J.P. MORGAN PRIVATE BANK

Decoding the Elements of Sustainable Investing

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J.P.Morgan

Decoding the elements of sustainable investing

There is significant momentum around investment approaches that enable investors to integrate environmental, social and governance (ESG) considerations into their investment strategies and create positive benefits for society.

By one estimate, $30.7 trillion of global assets under management (AUM) in 2018 were reported as invested in a "sustainable" way—a significant increase from $22.9 trillion in AUM reported in 2016.[1] These assets reflect strategies that integrate consideration of ESG factors, generally with the goal of achieving appropriate risk-adjusted returns. They also reflect the growing adoption of other investment approaches that are intended to support environmental or social outcomes, such as exclusionary or positive screening, thematic investing or impact investing.

The growth of sustainable investing has enabled—and been driven by—a proliferation of different investment objectives, approaches and vehicles. Some investors are interested in strategies to better manage risk and strengthen financial performance. Others want to use investing as a means to achieve social or environmental impact, in addition to generating financial returns. As this sector is evolving quickly, it's important to build an understanding of the various sustainable investing approaches and develop a roadmap to guide investor decision making across this landscape.

In the next few pages, we outline the range of approaches included under the umbrella of "sustainable investing"—a term that now reflects not just a move toward more explicit consideration of environmental and social issues, but also the belief of some investors that maximizing the long-term financial value of a portfolio requires the integration of these factors.

IN BRIEF

1. When it comes to investing, we recognize that investors need to consider a number of factors unique to them, including their financial needs and personal values. The same holds true for sustainable investing.

2. There are many ways to integrate sustainable investing approaches into investment portfolios that enable investors to meet financial objectives while incorporating non-financial priorities. These approaches can be used alone or in concert together across a portfolio.

3. For investors, the first and most important step is to identify one's personal priorities. With these in mind, it is possible to create an investment portfolio that strikes the right balance between sustainability objectives, and risk and return expectations.

A Spectrum of Approaches

SUSTAINABLE INVESTING

Exclusionary screening
Avoiding investing in companies or sectors whose products or business practices do not align with investor values or meet other standards

ESG integration
Actively integrate environmental, social and governance (ESG) issues into investment due diligence and financial analysis

Thematic investing
Focus investments according to an interest in a specific issue area or sector such as water, clean energy and gender diversity

Impact investing
Aim to generate positive impact alongside financial return through investments in specific companies, organizations or funds

[1] Global Sustainable Investment Review (2018). http://www.gsi-alliance.org/wp-content/uploads/2019/03/GSIR_Review2018.3.28.pdf.

AN EVOLVING LANDSCAPE

Today, many companies are expected to articulate how they manage diverse social and environmental challenges, as well as new strategic opportunities. These range from issues like natural resource constraints to changing government policies and regulations on issues such as climate change, healthcare and education. Many companies are also contending with evolving social norms, demographics and consumer preferences, and are looking for ways to capitalize on these trends to gain a competitive advantage.

Investors are simultaneously looking for ways to more effectively manage exposure to both environmental and social risks through their investments, and also pursue sustainability-focused opportunities. The *Global Sustainable Investment Review*, which produces a biannual report on market activity, estimates that approximately $30.7 trillion globally in 2018—approximately 26% of AUM—was being managed according to one of the sustainable investing strategies.[2]

While Europe has historically led the market, the growth in sustainable investing has been strongest recently in the United States, particularly with institutional investors managing the assets of pension funds, governments, universities and foundations. Between 2016 and early 2018, U.S.-managed assets identified as utilizing a sustainable investing approach grew by 38%, to reach more than $12 trillion.[3]

In the past, many investors were primarily focused on exclusionary screening, which entails full or partial exclusion or divestment of certain holdings in response to investors' values and societal norms. Today, while investors often still employ exclusionary screens, most of the recent growth in sustainable investing has been driven by more explicit integration of ESG considerations across asset classes (including more active engagement with companies on these issues) as a means of managing downside risk and achieving appropriate risk-adjusted returns. Investors are also demonstrating increasing interest in other approaches (e.g., both thematic investing and impact investing), which enable them to use their capital more deliberately to help support and/or achieve positive environmental and social outcomes.

One indicator of this broader movement is the growth in number of signatories to the U.N. Principles for Responsible Investment (UNPRI), an international network of investors working on a voluntary basis to incorporate ESG issues into investment practices across asset classes. UNPRI signatories—including J.P. Morgan Asset & Wealth Management—manage approximately $85 trillion in assets globally from 2,000 signatories, up from approximately $7 trillion in AUM when it was launched in 2006.[4] This has been accompanied by growth in broader infrastructure that has emerged to support this field, including investor-focused networks, analysts that publish research on ESG issues, and nonprofit organizations focused on the intersection of environmental and social issues and finance.

Sustainable investing may also get a boost from recent regulatory changes, particularly in the United States. In October 2015, the U.S. Department of Labor issued guidance on the investment duties of plan fiduciaries under the Employee Retirement Income Security Act, which clarifies that fiduciaries can appropriately consider ESG issues in investment analysis and decision making.[5] The guidance was hailed by many sustainable investing advocates as removing a significant regulatory barrier to ESG integration and sustainable investing more broadly.

[2] Global Sustainable Investment Review (2018). http://www.gsi-alliance.org/wp-content/uploads/2019/03/GSIR_Review2018.3.28.pdf.
[3] U.S. Sustainable, Responsible and Impact Investing Trends (2018).
[4] UNPRI (4/5/2019). https://www.unpri.org/about.
[5] U.S. Department of Labor. https://s3.amazonaws.com/public-inspection.federalregister.gov/2015-27146.pdf.

Sustainable Investing Across Asset Classes

EQUITIES

Equities have historically been the asset class most commonly utilized in sustainable investing approaches. Investors can access equity funds or managed accounts that:

- Have been constructed to focus on ESG factors.
- Negatively screen out companies based on certain ethical norms or other criteria; or
- Are specifically created to own companies that develop solutions that help address social challenges, such as clean energy or public health.
- Engage with companies through dialogue with management and by filing shareholder resolutions (via the asset manager).

FIXED INCOME

Fixed income is an asset class that is becoming more commonly employed in sustainable investing approaches. For example, investors have growing access to products such as:

- Green Bonds, which target proceeds to projects or activities such as clean energy, energy efficiency, green buildings or water, among others.
- Global issuance in the Green Bond market was $168 billion in 2018, a 3% increase from 2017.[6]
- Social Impact Bonds, which are bilateral contracts that utilize "pay for performance" models to achieve social outcomes on issues such as education and recidivism.

ALTERNATIVES

Alternatives, including private market debt and equity investments and real estate, have seen momentum as an area of focus for sustainable investing. For example, investors have access to:

- Early-stage socially and environmentally driven enterprises.
- Direct investments or funds that invest in companies or projects with a thematic or impact-driven focus.
- As with most private investments, the degree of liquidity in these markets is a factor to consider.

[6] Green bonds: The state of the market 2018. https://www.climatebonds.net/system/tdf/reports/cbi_gbm_final_032019_web.pdf?file=1&type=node&id=36883&force=1

UNDERSTANDING SUSTAINABLE INVESTING APPROACHES

The growth in sustainable investing has given rise to a new vocabulary used to define various approaches. There are no universal definitions for these terms, and they are often used interchangeably. As the terminology in this space continues to evolve, it is important for investors that are assessing investment opportunities to look closely at the underlying approach being utilized. The framework, described below, outlines how we define these approaches at J.P. Morgan.

EXCLUSIONARY SCREENING

Definition: Exclusionary, or negative, screening is often the approach most commonly associated with sustainable or socially responsible investing, as it is sometimes referenced. It entails excluding from portfolios the stocks or bonds of companies that are involved in certain activities (often measured as a percentage of revenue they generate) or sectors that do not align with investor norms or standards.

Applicability: Exclusionary screening is most often applied to the stocks or bonds of publicly listed companies. While investors often have their own set of criteria for exclusion, some of the more commonly used screens exclude tobacco, alcohol, defense and nuclear energy. In recent years, some investors have focused on excluding (or actively divesting from) fossil fuels, such as coal and oil and gas, in response to concerns about climate change.

Considerations: When specific stocks or sectors are eliminated from a broader benchmark, a tracking error may be introduced, meaning the possibility of a negative impact on performance. Investors often utilize separately managed portfolios that enable them to structure the portfolio after exclusions to closely track a reference benchmark or index with minimal sector and regional biases.

Case study: A foundation, concerned about the potential risks of climate change, wishes to align its investment strategy with its philanthropic mission and organizational values, and to ensure that any new investments do not include fossil fuel companies. After weighing a series of considerations, the foundation decides to establish an exclusionary screen for companies that derive the majority of their revenues from coal mining.

ESG INTEGRATION

Definition: This approach involves integrating consideration of environmental, social and governance (ESG) issues, where material, into investment due diligence and analysis. The principal objective of ESG integration is to ensure that relevant issues, factors and risks that have the potential to impact companies are considered alongside traditional financial analysis during the investment process. ESG integration often entails direct engagement with companies, including through active discussions with management and, in some cases, through shareholder action.

Applicability: Because ESG integration is part of the fundamental research process, it can be applied to any asset class. Until recently, ESG integration has been most commonly applied to equities, including listed and private equities. However, ESG factors are increasingly being integrated into analysis of fixed income products. Efforts such as shareholder proxy voting and corporate engagement are also strategies that are often considered elements of ESG integration.

Considerations: ESG integration is generally used as a strategy to manage downside risk and achieve appropriate risk-adjusted returns. It is typically not employed as a means of intentionally generating positive social or environmental benefits—though companies that perform well on ESG measures certainly may also have positive impacts on society. There is no "one-size-fits-all" approach to ESG integration, including the relevant issues that should be considered, and how to evaluate their applicability or level of materiality to a company's performance. ESG analysis is generally an integrated part of investment research undertaken by analysts. In addition, there are now third parties that produce independent research and "ratings" on company ESG performance.

Case study: A CIO of a family foundation integrates ESG factors in its investment portfolios. Some of the ESG criteria are consistent across all companies (e.g., risk management approach or effectiveness of board oversight), whereas others are unique to certain kinds of companies (e.g., health and safety compliance for a large manufacturer). The CIO's investment decisions reflect consideration of financial metrics and performance, and handling of ESG issues—including risks and potential business opportunities.

Company-Level ESG Issues Commonly Assessed by Investors

Environmental: Greenhouse gas emissions, energy efficiency, water and waste management, and compliance with environmental policies and regulations

Social: Health and safety, compensation and benefits, community relations, employee diversity and human rights

Governance: Board structure and diversity, executive compensation, ethics and risk management

THEMATIC INVESTING

Definition: Thematic investing identifies companies whose business models focus on specific sectors and related innovations or improvements over industry peers with respect to social or environmental impacts. Thematic investing around sustainability-related issues may focus on areas such as healthcare in emerging markets, education, clean energy or sustainable agriculture, among others.

Applicability: Thematic investments can range from direct investments (equity or fixed income) in companies that focus on certain assets or projects in a specific sector or industry, or, more broadly, in funds that invest in companies focused on a certain theme.

Considerations: Thematic investors generally seek to earn financial returns and may also strive to support positive social and/or environmental outcomes through their investment strategies, often seeking investment opportunities positioned to realize benefits as a result of changing social and environmental trends. As with all types of thematic investing, investors will need to weigh potential financial returns and other investment considerations along with the desire for positive social and/or environmental outcomes.

Case study: A private equity fund makes investments in private and public companies whose businesses may be positioned to benefit from economic, policy and social trends that are encouraging more efficient use of natural resources or adoption of lower-carbon technologies. Such companies may include those building wind turbines, developing battery storage, creating technologies that promote efficient water use, or developing sustainable packaging, among others.

IMPACT INVESTING

Definition: Impact investing is an approach that intentionally seeks to create positive social and environmental impacts alongside financial returns. Investors generally define the positive impacts they are targeting during investment due diligence and seek to measure the generation of those impacts throughout the lifecycle of the investment.

Applicability: Impact investing has most commonly involved the use of private equity or private debt—either deployed through direct investments in companies, or through funds that invest in a portfolio of companies. Impact investments may support the objectives that align with the philanthropic or organizational mission of the investor. For example, program-related investments are a tool that can be used by foundations to make below-market rate loans or equity investments in enterprises that help to advance the philanthropic mission of the institution.

Considerations: Impact investing is generally characterized by the desire to use investing as a tool to create social or environmental impact. The target of these impact investments are financial returns that range from below-market rate to market rate, and can be made in both emerging and developed markets. While there are strong indicators of market growth in impact investing, it is still in an early stage of development. As with all private investing, due diligence and manager selection and liquidity are critical considerations in the investment process.[7]

Case study: One example of innovation in the impact investing space is The Nature Conservancy's impact investment unit, NatureVest, which was established with founding sponsorship from JPMorgan Chase. NatureVest originates and structures impact investment opportunities in environmental conservation globally. One example of its work is the Washington, DC, Green Infrastructure Fund, which uses private investment to develop green infrastructure[8] to mitigate water pollution exacerbated by stormwater runoff. NatureVest aims to scale this model across the District and then replicate this model in other cities around the country that need to comply with Clean Water Act regulations.

[7] Cambridge Associates and the Global Impact Investing Network, "Introducing the Impact Investing Benchmark," May 2015.
[8] Green infrastructure employs elements of natural systems (e.g., wetlands), while traditional gray infrastructure is man-made (e.g., pipes).

PERFORMANCE CONSIDERATIONS

An ongoing topic of discussion is whether investments that utilize sustainable investing approaches are capable of achieving returns mirroring those of a "conventional" opportunity in the same asset class.

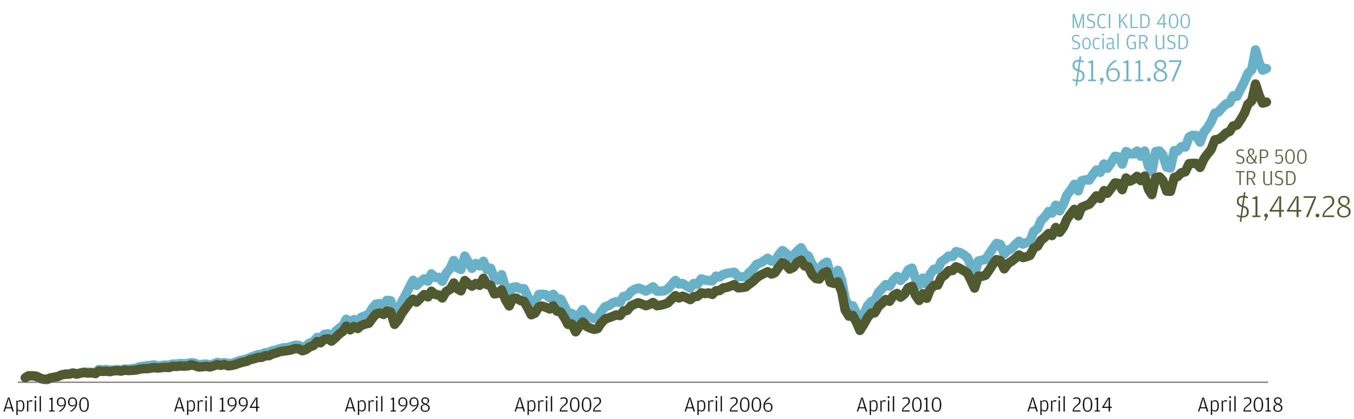
At first glance, questions about performance are logical particularly when considering strategies such as negative or positive screening. Eliminating specific stocks or sectors from a broader benchmark for an exclusionary strategy, or choosing constituents for a well-established portfolio based on non-financial criteria, is likely to introduce a tracking error versus a mainstream benchmark.

Considering the broader application of ESG integration, as the interest in these issues has increased, so too has the number of studies that consider the correlation between ESG factors and the financial performance of companies.

The University of Oxford and Arabesque Partners conducted a study in 2014 to assess how sustainable investing may have an impact on returns. What they discovered is that 88% of the research showed that effective management of ESG issues results in better operational performance of companies, and furthermore, 80% of the studies showed that stock price performance of companies is positively influenced by attention to ESG issues.[9] This suggests that there may be benefits to considering ESG factors as part of traditional fundamental analysis of a company's performance.

Charting Performance in Public Equities

Sustainable investing has historically provided returns in line with their respective benchmarks



Source: Bloomberg. Performance of MSCI KLD 400 Social Index and S&P 500 TR Index is from 5/1/1990 to 4/30/2018.

PERFORMANCE (SINCE INCEPTION ANNUALIZED RETURNS FOR THE ESG INDICES)			
MSCI KLD 400 Social*	10.0%	S&P 500 TR Index*	9.6%
MSCI EAFE ESG Leaders Index**	5.6%	MSCI EAFE Index**	5.2%
MSCI ACWI ESG Leaders Index***	3.7%	MSCI ACWI Index***	3.0%

Source: Bloomberg. **Past performance is not a reliable indicator of future results.**

* Performance of MSCI KLD 400 Social Index and S&P 500 TR Index is from 5/1/1990 to 12/31/2018.

** Performance of MSCI EAFE ESG Leaders Index and MSCI EAFE Index is from 9/1/2010 to 12/31/2018.

*** Performance of MSCI ACWI ESG Leaders Index and MSCI ACWI Index is from 10/1/2007 to 12/31/2018.

[9] "From the stockholder to the stakeholder: How sustainability can drive financial outperformance," University of Oxford and Arabesque Partners, March 2015. https://arabesque.com/research/From_the_stockholder_to_the_stakeholder_web.pdf.

PATHWAYS TO SUSTAINABLE INVESTING

There are many ways that investors can think about integrating one or several sustainable investing approaches into their investments to achieve their specific financial objectives and personal goals.

It is standard for investors to consider a number of factors in their decision making, including financial and non-financial objectives. Investors can begin the process by identifying and articulating priorities, including short- and long-term financial goals, risk appetite and liquidity needs. It's also important to think about personal, non-financial goals. For example, are there certain social or environmental issues that are of particular interest? Are there certain activities that should be either avoided or proactively targeted through the investment strategy? With these perspectives in mind, it is possible to create an investment portfolio that strikes the right balance across a range of considerations.

An initial step, which can serve as a useful foundation for considering sustainable investing approaches, is to do an assessment of one's existing investment strategy and portfolio composition.

- To what extent have ESG issues or impact considerations already been articulated or reflected?
- What impact would the introduction of sustainable investing approaches (e.g., positive or negative screens) have on the current portfolio?
- Do any current managers also provide other products that incorporate sustainable investing approaches?

Once this type of assessment has been undertaken, a more informed discussion can take place about how sustainable investing approaches could potentially be incorporated into a portfolio.

Below are three foundational methods that investors can use to allocate assets to sustainable investing strategies:

- **Test the waters:** This method is designed for those investors that have an interest in gaining experience with sustainable investing approaches and would like to test implementation through a carve-out in their portfolios, either within a specific asset class or across multiple asset classes. Within this carve-out, investors may choose to explore different strategies, products, funds and investment managers.
- **Create an impact-driven carve-out:** Similar to testing the waters, this method involves designating a carve-out from a portfolio to direct toward investments intended to achieve specific social or environmental impact-related outcomes. These investments are typically taken by investors that are prioritizing the creation of impact for this component of their portfolios.
- **Pursue broad integration:** This method entails adopting a sustainable investing lens across all asset classes within an investment portfolio. With this strategy, the sustainability orientation and performance of managers are important to consider, as is the sustainability profile of specific investment products and vehicles.

J.P. Morgan Private Bank is committed to working with clients on ensuring that their portfolios reflect their values and their intentions to attain societal benefit. We can work with you to determine the best approach to meeting your needs and goals. To learn more, we encourage you to contact your J.P. Morgan representative.

FOR MORE INFORMATION ON SUSTAINABLE INVESTING, PLEASE VISIT:
www.jpmorgan.com/sustainableinvesting.

JPMORGAN CHASE'S COMMITMENT TO SUSTAINABLE SOLUTIONS

J.P. Morgan Asset & Wealth Management serves individual investors and organizations globally, including corporate pension plans, endowments, foundations, insurance companies, sovereign wealth funds and government-affiliated institutions. We are one of the largest asset and wealth managers in the world, with assets under management of $2 trillion (as of December 31, 2018). Recognizing the importance of sustainable investing, J.P. Morgan Asset & Wealth Management has been a signatory to the Principles for Responsible Investment since 2007. As a global financial institution, J.P. Morgan leverages the expertise and resources of the entire firm to support our clients' sustainability objectives. J.P. Morgan is a lead underwriter of Green Bonds and other social- and sustainability-themed bonds, and co-authored the *Green Bond Principles,* which are voluntary guidelines for the development and issuance of Green Bonds that aim to promote transparency in the market.

In 2017, JPMorgan Chase expanded its own comprehensive strategy to advance environmentally sustainable solutions for clients and its own operations. The strategy builds on JPMorgan Chase's leadership on sustainability established over the last decade, with a foundation in environmental and social risk management, policy engagement, public reporting and employee engagement.

The firm's two new strategic goals include:

- Operational sustainability: JPMorgan Chase will source renewable power for 100% of its global energy needs by 2020.
- Business development: The firm will facilitate $200 billion in clean financing through 2025, the largest commitment by a global financial institution.

Our efforts are enhanced through engagement and partnerships with nonprofit organizations. Since 2010, J.P. Morgan has collaborated with The Global Impact Investing Network to publish an annual Impact Investor Survey, which is publicly available on our website. The firm is also a founding sponsor and lead strategic advisor to NatureVest, an initiative of The Nature Conservancy that is developing transactions that harness the power of markets to advance conservation, while generating financial returns for investors.

As a firm, J.P. Morgan is dedicated to serving our customers and the communities in which we operate. We are committed to providing information about how we manage and conduct our business, including how we leverage our resources and capabilities to help solve pressing social, economic and environmental challenges. For more information about our performance and our efforts, please visit: www.jpmorganchase.com/esg.

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All index performance information has been obtained from third parties and should not be relied on as being complete or accurate. Indices are shown for comparison purposes only. While an investor may invest in vehicles designed to track certain indices, an investor cannot invest directly in an index.

The MSCI ACWI Index is a free float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of developed and emerging markets.

The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the United States and Canada. The MSCI EAFE Index consists of the following 21 developed market country indexes: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

The MSCI KLD 400 Social Index is a capitalization-weighted index of 400 U.S. securities that provides exposure to companies with outstanding Environmental, Social and Governance (ESG) ratings and excludes companies whose products have negative social or environmental impacts. The parent index is MSCI USA IMI, an equity index of large, mid and small cap companies. The index is designed for investors seeking a diversified benchmark comprising companies with strong sustainability profiles while avoiding companies incompatible with values screens. Launched in May 1990 as the Domini 400 Social Index, it is one of the first SRI indexes. Constituent selection is based on data from MSCI ESG Research.

The MSCI EAFE ESG Index is a capitalization-weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers. MSCI EAFE ESG consists of large and mid cap companies across Developed Markets countries[10] around the world, excluding the United States and Canada. The index is designed for investors seeking a broad, diversified sustainability benchmark with relatively low tracking error to the underlying equity market. The index is a member of the MSCI Global Sustainability Index series. Constituent selection is based on data from MSCI ESG Research.

The MSCI ACWI ESG Index is a capitalization-weighted index that provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers. MSCI ACWI ESG consists of large and mid cap companies across 23 developed markets (DM) and 23 emerging markets (EM) countries.[10] The index is designed for investors seeking a broad, diversified sustainability benchmark with relatively low tracking error to the underlying equity market. The index is a member of the MSCI Global Sustainability Index series. Constituent selection is based on data from MSCI ESG Research.

The MSCI USA Investable Market Index (IMI) is designed to measure the performance of the large, mid and small cap segments of the U.S. market. With 2,523 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in the United States.

S&P 500 is a capitalization-weighted index of 500 stocks from a broad range of industries. The component stocks are weighted according to the total market value of their outstanding shares. The impact of a component's price change is proportional to the issue's total market value, which is the share price times the number of shares outstanding. "S&P 500" is a trademark of the parent company, "The McGraw-Hill Companies, Inc." (source: www.standardandpoors.com).

[10] Developed Markets countries in the MSCI EAFE Index include: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

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Investment strategies are selected from both J.P. Morgan and third-party asset managers and are subject to a review process by our manager research teams. From this pool of strategies, our portfolio construction teams select those strategies we believe fit our asset allocation goals and forward-looking views in order to meet the portfolio's investment objective.

As a general matter, we prefer J.P. Morgan managed strategies. We expect the proportion of J.P. Morgan managed strategies will be high (in fact, up to 100 percent) in strategies such as, for example, cash and high-quality fixed income, subject to applicable law and any account-specific considerations.

While our internally managed strategies generally align well with our forward-looking views, and we are familiar with the investment processes as well as the risk and compliance philosophy of the firm, it is important to note that J.P. Morgan receives more overall fees when internally managed strategies are included. We offer the option of choosing to exclude J.P. Morgan managed strategies (other than cash and liquidity products) in certain portfolios.

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