connection. Our research process involves collaboration with colleagues at Putnam, at other research and investment firms, and at the companies in which we invest. Our portfolio analysis involves partnership with external standard-setting bodies, data providers, academic researchers, and governmental and nongovernmental organizations. Our thematic and impact-centered activity requires connection at all levels of systems, from community inputs to consultation with scientific experts to discourse with policymakers. Investing is often perceived as a purely competitive endeavor, but our portfolios and our shareholders benefit from the broad and deep community that supports our work.

Thank you for taking the time to understand the research process that informs our investing, the ways we assess our progress, and the potential impact that our work and investments have in the world. As our practice continues to develop, we are encouraged by the increasingly evident and relevant links between sustainability strategy, environmental and social impact, and long-term business fundamentals. We are grateful for your engagement and eager to continue in our shared endeavors — to reconnect investing with the world it is designed to serve.

APPENDIX 1

UN Sustainable Development Goals

We explain how our sustainable equity themes align with the 17 UN Sustainable Development Goals, a global guide to sustainability efforts.

The Sustainable Development Goals are a set of global priorities developed by countries, NGOs, businesses, scientific communities, and other stakeholders from around the world. The SDGs were not explicitly devised as an investment framework, but serve as a guide for companies' and investors' long-term sustainability efforts and as a mandate to address the challenges facing our world.

Per the United Nations, the SDGs “are a call for action by all countries — poor, rich, and middle-income — to promote prosperity while protecting the planet. They recognize that ending poverty must go hand in hand with strategies that build economic growth and address a range of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection.”

The 17 SDGs are at the heart of the 2030 Agenda for Sustainable Development, which was adopted by all United Nations Member States in 2015. These goals “provide a global blueprint for dignity, peace, and prosperity for people and the planet, now and into the future.”³⁷

Sustainable Development Goals

 <p>1 NO POVERTY</p>	End poverty in all its forms everywhere	 <p>10 REDUCED INEQUALITIES</p>	Reduce inequality within and among countries
 <p>2 ZERO HUNGER</p>	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	 <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	Make cities inclusive, safe, resilient, and sustainable
 <p>3 GOOD HEALTH AND WELL-BEING</p>	Ensure healthy lives and promote well-being for all at all ages	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	Ensure sustainable consumption and production patterns
 <p>4 QUALITY EDUCATION</p>	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	 <p>13 CLIMATE ACTION</p>	Take urgent action to combat climate change and its impacts
 <p>5 GENDER EQUALITY</p>	Achieve gender equality and empower all women and girls	 <p>14 LIFE BELOW WATER</p>	Conserve and sustainably use the oceans, sea, and marine resources
 <p>6 CLEAN WATER AND SANITATION</p>	Ensure access to water and sanitation for all	 <p>15 LIFE ON LAND</p>	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	Ensure access to affordable, reliable, sustainable, and modern energy	 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	Promote just, peaceful, and inclusive societies
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	Promote inclusive and sustainable economic growth, employment, and decent work for all	 <p>17 PARTNERSHIPS FOR THE GOALS</p>	Revitalize the global partnership for sustainable development
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	Build resilient infrastructure, promote sustainable industrialization, and foster innovation		

Mapping Putnam sustainable equity themes to the UN SDGs

The United Nations Sustainable Development Goals (listed in the far left columns of the tables below) serve as a guide to the world’s most important sustainability priorities. Here we show the connections between our investment themes and the SDG framework, based on internal analysis. As more companies link their own operating activities to the SDG framework, we expect this type of analysis to extend and deepen over time.

- Direct connection
- Indirect connection



Thriving People



Thriving Public

United Nations Sustainable Development Goals (SDGs)	Delivery of care	Tools and therapies	Preventive care and wellness	Access and opportunity	Stakeholder wellness and equity	Security and privacy	Business processes
1 Poverty	●	●	●	●	●		
2 Hunger	●	●	●	●	●		
3 Health	●	●	●	●	●		
4 Education	●	●	●	●	●		
8 Economy				●	●	●	●
9 Infrastructure and industry						●	●
11 Cities				●	●	●	●
12 Consumption and production					●		●
6 Water and sanitation				●			
7 Energy				●			●
13 Climate change							●
14 Oceans							
15 Land							
5 Gender equality	●	●	●	●	●	●	
10 Reduced inequalities	●	●	●	●	●	●	
16 Peace and justice	●	●	●	●	●	●	
17 SDG partnership							

- Direct connection
- Indirect connection



Thriving Public



Thriving Planet

United Nations Sustainable Development Goals (SDGs)	Precision tech and shared infstr.	Circular economy	Biological solutions	Sustainable agriculture	Resource stewardship	Water quality and access	Decarbonization
1 Poverty					●		
2 Hunger	●		●	●	●		
3 Health	●		●	●	●		
4 Education							
8 Economy	●	●	●				
9 Infrastructure and industry	●	●	●	●	●	●	●
11 Cities	●	●			●	●	●
12 Consumption and production	●	●	●	●	●	●	●
6 Water and sanitation	●	●		●	●	●	
7 Energy	●	●	●		●		●
13 Climate change	●	●	●	●	●	●	●
14 Oceans		●	●	●	●	●	●
15 Land		●	●	●	●	●	●
5 Gender equality					●		
10 Reduced inequalities					●		
16 Peace and justice					●		
17 SDG partnership							

APPENDIX 2

Sustainability Summary Reports

We share the sustainability scoring, analysis, and indicators for the two funds as provided by Sustainalytics, an ESG research and data provider.

Some clients find these metrics useful, and selected metrics may be required in certain regulatory settings. As noted throughout this report, our investment process often analyzes and adjusts standardized third-party data to reflect more accurate, timely, or decision-useful information. Additionally, we assess the utility of specific calculations and methodologies involved in ESG data reporting, since many metrics are complicated and rely on partial or estimated data. Please refer to the footnotes and terms and definitions sections of these reports for more detailed information.

Sustainability Summary Report

Name: Putnam Sustainable Future Fund

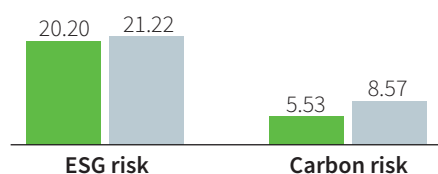
Benchmark: Russell Midcap Growth Index

As of December 31, 2022

Putnam Sustainable Future Fund seeks long-term capital appreciation by investing in companies with the potential to produce strong financial returns and positive environmental and social outcomes. The portfolio invests in companies whose products and services provide solutions to essential sustainability challenges. Our investment process does not utilize third-party ESG scores to drive the overall decision-making process. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities. In no case do ESG scores or models result in automatic buy or sell decisions for the portfolio.

Portfolio summary scoring

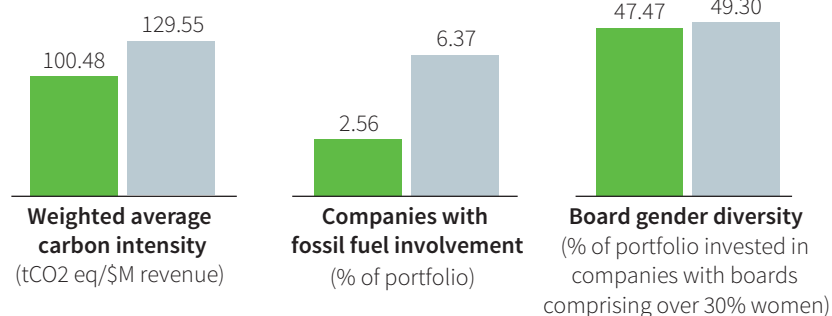
■ Portfolio ■ Benchmark



For definitions of Sustainalytics scores, please see the Appendix. Portfolios with lower ESG and carbon risk scores, based on Sustainalytics ratings, have lower ESG risk and lower exposure to material carbon and fossil fuel issues.

Key sustainability metrics

■ Portfolio ■ Benchmark



Business involvement

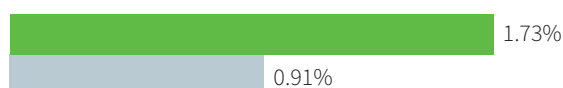
Business involvement	Revenue threshold	Count	% of portfolio
Private prisons	>10%	0	0.00%
Thermal coal	>10%	0	0.00%
Tobacco	>10%	0	0.00%
Gambling	>10%	0	0.00%
Controversial weapons*	>0%	0	0.00%

* Controversial weapons include the following: anti-personnel mines, biological and chemical weapons, cluster weapons, white phosphorus, depleted uranium, and nuclear weapons.

Controversy reporting

■ Portfolio ■ Benchmark

High and severe controversies (% of portfolio)



Controversy breakdown

Greatest controversy	Portfolio count	% of portfolio	Benchmark count	% of benchmark
Category 5 (severe)	0	0.00%	0	0.00%
Category 4 (high)	1	1.73%	7	0.91%

For definitions of Sustainalytics Category 4 and Category 5 controversy reporting, please see the Appendix.

Source: Sustainalytics, a third-party ESG research and data provider. Sustainalytics' data is aggregated at the portfolio level and is for illustrative purposes only. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities.

For the purposes of this report, we have chosen several portfolio-level ESG metrics (key sustainability indicators) that we believe provide a diverse set of factors that can be used to highlight the portfolio's ESG characteristics and are intended to illustrate Putnam's assessment of ESG-related information. Sustainability and ESG metrics are not uniformly defined, and applying these metrics involves subjective assessments. Sustainability and ESG scoring can vary across third-party data providers and may change over time.

ESG-related information generated by third-party data providers may be inaccurate, incomplete, inconsistent, and/or out-of-date, which may adversely impact analysis of the ESG factors relevant to a company, issuer, or portfolio. Use of quantitative and ESG modeling techniques is no guarantee of investment success or positive performance.

Key sustainability indicators

Name: Putnam Sustainable Future Fund

As of December 31, 2022

The indicators below aim to provide additional ESG metrics for the portfolio and were adapted from the European Union’s Sustainable Finance Disclosure Regulation. This document simply serves as a way to demonstrate Putnam’s capabilities to report these metrics through the use of a third-party vendor, such as Sustainalytics. This document does not serve in meeting any regulatory requirements.

	Indicator	Portfolio aggregate	Coverage ratio	Unit of measure	
ENVIRONMENTAL	Greenhouse gas emissions	Scope 1	3,676.22	88.15	tCO ₂ eq
		Scope 2	1,279.92	88.15	tCO ₂ eq
		Scope 3	13,712.89	92.49	tCO ₂ eq
		Total GHG	5,233.03	92.49	tCO ₂ eq
	Carbon footprint	Carbon footprint	16.12	92.49	tCO ₂ eq/EUR M invested
		Greenhouse gas intensity	102.21	93.52	tCO ₂ eq/EUR M invested
		Exposure to companies active in the fossil fuel sector	2.56	2.56	Percentage of portfolio
		Non-renewable energy consumption	65.89	46.76	Percentage of total energy sources
		Non-renewable energy production	21.57	16.98	Percentage of total energy sources
	Energy consumption intensity in high-impact climate sector	Agriculture, Forestry & Fish	—	—	GWh/EUR M revenue
		Construction	0.24	1.5	GWh/EUR M revenue
		Electricity, Gas, Steam & Air Conditioning	—	—	GWh/EUR M revenue
		Manufacturing	0.20	32.96	GWh/EUR M revenue
		Mining & Quarrying	—	—	GWh/EUR M revenue
		Real Estate Activities	0.00	1.30	GWh/EUR M revenue
		Transportation & Storage	—	—	GWh/EUR M revenue
		Water Supply, Sewerage, Waste Management & Remediation Activities	—	—	GWh/EUR M revenue
		Wholesale & Retail Trade & Repair of Motor Vehicles & Motorcycles	0.05	3.89	GWh/EUR M revenue
		Activities negatively affecting biodiversity-sensitive areas	1.29	1.29	Percentage of portfolio
		Emissions to water	0.33	2.88	t/EUR M invested
		Hazardous waste	20.85	23.30	t/EUR M invested (weighted average)
		Air pollutants	1.21	10.68	t/EUR M invested
	Investments in companies without carbon emissions reduction initiatives*	64.67	64.67	Percentage of portfolio	
	GOVERNANCE AND SOCIAL	Violations of UN Global Compact principles and OECD Guidelines for Multinational Enterprises	0.00	0.00	Percentage of portfolio
		Lack of processes and compliance to UNGC and OECD	77.60	77.60	Percentage of portfolio
		Unadjusted gender pay gap	—	—	Percentage
		Board gender diversity	31.10	96.12	Percentage
Exposure to controversial weapons		0.00	0.00	Percentage of portfolio	
Lack of anti-corruption and anti-bribery policies		0.00	0.00	Percentage of portfolio	
Lack of a supplier code of conduct*		5.8	5.75	Percentage of portfolio	

* Optional PAI metrics.

Source: Sustainalytics, a third-party ESG research and data provider. Sustainalytics' data is aggregated at the portfolio level and is for illustrative purposes only. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities.

For the purposes of this report, we have chosen several portfolio-level ESG metrics (key sustainability indicators) that we believe provide a diverse set of factors that can be used to highlight the portfolio's ESG characteristics and are intended to illustrate Putnam's assessment of ESG-related information. Sustainability and ESG metrics are not uniformly defined, and applying these metrics involves subjective assessments. Sustainability and ESG scoring can vary across third-party data providers and may change over time.

ESG-related information generated by third-party data providers may be inaccurate, incomplete, inconsistent, and/or out-of-date, which may adversely impact analysis of the ESG factors relevant to a company, issuer, or portfolio. Use of quantitative and ESG modeling techniques is no guarantee of investment success or positive performance.

Sustainability Summary Report

Name: Putnam Sustainable Leaders Fund

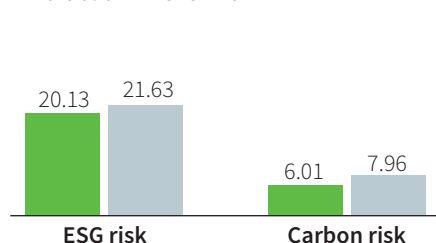
Benchmark: S&P 500 Index

As of December 31, 2022

Putnam Sustainable Leaders Fund seeks long-term capital appreciation. The fund invests in companies we believe have strong fundamentals linked to leadership in financially material sustainability issues. Our investment process does not utilize third-party ESG scores to drive the overall decision-making process. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities. In no case do ESG scores or models result in automatic buy or sell decisions for the portfolio.

Portfolio summary scoring

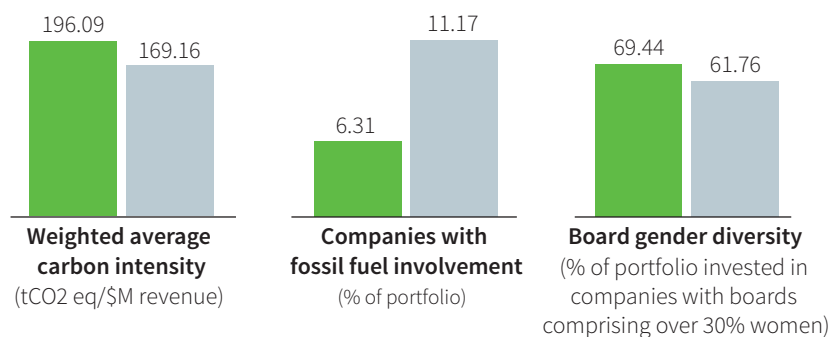
■ Portfolio ■ Benchmark



For definitions of Sustainalytics scores, please see the Appendix. Portfolios with lower ESG and carbon risk scores, based on Sustainalytics ratings, have lower ESG risk and lower exposure to material carbon and fossil fuel issues.

Key sustainability metrics

■ Portfolio ■ Benchmark



Business involvement

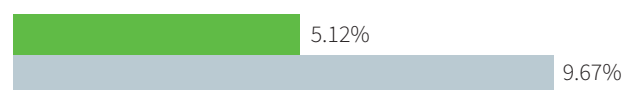
Business involvement	Revenue threshold	Count	% of portfolio
Private prisons	>10%	0	0.00%
Thermal coal	>10%	1	1.27%
Tobacco	>10%	0	0.00%
Gambling	>10%	0	0.00%
Controversial weapons*	>0%	0	0.00%

* Controversial weapons include the following: anti-personnel mines, biological and chemical weapons, cluster weapons, white phosphorus, depleted uranium, and nuclear weapons.

Controversy reporting

■ Portfolio ■ Benchmark

High and severe controversies (% of portfolio)



Controversy breakdown

Greatest controversy	Portfolio count	% of portfolio	Benchmark count	% of benchmark
Category 5 (severe)	0	0.00%	2	0.57%
Category 4 (high)	3	5.12%	18	9.10%

For definitions of Sustainalytics Category 4 and Category 5 controversy reporting, please see the Appendix.

Source: Sustainalytics, a third-party ESG research and data provider. Sustainalytics' data is aggregated at the portfolio level and is for illustrative purposes only. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities.

For the purposes of this report, we have chosen several portfolio-level ESG metrics (key sustainability indicators) that we believe provide a diverse set of factors that can be used to highlight the portfolio's ESG characteristics and are intended to illustrate Putnam's assessment of ESG-related information. Sustainability and ESG metrics are not uniformly defined, and applying these metrics involves subjective assessments. Sustainability and ESG scoring can vary across third-party data providers and may change over time.

ESG-related information generated by third-party data providers may be inaccurate, incomplete, inconsistent, and/or out-of-date, which may adversely impact analysis of the ESG factors relevant to a company, issuer, or portfolio. Use of quantitative and ESG modeling techniques is no guarantee of investment success or positive performance.

Key sustainability indicators

Name: Putnam Sustainable Leaders Fund

As of December 31, 2022

The indicators below aim to provide additional ESG metrics for the portfolio and were adapted from the European Union's Sustainable Finance Disclosure Regulation. This document simply serves as a way to demonstrate Putnam's capabilities to report these metrics through the use of a third-party vendor, such as Sustainalytics. This document does not serve in meeting any regulatory requirements.

	Indicator	Portfolio aggregate	Coverage ratio	Unit of measure	
ENVIRONMENTAL	Greenhouse gas emissions	Scope 1	138,772.71	92.75	tCO ₂ eq
		Scope 2	40,774.42	92.75	tCO ₂ eq
		Scope 3	360,624.48	95.87	tCO ₂ eq
		Total GHG	181,670.39	95.87	tCO ₂ eq
	Carbon footprint	Carbon footprint	39.65	95.87	tCO ₂ eq/EUR M invested
		Greenhouse gas intensity	209.02	96.78	tCO ₂ eq/EUR M invested
		Exposure to companies active in the fossil fuel sector	6.31	6.31	Percentage of portfolio
		Non-renewable energy consumption	70.15	73.07	Percentage of total energy sources
		Non-renewable energy production	37.47	24.32	Percentage of total energy sources
	Energy consumption intensity in high-impact climate sector	Agriculture, Forestry & Fish	—	—	GWh/EUR M revenue
		Construction	—	—	GWh/EUR M revenue
		Electricity, Gas, Steam & Air Conditioning	11.69	1.27	GWh/EUR M revenue
		Manufacturing	0.35	45.26	GWh/EUR M revenue
		Mining & Quarrying	—	—	GWh/EUR M revenue
		Real Estate Activities	0.34	2.82	GWh/EUR M revenue
		Transportation & Storage	2.03	1.66	GWh/EUR M revenue
		Water Supply, Sewerage, Waste Management & Remediation Activities	—	—	GWh/EUR M revenue
		Wholesale & Retail Trade & Repair of Motor Vehicles & Motorcycles	0.09	6.40	GWh/EUR M revenue
		Activities negatively affecting biodiversity-sensitive areas	4.48	4.48	Percentage of portfolio
	GOVERNANCE AND SOCIAL	Emissions to water	24.91	9.98	t/EUR M invested
		Hazardous waste	295.88	47.13	t/EUR M invested (weighted average)
		Air pollutants	262.39	23.91	t/EUR M invested
		Investments in companies without carbon emissions reduction initiatives*	57.28	57.28	Percentage of portfolio
		Violations of UN Global Compact principles and OECD Guidelines for Multinational Enterprises	0.00	0.00	Percentage of portfolio
		Lack of processes and compliance to UNGC and OECD	72.04	72.04	Percentage of portfolio
		Unadjusted gender pay gap	—	—	Percentage
	Board gender diversity	33.69	97.26	Percentage	
GOVERNANCE AND SOCIAL	Exposure to controversial weapons	0.00	0.00	Percentage of portfolio	
	Lack of anti-corruption and anti-bribery policies	0.00	0.00	Percentage of portfolio	
	Lack of a supplier code of conduct*	1.9	1.91	Percentage of portfolio	

* Optional PAI metrics.

Source: Sustainalytics, a third-party ESG research and data provider. Sustainalytics' data is aggregated at the portfolio level and is for illustrative purposes only. Putnam uses Sustainalytics to provide additional input in the analysis of ESG-related criteria as part of the overall research and investment process and to understand potential ESG risks and opportunities.

For the purposes of this report, we have chosen several portfolio-level ESG metrics (key sustainability indicators) that we believe provide a diverse set of factors that can be used to highlight the portfolio's ESG characteristics and are intended to illustrate Putnam's assessment of ESG-related information. Sustainability and ESG metrics are not uniformly defined, and applying these metrics involves subjective assessments. Sustainability and ESG scoring can vary across third-party data providers and may change over time.

ESG-related information generated by third-party data providers may be inaccurate, incomplete, inconsistent, and/or out-of-date, which may adversely impact analysis of the ESG factors relevant to a company, issuer, or portfolio. Use of quantitative and ESG modeling techniques is no guarantee of investment success or positive performance.

Terms and definitions

Board gender diversity metric is the calculation of the percentage of companies in the portfolio where women comprise 30% or more of total board membership. The metric includes holdings for which the percentage of female board members details are known. It is calculated only on the long holdings portion of the portfolio.

Carbon intensity is a relative metric used to compare company emissions across industries. Sustainalytics divides the absolute emissions by total revenue, meaning the figure is expressed in tonnes of carbon dioxide equivalent per million USD of total revenue. (scope 1 and scope 2)

Carbon risk rating quantifies the company's exposure and management of material carbon issues in its own operations as well as its products and services (as assessed by Sustainalytics).

Category 4 controversy reporting events have a high impact on the environment and society, posing high business risks to the company. This rating level represents systemic and/or structural problems within the company, weak management systems and company response, and a recurrence of incidents (as assessed by Sustainalytics).

Category 5 controversy reporting events have a severe impact on the environment and society, posing serious business risks to the company. This category represents exceptional egregious corporate behavior, high frequency of recurrence of incidents, very poor management of ESG risks, and a demonstrated lack of willingness by the company to address such risks (as assessed by Sustainalytics).

ESG risk rating measures the degree to which a company's economic value is at risk driven by ESG factors, as assessed through Sustainalytics' calculation of the company's unmanaged ESG risks.

Fossil fuel involvement measures the percentage of the portfolio exposed to companies that derive any percentage of revenue from fossil fuels.

It is important to note that, in pursuit of the Funds' goals, the Portfolio Management Team focuses on companies with a demonstrated commitment to sustainable business practices in areas that are relevant and material to their long-term financial returns and risk profiles. The team believe that companies that have exhibited such a commitment also often demonstrate potential for strong financial growth. This commitment may be reflected through environmental, social and/or corporate governance (ESG) policies, practices, or outcomes. The team believe that analysis of sustainability factors is best utilized in combination with a strong understanding of a company's fundamentals (including a company's industry, geography, and strategic position). The team's approach to sustainability analysis is deeply intertwined with their fundamental research process.

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For informational purposes only. Not an investment recommendation.

Endnotes

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- 5 More detail can be found at www.putnam.com/individual/how-we-invest/sustainable-investing/.
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- 18 Economic Policy Institute, “CEO pay has skyrocketed 1,460% since 1978,” October 4, 2022, <https://www.epi.org/publication/ceo-pay-in-2021/>.
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- 20 Based on HOLT data and Putnam analysis.
- 21 Based on HOLT data and Putnam analysis.
- 22 Based on HOLT data and Putnam analysis.
- 23 Based on HOLT data and Putnam analysis.
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The companies presented as investment examples represent the positions deemed most relevant to the applicable ESG investment theme being discussed. Company examples were selected without regard to whether such industries, or relevant securities, were profitable and are intended to help illustrate our fundamental research process. A security may be selected for a portfolio based on factors other than the ESG themes highlighted herein, and the inclusion of company information should not be interpreted as a recommendation to buy or sell or hold any security. It should not be assumed that investment in the securities mentioned was or will be profitable.

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