Morgan Stanley

Climate Change and Fossil Fuel Aware Investing

Risk, Opportunities and a Roadmap for Investors

Despite increasing discussion about the role of fossil fuels in an investment portfolio today, many investors remain unsure of the impact of greenhouse gases and climate change on their investments. Navigating the steps to generate financial returns, while also benefiting the environment, can be daunting. The objective of this primer is to simplify this process by outlining a roadmap for investors to understand the range of investable approaches available related to climate change.

Many of the current conversations about climate change and fossil fuel aware investing have grown out of the fossil fuel divestment movement, which has gained significant visibility on the public agenda and in the investment arena due to grassroots movements such as 350.org. Established in 2008 by a group of university students, 350.org issued a global call to action for immediate, concrete steps to address climate change and now has affiliates in 188 countries around the world.[1] In 2012, 350.org launched a campaign called Fossil Free, an international network of campaigns and campaigners working toward fossil fuel divestment in their local communities.[2] Today, colleges, universities, cities and numerous other entities, including endowments and

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religious organizations, have made public commitments to partially or completely divest fossil fuels from their portfolios over a period of time.

For some investors, the fossil fuel divestment movement has been paralyzing, as both individuals and institutions may have a difficult time understanding how to interpret the conversation in an investment context. Moreover, some of the communication around incorporating climate change and fossil fuel awareness into a diversified investment portfolio is polarizing and presented as part of a political agenda. At Morgan Stanley, we believe there are a variety of approaches investors can take to transform the dialogue around fossil fuels and climate change into an actionable plan for investing.

In this primer, we explore the topic of climate change, with a focus on fossil fuels, and provide a framework for investors to understand the risks and opportunities involved in climate change and fossil fuel aware investing. We also unpack various approaches and how to implement these approaches from a portfolio perspective in a changing marketplace.

Background

THE SCOPE OF THE PROBLEM

Many experts agree that human-induced climate change is having a significant impact on the environment and society, representing one of the most pressing challenges of our time.[3] Studies indicate that nearly two-thirds of climate change is driven by energy use (fossil fuels such as coal, oil and natural gas), with the remainder caused primarily by agricultural and land-use changes.[4] Historically, the bulk of greenhouse gas (GHG) emissions have come from developed markets; however, China, India and other emerging markets are undergoing rapid growth that is largely dependent on GHG-intensive energy generation and these countries are therefore expected to contribute much more heavily to GHG emissions in the future.

With growing awareness of the potential impact of climate change on investments, what solutions can help investors build a lower-carbon economy, while still pursuing expected returns?

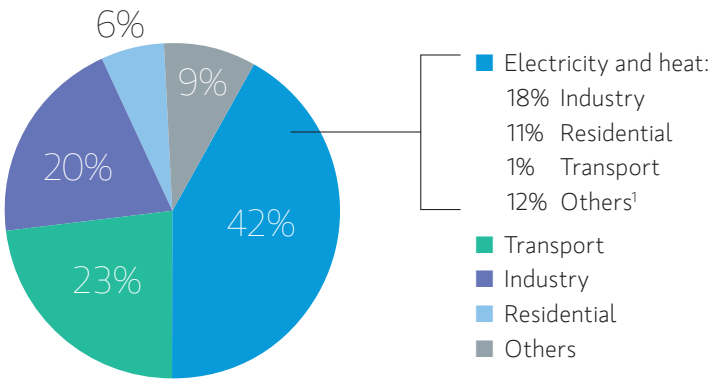
When GHGs are released faster than they can be absorbed by forests, soil layers, and other forms of natural carbon storage, the buildup causes short- and long-term environmental changes. The last 150 years have seen a 40% increase in atmospheric carbon[5] and the last three decades have been successively warmer than any decade since 1850.[6] Global sea levels have risen nearly eight inches since 1880 due to heat absorbed from increased GHGs. NASA satellite imaging indicates that this process is accelerating rapidly, with a potential rise between one and four feet by the year 2100, which would threaten 11 of the world's 15 largest cities.[7]

Economic growth and global stability depend on vital natural resources. With a rapidly changing climate, we face significant risks to global food, water and energy supplies. Current research suggests that limiting climate change to no more than 2° C (3.6° F) would avoid the most serious impacts.[8] Yet, the world is already on course to experience 1.5° C (2.7° F) warming by mid-century, and potentially more than 4° C (7.2° F) warming by 2100.[8]

Amidst mounting scientific evidence that the problem of global warming is real and immediate, many investors believe they can no longer afford to ignore the risks and opportunities of climate change and fossil fuels in their portfolios.

A signal that globally, governments, corporations and investors are taking the threat of climate change seriously, was the increased momentum coming out of the December 2015 United Nations climate conference in Paris, also known as COP21. Following two weeks of intense negotiations, a final agreement was reached across both developed and developing countries, signalling an unprecedented diplomatic achievement. The COP21 Paris Agreement, signed by 187 countries representing 98.6% of global GHG emissions, outlined specific recommendations towards keeping global temperature increases below 2°C above preindustrial levels. As mentioned above, 2°C is the point at which scientific studies have concluded that the world will be locked into a future of devastating consequences including rising sea levels, severe droughts, flooding, and widespread food and water shortages. A 1.5°C cap was sought by island nations who are most

FIGURE 1: GHG Emissions by Sector[4]



Note: Also shows allocation of electricity and heat to end-use sectors.

vulnerable to some of the main impacts of climate change, especially rising sea level.

The Agreement seeks to make governments more accountable through a five-year greenhouse gas emissions review with the goal of inspiring confidence and collaboration amongst countries, globally, given that the reporting will be standardized and transparent. One key limitation of the Agreement is that it does little to outline strategies for policymakers, corporations and investors with regard to implementation and enforcement of emission standards. Implementation of the Agreement and evolving towards a low-carbon future will require thoughtful coordination from governments, corporations and investors.

With awareness of the potential impact of climate change on investments increasing, how can investors support a transition to a lower-carbon economy, while still pursuing expected returns?

INVESTMENT IMPLICATIONS OF CLIMATE CHANGE AND FOSSIL FUELS—RISKS AND OPPORTUNITIES

The U.S. economy is already beginning to feel the effects of climate change, with impacts which will likely grow materially over the next two decades and affect the future performance of today's business and investment decisions in areas such as energy, agriculture, and coastal property and infrastructure.[9] As the effects of climate change continue to accelerate, they will likely affect corporate profitability and government budgets on a global scale, creating long-term ripple effects in the markets. As investors balance risk and return, factoring the risk of climate change and fossil fuels into portfolio management is vital to creating a comprehensive risk picture.

In their inaugural Climate Change Study in 2011, the consulting firm Mercer—with the support of 14 global institutional investors, the International Finance Corporation of the World Bank Group, and the Carbon Trust—identified three direct risks of climate change to an investment portfolio over the next 20 to 30 years:[10]

- **Energy-efficient technologies.** The market for new investment opportunities in energy-efficient technologies could exceed $5 trillion by 2030, with the risk of devaluing fossil fuel investments. In addition, lack of exposure to this emerging opportunity set poses a risk for investors.
- **Direct results of climate change.** Health, food security, physical changes to our environment, and other direct impacts of climate change could cost as much as $4 trillion by 2030, including damage and adaptation costs.
- **Cost of carbon emissions.** Lack of coordinated policymaking has contributed to the cost of carbon emissions, which could surpass $8 trillion by 2030. This high cost represents a risk to companies and the portfolios that invest in them, and certain sectors of the economy—such as energy and transportation—could be deeply impacted.

At present, the global economy is so fossil-fuel dependent that a wholesale shift away from fossil fuels and the technological infrastructure built around them may not be feasible in the near-term. While some countries have taken steps—and made significant commitments—to materially lower their carbon emissions and increase their production of alternative energy sources, there is currently no viable comprehensive alternative energy infrastructure in place to meet existing energy needs on a global basis. If energy use is the major contributor to climate change, and material shifts in energy production and usage will take time, how can investors achieve a more immediate impact?

Investors of all sizes will be well served to understand the risks and opportunities that climate change and fossil fuels present. Investable climate change solutions available through the capital markets fall into two general categories:

- **Climate mitigation solutions** are those that help reduce GHG emissions, which in turn slows the effects of climate change, such as utility fuel switching or alternative energy fuelled vehicles.
- **Climate adaptation solutions** are those that help improve resilience to the effects of climate change, such as water storage infrastructure to protect from droughts or flood levees to protect from hurricanes.

Both climate mitigation and climate adaptation solutions will be needed to address climate change and will require coordination across the public and private sectors.

There is a significant potential opportunity to refocus the capital markets on addressing climate change using the same financial resources that are already at play. This change is already underway and progress to reduce GHG emissions is picking up pace—from 2004 to 2014, renewable energy investments increased from $45 billion to over $270 billion. During this same time period, renewable energy accounted for 48% of global new generating capacity, increasing the global share of renewable energy for electricity to over 9% and creating opportunity for investors.[11]

ALIGNING VALUES AND INVESTMENTS

Today, there are investors who seek to design their investment portfolio in line with their values and impact objectives.

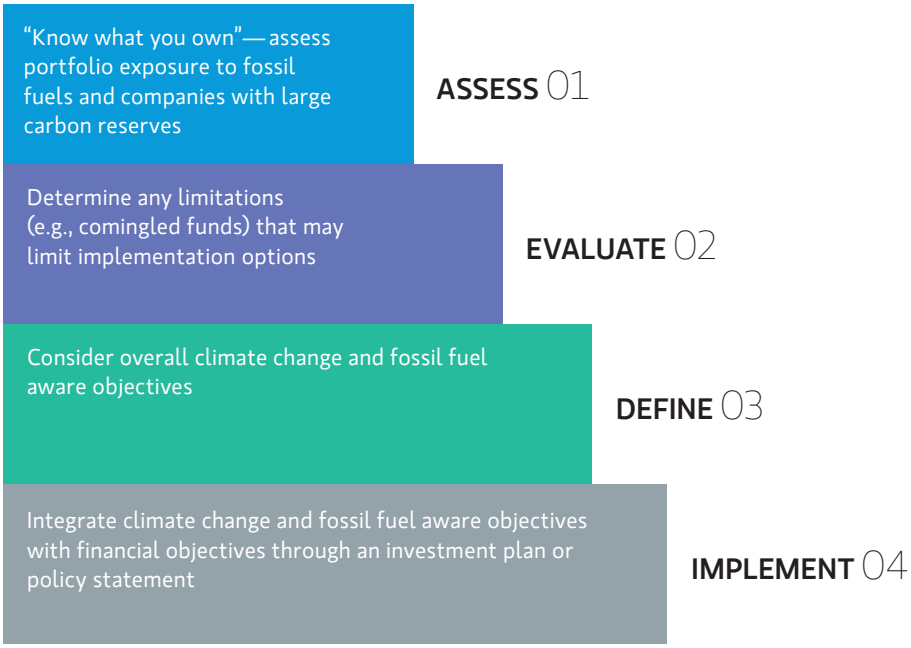
Through Morgan Stanley, investors who are interested in positioning their portfolios across a range of fossil fuel aware approaches have access to commercially viable strategies that do not sacrifice potential return.

Laying the Foundation

THINKING THROUGH AN APPROPRIATE CLIMATE CHANGE AND FOSSIL FUEL AWARE INVESTMENT STRATEGY

Investors can work with their Morgan Stanley Financial Advisor, Private Wealth Advisor or Institutional Consultant to develop a tailored

EXHIBIT 1: Developing a Climate Aware Investment Strategy



investment approach to incorporate climate change and fossil fuel awareness into their portfolio based on their unique objectives. This process (detailed in Exhibit 1 above) begins with (1) **ASSESS**—to the extent possible—utilize tools to assess the portfolio's current exposure to fossil fuels and companies with large carbon reserves. Then (2) **EVALUATE** feasibility of investment solutions, including any factors that may limit implementation options; for example, existing exposure to illiquid alternatives or comingled funds. The next steps are to (3) **DEFINE** the investor's overall climate change and fossil fuel aware objectives using the Morgan Stanley Climate Change and Fossil Fuel Aware Investing Framework (See Exhibit 2) and then to integrate these goals into the overall investment strategy and (4) **IMPLEMENT**. For individual investments this can take the form of an investment plan—or, for institutional clients, an Investment Policy Statement. This step helps to clarify and formalize the investor's priorities, risk tolerance, return objectives and time horizon, as well as lay down a framework for approaching climate change and fossil fuel aware investments across all relevant asset classes where options are available.

The investment plan or policy statement could also include guidelines for retaining and monitoring appropriate investment managers, and reaching climate change or fossil fuel aware investment goals over time. This can help to set investor expectations pre-implementation, as well as provide enough flexibility to allow the investment strategy to evolve over time as the investment opportunity set grows and adapts to market demand. Ultimately, the goal is to develop a long-term investment plan which seeks to achieve both the desired climate- and fossil fuel-based impact goals and target financial objectives.

Planning and Implementation

There is no one-size-fits-all approach to climate change and fossil fuel aware investing; however, adopting a systematic approach can help investors accomplish their unique goals: integrating climate change into their investment considerations, reducing carbon exposure in their portfolios through the strategic reallocation of assets, and more.

THE RANGE OF CLIMATE CHANGE AND FOSSIL FUEL AWARE INVESTMENT APPROACHES

Investors who are interested in engaging in climate action and proactively seeking opportunities to prioritize both positive environmental impact and financial return have access to a range of options for climate change and fossil fuel aware investment. These options include investment approaches, tools and reporting that can be used separately or in concert across a total or partial portfolio. Morgan Stanley's Fossil Fuel Aware Investing Framework (detailed in Exhibit 2) offers the following range of opportunities:

Fossil Fuel Aware. Investors may choose to reduce or eliminate (divest) exposure to companies producing coal, oil and gas, and/or nuclear energy or owning significant fossil fuel reserves. There are several considerations investors make with regard to fossil fuel divestment. Some investors view fossil fuel divestment as a commitment to avoid the industries that are most responsible for climate change. Others see fossil fuels as representing a key long-term investment risk, namely, a concern over the risk of stranded assets or "unburnable carbon reserves." Carbon reserves are the fossil fuel reserves companies intend to extract from the earth and then sell on the market to be burned to create energy. These reserves are counted as a positive asset on a company's balance sheet. Carbon reserves which may have to "stay in the ground" as a result of global climate action are considered stranded assets. The risk associated with stranded assets could have the potential to cause significant reductions in not only the value of specific companies, but also the long-term value of entire sectors. The Carbon Underground 200 releases an annual list of the largest public fossil fuel companies globally, ranked on the carbon

content of their reported reserves.[12] Investors can also select one or more fossil fuels to systematically avoid, for example, coal, oil and/or natural gas.

Asset classes: Public equity, public fixed income.
Investment example: Actively managed mutual fund, SMA or ETF with restricted exposure to a subset of publicly traded companies with the largest fossil fuel reserves; or an optimized index strategy that can be customized to avoid one or more types of fossil fuels.

Environmental Leaders. Investors can maintain select exposure to the energy sector by investing in companies that reflect industry-leading environmental practices compared with their peers. Using this approach, third-party portfolio managers proactively analyze a company's environmental performance (alongside other criteria, including both social and governance) and integrate climate change risk management into their investment selection process, which may include restriction screening that excludes the "worst offenders" or eliminates exposure to tar sands or coal mining. Note that eliminating traditional energy stocks from a portfolio can create short-term impact on portfolio performance during certain time periods, particularly when energy names are moving in different directions from the market as a whole. For this reason, this approach includes energy names for diversification, but seeks to invest in companies that are leaders in the industry when it comes to environmental practices. Please note that most third-party managers in this space employ a broad range of environmental, social and governance (ESG) criteria. We find that each third-party manager considers a different set of ESG metrics and especially relative to climate change and fossil fuel considerations (e.g., corporate climate policy and action, carbon footprint of the company's operations relative to peers, fuel mix with a preference for on-shore versus off-shore oil and gas operations, use of environmentally conscious practices for hydraulic fracturing, etc.)

Additional metrics may look at broader issues related to climate change, such as water efficiency, relative to peers.

Asset classes: Public equity, public fixed income and alternative investments.
Investment example: Investments can include a mutual fund, ETF or separately managed account (SMA) that optimizes exposure to companies or bonds that are leaders across ESG criteria; for example, a global SMA that integrates ESG criteria such as water efficiency and carbon footprint into the investment selection process with exposure to all sectors including energy.

Thematic Opportunities. This proactive approach focuses on opportunities across asset classes to invest in themes related to climate change and fossil fuel awareness. Examples of opportunities include energy efficiency, renewable energy including solar, wind, geothermal, biofuels and more, energy storage and distribution, alternative transportation such as electric vehicles, and more. A proactive investment in thematic opportunities related to climate change and fossil fuel awareness can be used instead of, or as a complement to, fossil fuel divestment. Some investors will seek investments in thematic opportunities to reinvest assets that have been divested from companies with large fossil fuel reserves as part of a total portfolio solution with a consideration for the different risk and return profile of the traditional energy sector versus the environmental opportunities sector.

Asset classes: Public equity, public fixed income, and alternative investments.
Investment example: Active or passive strategies with a focus or tilt on investing in companies in the environmental solutions-oriented subsector. Please note that this should not be considered a direct replacement for traditional energy sector from a risk and return profile perspective and total allocation decisions to environmental opportunities should

EXHIBIT 2: Morgan Stanley Climate Change and Fossil Fuel Aware Investing Framework

REDUCE EXPOSURE → ACTIVATE ENGAGEMENT

	Fossil Fuel Aware	Environmental Leaders	Thematic Opportunities	Shareholder Engagement
DEFINITION	Eliminate or reduce exposure to companies producing coal, oil and nuclear energy or owning significant fossil fuel reserves	Exposure to all sectors and industry groups including energy, but only in companies that reflect the best environmental practices relative to industry peers	Focus on investable themes that seek to improve climate change mitigation and/or adaptation solutions	Drive positive environmental change through active dialogue with invested companies

be made in the context of the total risk and return objective of the investment portfolio.

Shareholder Engagement. Shareholder engagement can serve as a tool in making a portfolio potentially less vulnerable to climate change- and fossil fuel-related risk. As shareholders, investors can drive positive environmental change by voting proxies and as an investor in third-party strategies that use the power of their collective assets to influence corporate behavior. There are many third-party managers that have a history of strong engagement around climate change and fossil fuel issues that tends to center around developing policy and methods to reduce carbon emissions including by setting greenhouse gas reduction targets, increasing energy efficiency of operations and reinvesting savings in renewable energy and alternatives. When shareholder engagement is used alone, this approach does not require investors to change anything in their portfolio holdings, i.e., investors are not necessarily divesting from fossil fuels or reinvesting in alternatives, but are actively working with companies in their portfolio to improve their operations over time. However, this approach to climate change and fossil fuel aware investing can also be used in concert with a Fossil Fuel Divestment or Environmental Leader approach as third-party managers seek to improve environmental performance of the companies in which they remain invested.

Asset classes: Public equity
Sample implementation: Actively managed mutual fund or SMA equity strategies employing shareholder advocacy, proxy voting and filing shareholder resolutions around key climate- and fossil fuel-related issues. Many of these strategies provide an overview of their shareholder engagement track record as part of their annual reporting cycle.

MANAGING CLIMATE CHANGE AND FOSSIL FUEL EXPOSURE AND OPPORTUNITY ACROSS ASSET CLASSES

Fossil fuel-related exposure and associated risks and opportunities are relevant to every asset class. Below are some examples of these risks and opportunities, as well as factors investors should take into account in order to help mitigate risk and maximize opportunity:

- **Fixed income.** Climate risks are commonly hidden within fixed income investments. For example, municipal bonds may be subject to hidden water risk as credit ratings for public utilities often overlook climate change scenarios which could threaten the long-term performance of the utilities.[13]

On the opportunity side, investors can consider fixed income instruments, such as green bonds, that are specifically designed to finance positive climate outcomes. As with any investment, when considering a potentially climate-supportive fixed income vehicle, investors must take into account all risks associated with the investment opportunity. Skilled investment managers should be able to successfully incorporate these risks in order to best pursue opportunities in fixed income investments.

Developments in the sustainable fixed income investment infrastructure are also helping to pave the way for investment opportunities in this asset class. Historically, it has been difficult to measure ESG performance in the fixed income space; however, this barrier is gradually eroding as investors and investment managers recognize the need for greater transparency and standardization of ESG reporting to assist in prudent investment decision-making.

- **Public equities.** Public equities may present the most visible investment for climate action and fossil fuel risk mitigation and investment opportunities. Investors have access to a significant amount of publicly available information regarding company financial, climate and sustainability performance. Today, an increasing number of companies provide integrated annual reports that combine both financial and social/environmental metrics, which can help to inform investment due diligence.
- **Alternative investments.** Growing focus on climate change- and fossil fuel-related risk issues in the infrastructure, real estate and agriculture sector, and among private equity and venture capital firms underscores the increasing materiality of the risk, as well as the scope of the opportunity. Private equity and venture capital firms are increasingly focusing on how better climate change and fossil fuel risk management can reduce costs and increase the value of their portfolio companies. Related to opportunities, public advocacy and government support for green technologies and renewable energy are driving growth in these areas. As such, investment managers may integrate climate risk, environmental innovation and energy efficiency as strategies for not only mitigating fossil fuel risk, but also possibly achieving positive sustainability and financial outcomes.

Investors who are interested in engaging in climate action and proactively seeking opportunities to enhance both environmental impact and financial return have access to a range of climate change and fossil fuel aware investments.

PORTFOLIO CONSTRUCTION

There are at least three different ways for investors to think about integrating climate change and fossil fuel aware investment strategies into their portfolio including public equity, public fixed income and alternatives:

- **Total portfolio solution.** Investors can design their entire portfolio across public equity, public fixed income and as appropriate alternatives, to integrate both their financial and climate change or fossil fuel aware objectives into their investment discipline. One limitation to this approach is that at any given time the available opportunities may limit portfolio diversification.
- **Partial portfolio solution.** Investors seek to allocate opportunistically to investments that meet both the financial and climate change or fossil fuel aware investment objectives that can be integrated into their existing portfolio, which may include investments that are not climate change or fossil fuel aware.
- **Carve-out.** Investors may also choose to set aside a portion of their assets across public equity, public fixed income or alternatives, with the intention of specifically allocating to investments aligned with their climate change and fossil fuel objectives.

Morgan Stanley Financial Advisors, Private Wealth Advisors and Investment Consultants work with their clients to align climate change- and fossil fuel-aware impact goals with their risk tolerance and return objectives.

Restriction screens. In addition to selecting appropriate managers that employ their own investment process across the range of approaches outlined in Exhibit 2; at Morgan Stanley, investors can apply additional restriction overlay screens to their existing separately managed accounts (mutual funds and ETFs cannot be screened). With these screens, it is possible to reduce exposure to fossil fuels. For example the "Oil & Gas industry" screen restricts exposure to the top 200 companies with coal, oil and natural gas reserves.

POTENTIAL IMPACT ON RETURNS

The potential impact on the return or risk profile of climate change and fossil fuel aware investing can vary significantly by investment vehicle, strategy, portfolio manager, geography, sector and more. To provide a brief backdrop of the impact of constraining a portfolio by avoiding all coal, oil and natural gas companies, we turn to research conducted by Aperio Group.

In January 2013, Aperio Group, a specialized investment firm that creates and analyzes custom index strategies, published research on the real risk of divesting from fossil fuels. To measure the impact of excluding coal, oil and natural gas from a portfolio, Aperio excluded the energy sector (based on GICS industry of Oil, Gas and Consumable Fuels) from the Russell 3000 Index (a benchmark of the 3,000 largest companies in the U.S.) to create a custom Russell 3000 ex Energy Index that resembled the Russell 3000® Index as closely as possible in terms of its risk/return profile over a 25-year time horizon.

Based on this historical analysis, investors who seek a portfolio free of fossil fuels can do so with an estimated tracking error of 0.77%, excluding an average of 6.8% of the market represented by the underlying Russell 3000 index. While this exclusion analysis does suggest that restriction screening for fossil fuels affects a portfolio's risk and return, it also shows that the impact may be less significant than presumed.

Conclusion

In the face of climate change, investors cannot assume that economic growth will continue to rely heavily on an energy sector powered predominantly by fossil fuels. As the world moves toward a low-carbon economy, investors are beginning to now position themselves for this paradigm shift — and the evolving investment opportunity set within it.

Given the wide range of approaches one can take to design a climate change and fossil fuel aware portfolio, many investors have been paralyzed into inaction in the past. The framework presented in this primer helps to clarify the different approaches to climate change and fossil fuel aware investing and serves as a catalyst for action by providing a lens for portfolio construction that maintains a consistent, balanced focus on both impact and financial goals.

Assessing and addressing climate change and fossil fuel exposure within individual investment strategies is a long-term, dynamic process that is subject to uncertain scenarios. With the support of a Morgan Stanley Financial Advisor, Private Wealth Advisor or Institutional Consultant, investors can take actionable steps toward understanding their exposure and the impact of climate change and fossil fuels on their portfolios and shifting their investments toward building a more resource-efficient economy.

Climate change and fossil fuel awareness presents both risks and opportunities for investors and the market may be at a tipping point for climate action, the beginning of a long-term trend that will drive unprecedented changes in the investment decision process across many sectors.

For more information on sustainable investing:

Morgan Stanley's Institute for Sustainable Investing works to strengthen the array of financial products and strategies seeking to offer competitive financial returns and address global challenges — allowing investors and businesses to leave a positive legacy to future generations.

www.morganstanley.com/sustainableinvesting

Climate Change and Fossil Fuel Aware Terminology[14]

Alternative Energy — Energy derived from nontraditional sources (e.g., compressed natural gas, solar, hydroelectric, wind).

Carbon Footprint — The total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company.

Climate Adaptation — Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities.

Climate Change — Climate change refers to any significant change in the measures of climate lasting for an extended period of time; this includes major changes in weather such as temperature, precipitation, wind patterns and more.

Emissions — The release of a substance (usually a gas when referring to the subject of climate change) into the atmosphere.

Fossil Fuel — A general term for organic materials formed from decayed plants and animals that have been converted to crude oil, coal, natural gas or heavy oils by exposure to heat and pressure in the Earth's crust over hundreds of millions of years.

Global Warming — The recent and ongoing global average increase in temperature near the Earth's surface.

Greenhouse Gas (GHG) — Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydrochlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride.

Renewable Energy — Energy resources that are naturally replenishing such as biomass, hydro, geothermal, solar, wind, ocean thermal, wave action and tidal action.

[1] 350.org — What We Do. Available at http://350.org/about/what-we-do/.

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[14] http://www3.epa.gov/climatechange/glossary.html.

IMPORTANT DISCLOSURES

This material does not provide individually tailored investment advice. It has been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The strategies and/or investments discussed in this material may not be suitable for all investors. Morgan Stanley Smith Barney LLC recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a Financial Advisor. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. This material is not an offer to buy or sell any security or to participate in any trading strategy. Asset allocation does not guarantee a profit or protect against a loss.

This publication is based on information from multiple sources and Morgan Stanley makes no representation as to the accuracy or completeness of information from sources outside of Morgan Stanley.

The investment examples are for illustrative purposes only and should not be deemed a recommendation to purchase, hold or sell any securities or investment products. They are intended to demonstrate the types of approaches taken by managers who focus on ESG criteria in their investment strategy. There can be no guarantees that a client's account will be managed as described herein.

Alternative investments may only be offered to clients by AI-qualified FAs/PWAs/ICs. Before AI-qualified FAs/PWAs/ICs may discuss a particular private fund with a prospective investor, they must confirm that the prospective investor meets the offering's minimum qualification requirements by submitting the appropriate client information into the firm's Reg D system. Only firm-approved offering materials (generally, the offering memorandum, pitchbook and related materials) may be used to offer or sell interests in a particular fund.

Most alternative investments on the AI platform are sold on a private placement basis to eligible clients who must be Accredited Investors and/or Qualified Purchasers depending on the requirements of the specific investment.

Investing in the market entails the risk of market volatility. The value of all types of investments may increase or decrease over varying time periods. Fixed Income investing entails credit risks and interest rate risks. When interest rates rise, bond prices generally fall.

The returns on a portfolio consisting primarily of climate and fossil fuel aware investments may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria.

Alternative investments often are speculative and include a high degree of risk. Investors could lose all or a substantial amount of their investment. Alternative investments are suitable only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period of time. They may be highly illiquid and can engage in leverage and other speculative practices that may increase the volatility and risk of loss. Funds of funds typically have higher fees than single-manager vehicles as they are subject to an additional layer of fees charged by the fund of funds manager. Alternative investments involve complex tax structures, tax-inefficient investing and delays in distributing important tax information.

An investment in an exchange-traded fund involves risks similar to those of investing in a broadly based portfolio of equity securities traded on exchange in the relevant securities market, such as market fluctuations caused by such factors as economic and political developments, changes in interest rates and perceived trends in stock prices. The investment return and principal value of ETF investments will fluctuate, so that an investor's ETF shares, if or when sold, may be worth more or less than the original cost.

Diversification does not assure a profit or protect against loss in a declining market. Past performance is no guarantee of future results.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of a mutual fund/exchange-traded fund before investing. To obtain a prospectus, contact your Financial Advisor or visit the fund company's website. The prospectus contains this and other information about the mutual fund/exchange-traded fund. Read the prospectus carefully before investing.

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