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The active edge in sustainable investing

The challenges of 2020 have given us an opportunity to test our processes and performance in an extreme set of conditions. During this time, our active investment and sustainable investing strategies have fared well. We believe that active, fundamental research is key to unlocking differentiated insights and creating alpha for all strategies. The potential benefits are even more clear for sustainable investing, where underlying environmental, social, and governance (ESG) data is still evolving, and context matters greatly.

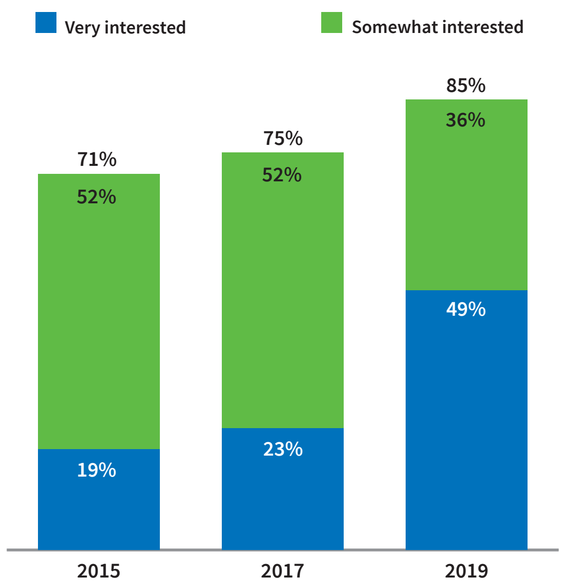
Sustainable strategies have outperformed their traditional peers in recent time periods

According to the Morgan Stanley Institute for Sustainable Investing's "Sustainable Reality: 2020 Update," U.S.-based sustainable equity strategies outperformed their traditional peers in 2019. Also in the extremely challenging first half of 2020, U.S.-based sustainable strategies outperformed traditional strategies by an even wider margin. The Morgan Stanley report draws on analysis of more than 11,000 mutual and exchange traded U.S.-domiciled funds.

FIGURE 1

Rising interest in sustainable investing

A growing number of individuals say they are "very interested" in sustainable investing, according to surveys from the Morgan Stanley Institute for Sustainable Investing.



Source: Morgan Stanley Institute for Sustainable Investing, "Sustainable Reality: 2020 Update." September 2020.

Focus on inclusion is key to alpha and impact

Putnam's two sustainable strategies have delivered alpha, particularly through the difficult market environment in 2020. Both strategies outperformed their benchmarks for the one-year period ended September 30, 2020.

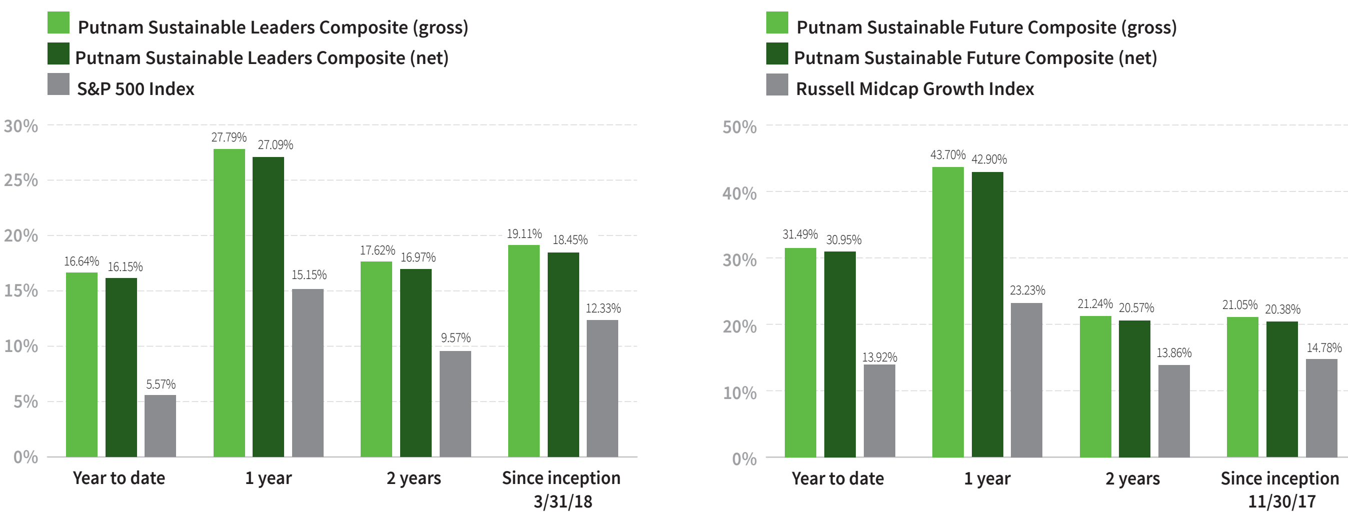
As active managers, we take an inclusionary approach and seek out companies where a leading sustainability strategy may have a positive impact on financial performance. One example is First Republic Bank, where a strong culture leads to lower employee turnover, higher referral rates, and more sustainable loan growth.

> "We seek out companies where a leading sustainability strategy may have a positive impact on financial performance."

Within the sustainable investment landscape, many passive strategies take an exclusionary approach that eliminates exposure to certain types of businesses, while other passive strategies take a "best-in-class" approach that aims for sector-neutral portfolio construction by owning stocks with the highest sustainability ratings within each sector or industry. For example, one of the largest passive ESG exchange-traded funds (ETFs) available today holds shares in two of the world's largest publicly traded hydrocarbon producers. Several of the other top passive ESG ETFs hold shares in other large global hydrocarbon producers. This is because the investment process for passive ETF portfolios is typically based on owning higher relative rated companies and/or incorporating assessments of ESG corporate practices.

FIGURE 2

Competitive performance from Putnam's sustainable strategies



Data as of 9/30/20. Past performance is not a guarantee of future results. An investment in this strategies can lose value. Please see the composite disclosures to located at the end of the presentation for strategy specific risk disclosures.

Periods less than one year are not annualized. Returns are shown in U.S. dollars and include the reinvestment of dividends and interest. Gross performance does not include the deduction of management fees and other expenses that may be incurred in managing an investment account. A portfolio's return will be reduced by advisory and other fees.

Sources: The S&P 500 Index is an unmanaged index of common stock performance. The Russell Midcap Growth Index is an unmanaged index of those companies in the Russell Midcap Index chosen for their growth orientation. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Russell® is a trademark of Frank Russell Company. You cannot invest directly in an index.

As of 9/30/20, First Republic Bank accounted for 1.84% and 0.94% of the Sustainable Future and Sustainable Leaders strategies, respectively. The company presented as an investment example represents the position deemed most relevant to the applicable ESG investment theme being discussed. Company examples are 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. Holdings are for a representative account and are shown for illustrative purposes only. Each account is managed individually. Accordingly, account characteristics may vary.

In contrast, our forward-looking fundamental approach, which is focused on long-term trends and company-specific business analysis, helps us to identify companies that are proactively transitioning power generation from hydrocarbons to renewable energy. The stocks of large hydrocarbon producers have underperformed in recent years in part due to the industry's transition to lower cost renewable energy sources, whereas companies that had renewable energy sources in place performed better. Of course, an active approach does not always lead to such divergence in performance, but this example illustrates the potential benefit of investing in companies that are leading sustainability trends like the shift to renewable energy.

Considering companies of all sizes

As active managers, we are also able to seek opportunities in smaller, faster-growth companies. We seek those that are creating innovative and impactful solutions that we believe will drive investment performance. Many passive strategies rely at least in part on third-party ESG ratings, which tend to favor larger-cap companies. Generally, larger companies have more resources to devote to ESG disclosure, which tends to lead to higher scores. Smaller companies with fewer resources often have lower, or incomplete, scores from third-party data providers. Yet these smaller companies can also have products or services that might be tied to powerful sustainability themes, driving potentially faster growth.

This dynamic can also be seen with newer companies, and especially with recent IPOs. Our ability as active managers to incorporate timely and less-structured ESG information before it is reflected in third-party scores or other structured data sources is essential in our view. Without this approach, investors may miss out on the potentially positive performance and faster growth of smaller or newly public companies that focus on sustainability solutions.

> “As active managers, we are able to incorporate timely and less-structured ESG information before it is reflected in third-party scores.”

According to Bloomberg, the average ESG disclosure score for small-cap companies is nearly 20% lower than that of large-cap companies, as reported by BofA Research in “ESG Matters,” August 21, 2020. Within the Russell 1000 Index, 90% of the larger companies (top half of the index based on market cap) published sustainability reports, while only one third of the smaller companies did the same.

This disclosure dynamic translates to some surprising and counterintuitive results at the company rating level. Using one third-party data provider's methodology, for example, many investors would be surprised to learn that one of the largest public tobacco companies scores better than a pharmaceutical company developing lung cancer therapeutics. This is due in part to differences in the volume of ESG disclosures. As active investors, we also consider the substance of the business, the company-specific sustainability strategy and forward looking goals, and how all of these elements are also linked to financial performance.

> “We consider the substance of the business, the company-specific sustainability strategy and forward-looking goals, and how all of these elements are also linked to financial performance.”

We learn from the past, but are focused on the future

Often, the ratings and data that help inform ownership in passive products are based on historical data. A company's disclosure on greenhouse gas emissions over the past five years is likely not the determining factor for financial performance — or environmental progress — over the next five years. Our approach allows us to use valuable historical and external ESG data as context for considering future prospects.

We believe that with an understanding of history, we can analyze future potential in areas like resource intensity, strength of corporate culture, and ability to invest future cash flows wisely. All of these elements are harder-to-quantify, forward-looking ESG characteristics that we believe can meaningfully impact future fundamental performance.

Our sustainable strategies

In our portfolios, we pursue excellence in sustainability performance that we believe is intrinsically linked to positive financial performance.

Putnam Sustainable Future

- Our emphasis for this strategy is on solutions-oriented companies that offer innovative ways to address our greatest sustainability challenges.
- The stocks of these companies are typically, but not always, considered to be growth stocks, and often are mid-cap or small-cap in size.
- We seek to invest in products and services that result in positive environmental, economic, or social impact.
- By providing these solutions, the companies in the portfolio offer potential for strong financial growth and profitability, in our view.

Putnam Sustainable Leaders

- With this strategy, we seek companies with strong fundamentals that are linked to leadership in financially material sustainability issues.
- The stocks of these companies are typically, but not always, considered to be growth stocks, and in most cases they are large-cap in size.
- We look for performance that demonstrates true leadership, not just compliance, in areas such as clean and efficient materials use, reductions in carbon or water intensity, improvements in work-place equality and diversity, and alignment of management incentives.
- We invest in companies where strength in relevant sustainability issues is increasing their long-term business potential.
- By focusing on material ESG issues for each individual business, we aim to identify companies with durable financial performance and potentially lower risk profiles.

No assurance can be given that the investment objective will be achieved or that an investor will receive a return of all or part of his or her investment. Actual results could be materially different from the stated goals. Investors should carefully consider the risk involved before deciding to invest. As with any investment, there is a potential for profit as well as the possibility of loss.

The active advantage

We believe that thoughtful fundamental analysis is required to identify the relevant and financially material sustainability issues that will impact the future performance of a given company. By taking an integrated fundamental approach to research, we seek to identify companies where sustainability leadership and innovative solutions will contribute to long-term financial success. Our active portfolios therefore pursue excellence in sustainability performance that we believe is intrinsically linked to positive financial performance. In our view, this forward-looking fundamental approach gives us a distinct advantage.

> “We seek to identify companies where sustainability leadership and innovative solutions will contribute to long-term financial success.”

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Putnam Sustainable Leaders strategy

Year	Gross of Fees Return (%)	Net of Fees Return (%)	Annual Benchmark Return (%)	Three year Standard Deviation of Composite (%)[1]	Three year Standard Deviation of Benchmark (%)[1]	Standard Deviation of Account Returns (%)[2]	Composite Assets (millions)	Total Firm Assets (millions)[3]	Number of Accounts
2019	37.29	36.54	31.49	—	—	—	5,748	138,486	≤5
2018	-3.30*	-3.70*	-3.65*	—	—	—	4,586	117,149	≤5

* The period from inception, March 31, 2018, to December 31, 2018, is not annualized.

1 The three-year, annualized ex-post standard deviation of monthly composite and benchmark returns represents a measure of total investment risk (volatility) and calculates the variance of a distribution of returns. Data is not presented for periods with less than 36 months of composite returns.

2 The standard deviation of comparable performance over time is a measure of volatility. Composite dispersion is measured by the standard deviation across equal weighted portfolios represented within the composite for the full year. Standard deviation is N/A for composites with five or fewer accounts for the full year.

3 Total Firm Assets prior to 2011 do not include Guaranteed Investment Contract ("GIC") assets.

Firm overview: Putnam Investments claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Putnam Investments has been independently verified from January 1, 2000, through December 31, 2019. The verification report(s) is/are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. Putnam Investments (the "Firm") is defined as a broad-based investment management organization that provides financial services to institutions and individuals through separately managed accounts, pooled funds, and mutual funds. Except for a minority stake owned by employees, the Firm is a wholly owned subsidiary of Great-West Lifeco Inc. Investment management is provided by four wholly owned subsidiaries of the Firm: The Putnam Advisory Company, LLC; Putnam Investment Management, LLC; Putnam Fiduciary Trust Company; and Putnam Investments Limited. A list of the Firm's composite descriptions is available upon request.

Composition of composite: The Putnam Investments Sustainable Leaders Composite (the "Composite"') seeks to provide long term capital appreciation by investing mainly in U.S. equity securities of companies with demonstrated commitment to sustainable business practices. The strategy aims for attractive risk-adjusted returns over the long term and invests in growth companies with the goal of delivering positive financial and ESG performance. It utilizes bottom-up fundamental research, including assessment of valuation and sustainability factors when selecting investments for the portfolio. The Composite's benchmark is the S&P 500 Index. Accounts in the composite may invest in private placements and may use derivatives, such as futures, options and swaps, for both hedging and non-hedging purposes. The Composite comprises all fully discretionary accounts managed by Putnam Investments

Risk considerations: Stock values may fall or fail to rise over time for a variety of reasons, including general financial market conditions and factors related to a specific issuer or industry. Growth stocks may be more susceptible to earnings disappointments, and the market may not favor growth-style investing. Investments in small and/or midsize companies increase the risk of greater price fluctuations. The composite's sustainable investment strategy limits the types and number of investment opportunities available to the portfolio and, as a result,the portfolio may underperform other portfolios that do not have a sustainable focus. The composite's environmental, social, and/or corporate governance (ESG) investment strategy may result in the portfolio investing in securities or industry sectors that underperform the market as a whole or underperform other portfolios screened for ESG standards. You can lose money by investing in this strategy.

Calculation of composite: Returns are presented in U.S. dollars ("USD"). Benchmark, Putnam account and Putnam mutual fund valuation sources and timing may sometimes differ, causing dispersion within the composite and between the composite and the benchmark. The results of the Composite for all periods shown include the reinvestment of dividends and other earnings. The Firm values securities using market quotations, fair value prices from pricing services and/or broker quotations. In limited circumstances, the Firm will value securities based solely on its own analysis, this may include using model prices based on third-party data or, for private equity securities, a fair valuation process whereby a special Valuation committee will review the nature of each deal, the model currently used to value each deal, and any critical underlying assumptions in order to determine fair value. Fair valuations based on internal resources are made in accordance with the Putnam Funds Pricing Procedures and are subject to the oversight of the Firm's Valuation Committee. Please note that, in limited cases, the inputs used to value the security are unobservable and reflect the source's

Benchmark disclosure: The S&P 500 Index covers 500 industrial, utility, transportation, and financial companies of the U.S. markets (mostly NYSE issues). The index represents about 75% of NYSE market capitalization and 30% of NYSE issues. It is a capitalization-weighted index calculated with dividends reinvested. Benchmarks are generally taken from published sources and may have different calculation methodologies, pricing times,

and foreign exchange sources from the Composite. The effect of those differences is deemed to be immaterial. The securities holdings of the Composite may differ materially from those of the index used for comparative purposes. Indexes are unmanaged and do not incur expenses.
You cannot invest directly in an index.

Gross and Net of fees disclosure: Gross of Fee Returns are net of transactions costs but do not include the deduction of management fees and other expenses that may be incurred in managing an investment account. A portfolio's return will be reduced by management and other fees. The impact of management fees can be material. For instance, assume that $1 million is invested in a Putnam Investments account, and this account achieves a 10% compounded annual return, gross of fees, for 10 years. If a management fee of 0.50% was charged each year for the 10-year period, the annual return would be 9.5% and the ending dollar value would be $2,478,200, net of fees, as opposed to $2,593,700, gross of fees. The actual fee rates are stated in advisory contracts with clients. For composites that contain U.S. mutual funds and UCITS funds, gross-of-fee performance is calculated by applying the prorated monthly percentage of the total net annual expense ratio (as published in the fund's annual report) to the monthly return on net asset value per share. Annual expense ratios for the current year may be based on the prior year's financial statements. Returns may be adjusted based upon each year's audited annual report.

Net of fee returns are calculated using a model fee ("Model Net Fee"). For the applicable time periods, net of fees returns reflect either the deduction of the highest management fee that is paid by a portfolio in the Composite during the performance period, applied on a monthly basis or the deduction of the highest applicable management fee in effect during the performance period that would be charged based on the fee schedule appropriate to this mandate, without the benefit of breakpoints, applied on a monthly basis, whichever is higher. Net of fee calculation methodology may change over time. For composites that include commingled funds that pay a performance fee and that calculate performance using the highest fee paid by an account in the composite, performance based fee adjustments are included in net of fee returns. For commingled funds, the fee is typically updated for the most recent fiscal year end after the portfolio has been audited. Returns may be adjusted based upon each year's audited annual report. Please be advised that the Composite may include other investment products or share classes of funds that are subject to management fees, including performance fees, that are inapplicable to you but that could have been in excess of the Model Net Fee. Therefore, the actual performance of all the portfolios in the composite on a net-of-fees basis will be different, and may be higher or lower, than the Model Net Fee performance. Composites that include certain commingled portfolios may also assess a performance fee to underlying investors which could result in the underlying investors paying a higher total management fee than the highest stated management fee below. However, Model Net Fee performance is intended to provide the most appropriate example of the impact management fees would have by applying management fees relevant to you to the gross performance of the Composite. Actual investment advisory fees incurred by clients are typically negotiated on an individual basis and may vary depending upon, among other things, the applicable fee schedule and portfolio size.

Fee schedule: The standard fee schedule is based on the market value of an account's assets under management and is stated on an annual basis. Separate account management fees are subject to change and are for investment management services only. Standard management fee is: 0.55% of assets on the first $50 million, 0.45% of assets on the next $50 million, 0.40% of assets on the next $150 million, and 0.30% for assets over $250 million.

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Putnam Sustainable Future strategy

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2019	31.21	30.48	35.47	—	—	—	451	138,486	≤5
2018	0.23	-0.32	-4.75	—	—	—	366	117,149	≤5
2017	-0.65*	-0.70*	0.54*	—	—	—	0	117,916	≤5

* The period from inception, November 30, 2017, to December 31, 2017, is not annualized.

1 The three-year, annualized ex-post standard deviation of monthly composite and benchmark returns represents a measure of total investment risk (volatility) and calculates the variance of a distribution of returns. Data is not presented for periods with less than 36 months of composite returns.

2 The standard deviation of comparable performance over time is a measure of volatility. Composite dispersion is measured by the standard deviation across equal weighted portfolios represented within the composite for the full year. Standard deviation is N/A for composites with five or fewer accounts for the full year.

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Composition of composite: The Putnam Investments Sustainable Future Composite (the "Composite"') seeks long-term capital appreciation by investing in companies with the potential to produce strong financial returns and positive environmental and social outcomes. The strategy invests in growth companies that directly demonstrate positive impact in social, environmental, or economic development. It utilizes bottom-up fundamental research, including assessment of valuation and sustainability factors when selecting investments for the portfolio. The composite's benchmark is the Russell Midcap Growth Index. Accounts in the composite may invest in private placements and may use derivatives, such as futures, options and swaps, for both hedging and non-hedging purposes. The Composite comprises all fully discretionary accounts managed by Putnam Investments in this investment style. The Composite inception date was November 30, 2017. The Composite creation date was December 13, 2017.

Risk considerations: Stock values may fall or fail to rise over time for a variety of reasons, including general financial market conditions and factors related to a specific issuer or industry. Growth stocks may be more susceptible to earnings disappointments, and the market may not favor growth-style investing. Investments in small and/or midsize companies increase the risk of greater price fluctuations. The composite's sustainable investment strategy limits the types and number of investment opportunities available to the portfolio and, as a result,the portfolio may underperform other portfolios that do not have a sustainable focus. The composite's environmental, social, and/or corporate governance (ESG) investment strategy may result in the portfolio investing in securities or industry sectors that underperform the market as a whole or underperform other portfolios screened for ESG standards. You can lose money by investing in this strategy.

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Benchmark disclosure: The Russell Midcap Growth Index measures the performance of those Russell Midcap companies with higher price/book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000® Growth Index Benchmarks are generally taken from published sources and may have different calculation methodologies, pricing times, and foreign exchange sources from the Composite. The effect of those differences is deemed to be immaterial. The securities holdings of the Composite may differ materially from those of the index used for comparative purposes. Indexes are unmanaged and do not incur expenses. You cannot invest directly in an index. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Russell® is a trademark of Frank Russell Company.

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