

WILSHIRE CONSULTING

Where's is the "F" in ESG?

Daniel E. Ingram
Vice President, Responsible Investment Research & Consulting

Why it may be prudent to analyze the potential Financial impacts from ESG risks sooner rather than later

Things take longer to happen than you think they will and then they happen faster than you thought they could.
Professor Rudi Dornbusch

Introduction

While there may not be a consensus, there is a growing body of research demonstrating how Environmental, Social and Governance (ESG) issues can have a direct relationship with long-term financial value - the "F" in ESG¹.

Some investors may believe that discussions about ESG issues are misplaced in an investment context and potentially even in conflict with their fiduciary obligations. However, the U.S. Department of Labor's position is that fiduciaries may consider ESG factors when investing plan assets as part of an economic analysis of the merits of competing investment choices. They stated that, "Plan fiduciaries should appropriately consider factors that potentially influence risk and return. ESG issues may have a direct relationship to the economic value of the plan's investment. In these instances, such issues are not merely collateral considerations or tie-breakers, but rather are proper components of the fiduciary's primary analysis of the economic merits of competing investment choices"².

With the challenges of meeting investment targets keeping asset allocators awake at night, it may be tempting to postpone, or even dismiss entirely, the daunting task of determining how long-term, broader financial risks and opportunities such as resource efficiency, human capital management and board composition could affect a fund's value. Delaying this process may seem sensible if these risks and opportunities take longer to materialize than some think they will.

What if, however, risks accelerate to impact the fund's value faster and to a greater extent than anticipated?

The first section of this paper describes how Wilshire Consulting incorporates ESG considerations into our Risk Lens framework and, within that context, explores the link between ESG, drawdown and behavioral risks. The second section of this paper is designed for organizations who want to incorporate the "F" in "ESG". We outline three steps to help guide this process:

Step 1. Identify what matters;

Step 2. Clarify objectives and trade-offs; and

Step 3. Integrate into investment decisions.

Section I: Wilshire Consulting's Risk Lens Framework

For the purposes of this paper we define ESG risks and opportunities as: broader financial and economic indicators that can impact long-term value, including issues such as resource efficiency, human capital management and board composition (see Exhibit 1). Cases such as Volkswagen's \$25bn fine for selling tainted diesel cars, Wells Fargo's mis-selling scandal and Equifax's cybersecurity breach are a sobering reminder that some of the most significant corporate scandals of the 21st Century have been caused by governance failures.

Exhibit 1: Non-exhaustive list of ESG examples

Environmental	Social	Governance
<ul style="list-style-type: none"> • Energy & fuel efficiency • Water scarcity & Sanitation • Waste Management • Air Pollution • Extreme weather events 	<ul style="list-style-type: none"> • Supply chain & Materials sourcing management • Sata & Cyber security • Labor management & community relations 	<ul style="list-style-type: none"> • Board composition & Diversity • Ownership, control & Investor rights • Corporate behaviour, accounting & audit practices

Source: All sources Wilshire Consulting unless stated otherwise

Wilshire Consulting views the investment landscape through a framework of essential Risk Lenses that are faced by all investors (see Exhibit 2). We believe these risks should be viewed holistically, considered as an explicit part of the investment process and balanced to strike an appropriate trade-off between risk mitigating and risk taking, which is the key to long-term success³. As they relate to ESG considerations, the most relevant of Wilshire Consulting's Risk Lenses are Drawdown and Behavioral risks.

Exhibit 2: Wilshire's Risk Lens framework



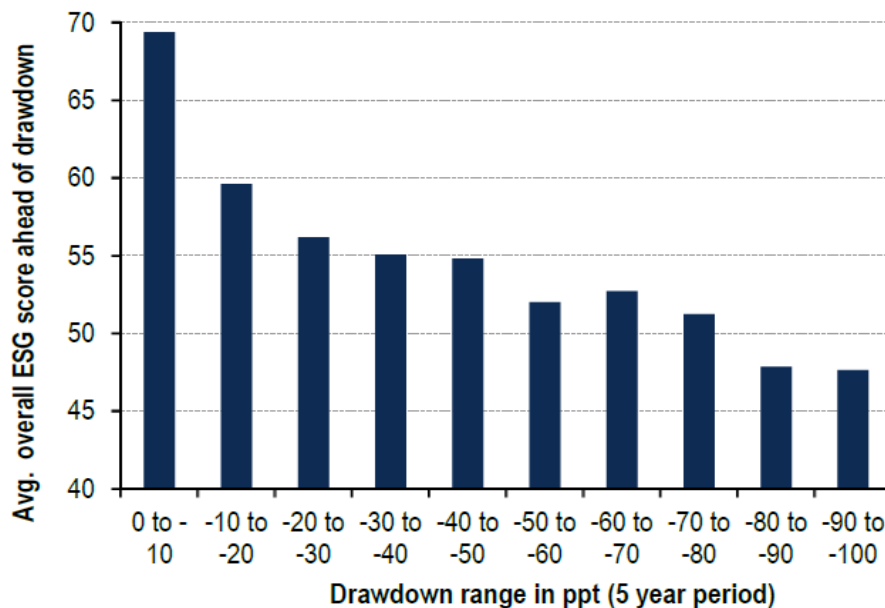
Linking ESG to Drawdown Risk

Portfolios of companies with poor ESG performance may exhibit higher price volatility and have more extreme drawdown (i.e. left-tail) risks than portfolios of companies with better ESG performance.

Morgan Stanley (2015) finds that sustainable mutual funds had equal or lower median volatility for 64% of the periods examined over the last 7 years compared to their traditional counterparts⁴ and Eccles, Ioannou, and Serafeim (2012) find that the portfolio of companies that have adopted a substantial number of environmental and social policies for a significant number of years exhibits lower monthly volatility (1.43% and 1.72% on a value-weighted and equal-weighted base) than a non-ESG portfolio (1.72% and 1.79%, respectively). AQR finds stocks with the worst ESG performance have total and stock-specific volatility that is up to 10-15% higher, and betas up to 3% higher, than stocks with the best ESG performance⁵.

ESG performance may also provide an effective signal of future price declines. BofA Merrill Lynch Global Research⁶ finds stocks with minimal peak to trough declines or drawdowns had an average ESG score of close to the 70th percentile ahead of the period analyzed, whereas those with extreme declines (over 90 percentage points) had an average score in the 47th percentile ahead of the decline (see Exhibit 3). These findings suggest that the weaker the stock's ESG performance, the greater the subsequent price decline.

Exhibit 3: Average ESG score* ahead of price declines, grouped by maximum peak to trough price decline over a 5-yr period (from 2005-2015)



*Average score of ESG-ranked stocks (0-100) in the BofAML US coverage universe using the Thomson Reuters ESG dataset⁷.

Source: Thomson Reuters, BofA Merrill Lynch Global Research

These findings are not unique to public equities but are also relevant to corporate bonds. In grouping the bonds in the Bloomberg Barclays US Corporate investment-grade index into buckets of low, medium and high ESG scores (using two different ESG data providers, MSCI⁸ and Sustainalytics⁹) Barclays found:

- The average spread of high ESG bonds was 38bp lower than that of the low ESG portfolio;
- Investing in top-tier ESG bonds delivered roughly a one-notch uptick in credit quality; and
- Bonds with high Governance scores (using MSCI data) experienced fewer downgrades than those with low G scores.

With these mixed results Barclays conclude their paper with a note of caution: constructing portfolios based on ESG information alone does not necessarily lead to better investment outcomes.

Linking ESG to Behavioral Risk

As noted above, we view ESG issues as broader financial and economic indicators that can impact long-term value. However, much of the research on investor behavior concludes that investors have certain intrinsic biases such as the tendency to discount future risks more aggressively than near term ones. This type of short-termism, where investors may seek short-term rewards like quarterly earnings at the expense of long-term objectives like sustainable growth, can be considered an intrinsic behavioral risk, which has been shown to destroy value¹⁰. A 2013 International Monetary Fund paper concluded that behaving in a manner consistent with long-term investing would lead to better long-term, risk-adjusted returns and, importantly, could lessen the potential adverse effects of short-term investment behaviors of institutional investors on global financial stability¹¹.

While some investors have strengthened their risk management programs since the financial crisis, for example by running scenario analyses on how their portfolios might behave in times of stress, these scenarios have tended to focus on short-term and backward-looking “tail” value-at-risk indicators such as macroeconomic volatility.

As we noted in our 2016 paper, *Climate Change: Evolving Risks and Opportunities for Asset Owners*, climate change and its associated regulatory response have the potential to affect the long term risk and return characteristics of all asset classes. For example, carbon pricing looks likely to become increasingly financially material if prices climb from current low levels to the \$100 per ton minimum required to ultimately reduce global greenhouse gas emissions in line with a 2-degree Celsius target. In seeking to understand how corporate cash flows, supply chains and consumer demand might be affected, Schroders has developed a carbon value-at-risk measure finding around 20% of the cash flows global companies generate could be lost if carbon prices rise to expected levels¹².

Section II: An ESG decision-making framework

Regulators, plan beneficiaries, student bodies and donors are becoming increasingly aware of the economic costs of global natural resource scarcity, extreme weather events and corporate governance failures. As a result many are now asking asset owners to be more transparent in documenting the process they have undergone to analyze how these risks and opportunities could impact a fund’s value, not just in a small sleeve but across the total portfolio. For those clients who want to incorporate the “F” in “ESG”, we outline three steps below to help guide this process.

Step 1: Identify what matters

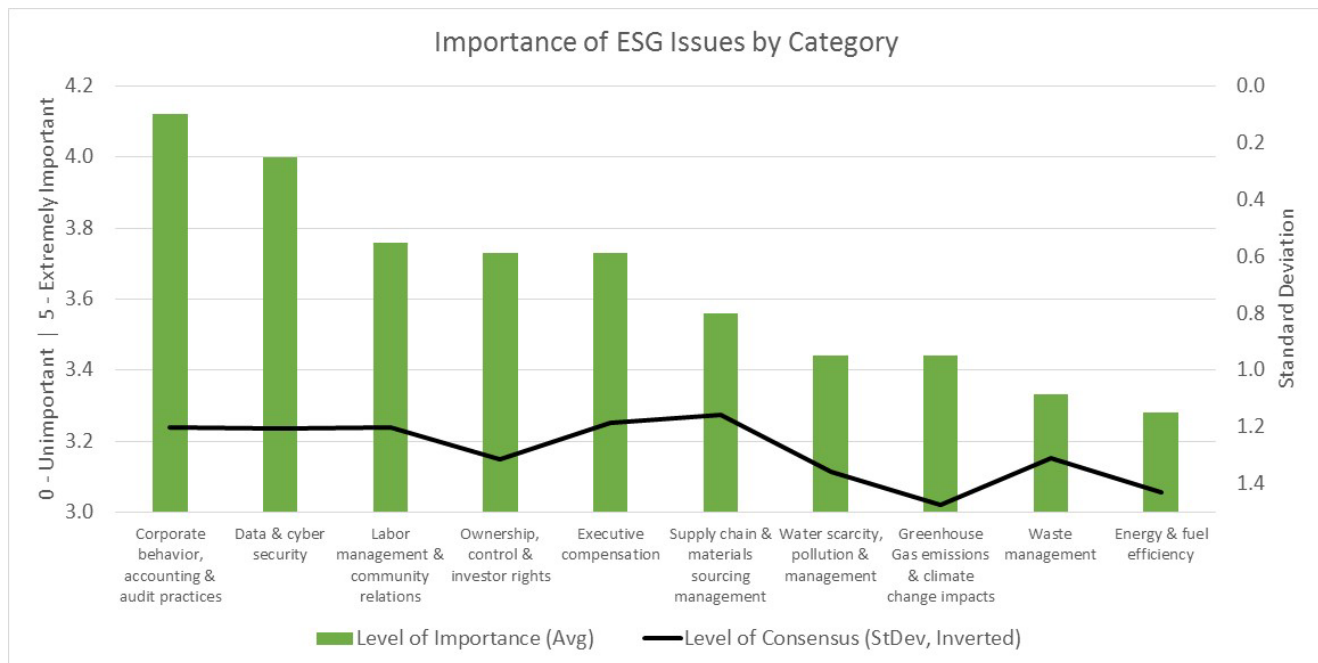
In 2017 Wilshire Consulting conducted a survey of our clients to better understand their level of interest and what actions they have taken to integrate ESG into their investment process. The primary objective for those respondents considering ESG risks and opportunities, particularly public plans, was to contribute to positive environmental or social impacts. As can be seen from Exhibit 4, other ESG motivations include: reputational reasons, demand from participants and to help identify and manage risks.

Exhibit 4: Wilshire 2017 Client Survey Reasons for Considering ESG Risks & Opportunities



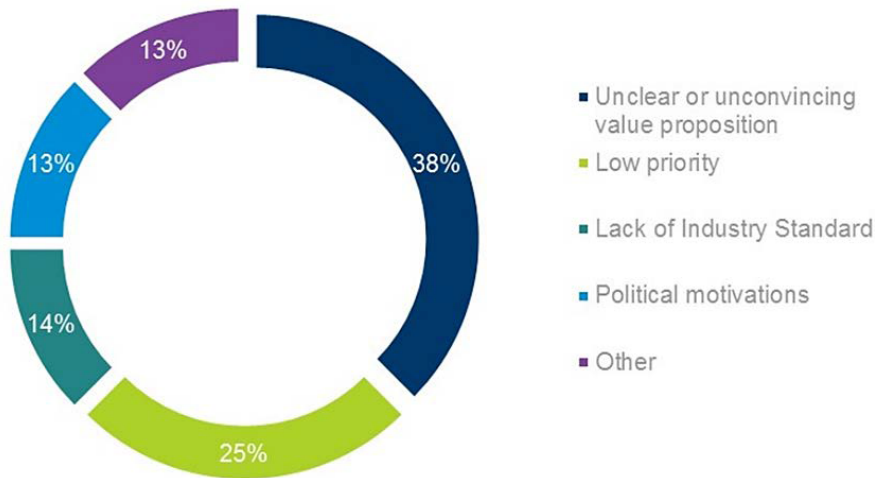
With such a wide range of ESG concerns and interest, it is important that asset owners prioritize which issues are more relevant to their existing portfolio, their broader mission and stakeholders. Our survey revealed the strongest consensus over governance issues including corporate behavior, accounting, and audit practices (see Exhibit 5). Governance risks, such as ownership and control, may be more idiosyncratic in nature insofar as they may be endemic to a particular corporate history and culture. Other risks, such as climate change, may be systemic where the distribution of outcomes is not fully known and impacts may affect the availability of resources, the price of energy, the vulnerability of infrastructure and the valuation of companies¹³.

Exhibit 5: Relative importance of different ESG issues



Our survey revealed significant impediments to asset owners undertaking further ESG analysis. From a long list of potential barriers provided, the top three identified barriers were: An unclear or unconvincing value proposition; low priority and lack of industry standard (see Exhibit 6).

Exhibit 6: Impediments to ESG analysis



Additional barriers included: Data quality issues and confusion over terminology. Other similar surveys identified the lack of internal capabilities, internal and external stakeholder misalignment with ESG objectives and concerns over costs¹⁴.

Step 2: Clarify objectives and trade-offs

Over half of our survey respondents have added ESG objectives to their investment policy or investment belief statements. Setting clear ESG objectives requires consideration of a wide range of issues and will depend on an institution's unique set of circumstances such as: funding and liability / spending profile; specific organizational mission; existing constraints; return targets and risk appetite.

For this reason, we caution against simply adopting boiler-plate ESG language into an investment policy statement and against designing ESG objectives without implementation firmly in mind. Wilshire can help guide clients through a comprehensive process of discussion and analysis before settling on ESG policy language. For example, in May 2014 the CalPERS Board of Administration adopted a set of beliefs that articulate the fund's views on public pension design, funding, and administration. These beliefs offer CalPERS views on the importance of retirement security, defined benefit plans, fiduciary duty, and the need to ensure long-term pension sustainability (See Exhibit 7).

In our experience, designing ESG objectives requires a process of extensive consultation and deliberation which may involve:

- Setting up a working group made up of investment staff and board members;
- Surveying stakeholders' opinions;
- Gathering data from peers and considering best practice examples;
- Conducting exposure analysis to specific themes;
- Appraising advantages and disadvantages of different approaches e.g. divestment vs engagement;
- Prioritizing ESG issues by order of potential impact.

Exhibit 7: CalPERS Investment Beliefs (IB) No.4

Long-term value creation requires effective management of three forms of capital: financial, physical and human. Sub belief:

- Governance is the primary tool to align interests between CalPERS and managers of its capital, including investee companies and external managers.
- Strong governance, along with effective management of environmental and human capital factors, increases the likelihood that companies will perform over the long-term and manage risk effectively
- CalPERS may engage investee companies and external managers on their governance and sustainability issues, including: Governance practices, including but not limited to alignment of interests; Risk management practices; Human capital practices, including but not limited to fair labor practices, health and safety, responsible contracting and diversity; Environmental practices, including but not limited to climate change and natural resource availability.

Step 3: Integrate into investment decisions

The “finance-first” alternative to divestment involves the explicit inclusion of ESG issues in investment analysis, decision-making and stewardship activities. Unlike divestment which involves negative exclusions of entire industries, the integration approach involves positive asset and security selection which takes into account the financial materiality of ESG risks. Once identified, ESG risks may be taken if expected to be sufficiently financially compensated, although behavioral biases may cause investors to underestimate those risks.

Asset owners may consider the following ESG integration steps:

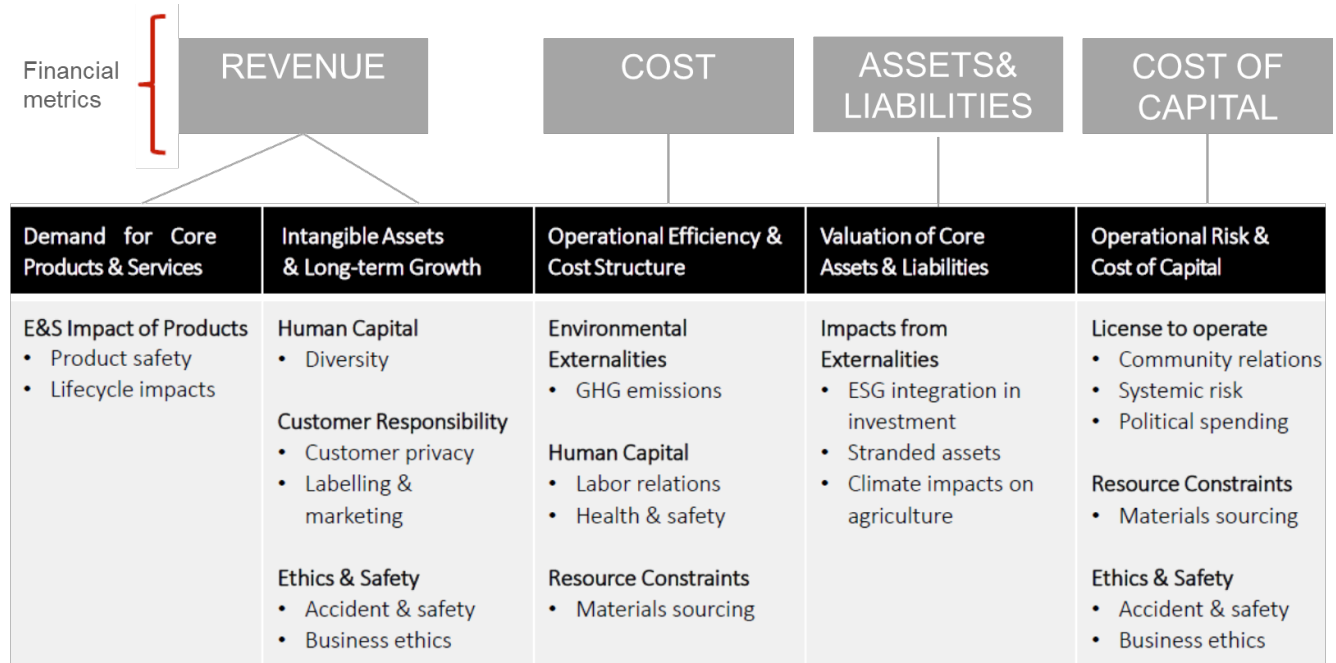
a) Analyze financial information alongside ESG data. Example: Equifax Cyber Security Breach

There are over 90mn cyberattacks every year with global consumer cybercrime estimated to cost over \$100bn annually¹⁵. In September 2017, Equifax, the global information solutions company, announced a major security breach potentially impacting over 140 million U.S. consumers. As a result, Equifax saw its stock price drop 27% and its market value drop by \$5.5bn within 20 days. Three Equifax executives sold \$2m worth of shares days after the cyberattack. ESG analysis could have helped identify the warning signs. Over a year before this major security breach MSCI had already downgraded Equifax’s ESG rating to CCC—its lowest ranking—following a data breach in 2016 that exposed the salary and tax data of over 400,000 employees of an Equifax client¹⁶.

b) Adjust valuations to reflect the potential financial impact of material ESG issues. Example: Sustainable Accounting Standards Board Framework (SASB)

ESG issues can be viewed as proxy for risk that may not be effectively priced into valuations. The emergence of ESG disclosures provides an opportunity to enhance Benjamin Graham and David L. Dodd’s “mosaic” theory for pricing companies to include the sustainability of a company’s business model and its license to operate. In their seminal work, *Security Analysis* first published in 1934, Graham and Dodd found a company's book value and its market value were highly related, but today market value is a multiple of book value because it includes intangible assets such as intellectual property and patent libraries which may amount to over 80% of the market value of a company¹⁷. In-depth analysis of material and broader financial data is becoming more critical to assessing the contribution of intangible assets to core financial drivers and firm valuations (see Exhibit 8).

Exhibit 8: Linking ESG issues to Financial Metrics using the SASB Framework



Source: Wilshire Consulting, SASB

c) Source investment managers with best in class ESG integration processes. *Example: Wilshire's Manager Research Process*

In addition to including a diverse-owned firm in every public securities manager search we conduct for advisory clients, Wilshire Consulting can provide clients with manager ESG ratings to help them better understand the degree of resources supporting a manager's ESG integration capabilities and how managers engage with and monitor ESG improvements at portfolio companies.

d) Act as a long-term steward of portfolio companies. *Example: ExxonMobil Vote 2017*

The day before the US announced its intention to withdraw from the Paris Climate Accord by the end of 2020, a group of investors including asset owners such as NY State Common Retirement Fund saw their landmark resolution at the US' largest oil and gas company pass with 62% shareholder support. The proposal requested Exxon:

- Enhance its existing reporting by analyzing impacts on oil and gas reserves of the globally agreed upon two degree target;
- Examine long-term impacts of technological advances;
- Understand the resiliency and financial risks of the company's portfolio through 2040 and beyond

Conclusion

With a growing body of evidence emerging about the financial risks and opportunities from ESG issues Wilshire will continue to provide our clients with educational resources by conducting further research on the link between ESG and risk / return for different asset classes, industries and markets. For some clients, where stakeholder queries are likely to rise up the agenda, it may be prudent to bring forward discussions about ESG risks and opportunities and, where feasible, adopt a proactive and holistic approach. Such an initiative can start with a few simple steps such as **Identify. Clarify. Integrate.** Wilshire can help clients take these steps by providing:

- **Strategic Advice.** By engaging stakeholders, methodically prioritizing issues and building consensus among staff and trustees, we can assist in drafting clear ESG policies and guidelines through a well-defined process;
- **Manager Insights.** By incorporating ESG questions in our manager due diligence process, sourcing diverse-owned managers and picking attractive impact strategies we can assist in constructing portfolios consistent with our clients' broader investment objectives and risk budgets; and
- **Risk & Performance Measurement.** By conducting ESG portfolio analysis and program reviews we can monitor the impact of our client's investment choices.

Endnotes

¹ Deutsche Asset Management (2016). ESG and Financial Performance: aggregated evidence from more than 2000 empirical studies.

² U.S. Department of Labor Interpretive Bulletin (2015). Fiduciary Standard under ERISA in Considering Economically Targeted Investments.

³ Wilshire Consulting (2016). Risk lenses- The Essential nature of risk.

⁴ Morgan Stanley (2015). "Sustainable Reality: Understanding the Performance of Sustainable Investment Strategies."

⁵ AQR (2017). Assessing Risk through ESG exposures.

⁶ BofA Merrill Lynch Global Research (2016). ESG: good companies can make good stocks.

⁷ Thomson Reuters (2013). Corporate Responsibility Ratings: Ranking Rules and Methodologies.

⁸ MSCI (2017). ESG ratings methodology: executive summary.

⁹ Sustainalytics (2016). Sustainalytics research methodology: company ESG research.

¹⁰ Davies, Richard and Haldane, Andrew and Nielsen, Mette and Pezzini, Silvia (2013). Measuring the Costs of Short-Termism; Focusing Capital on the Long Term (2016). Rising to the challenge of short-termism; Kaplan, Steven (2017) Are U.S. Companies Too Short-Term Oriented?.

¹¹ IMF (2013). Procyclical Behavior of Institutional Investors During the Recent Financial Crisis: Causes, Impacts, and Challenges.

¹² Schroders (2017). Climate change: redefining the risks.

¹³ University of Cambridge Institute for Sustainable Leadership and the Investment Leaders Group (2015). Unhedgeable risk: how climate change sentiment impacts investments.

¹⁴ SSGA (2017). ESG institutional survey.

¹⁵ Bank of America Merrill Lynch (2017). Thematic Investing: Investing for the Future.

¹⁶ MSCI (2017). Equifax Inc. ESG ratings report.

¹⁷ UBS (2017). Measure What Matters: Expanding the scope of intrinsic value to include ESG.

Important Information

This material contains confidential and proprietary information of Wilshire Consulting, and is intended for the exclusive use of the person to whom it is provided. It may not be disclosed, reproduced, or redistributed, in whole or in part, to any other person or entity without prior written permission from Wilshire Consulting.

This material is intended for informational purposes only and should not be construed as legal, accounting, tax, investment, or other professional advice. Past performance does not guarantee future returns. This material may include estimates, projections and other "forward-looking statements." Due to numerous factors, actual events may differ substantially from those presented.

This material represents the current opinion of Wilshire Consulting based on sources believed to be reliable. Wilshire assumes no duty to update any such opinions. Wilshire Consulting gives no representations or warranties as to the accuracy of such information, and accepts no responsibility or liability (including for indirect, consequential or incidental damages) for any error, omission or inaccuracy in such information and for results obtained from its use. Information and opinions are as of the date indicated, and are subject to change without notice.

Wilshire® is a registered service mark of Wilshire Associates Incorporated, Santa Monica, California. All other trade names, trademarks, and/or service marks are the property of their respective holders.

Copyright © 2018 Wilshire Associates Incorporated. All rights reserved.

180250 G0919

More information

Daniel E. Ingram
Vice President, Responsible Investment Research & Consulting

For more information, please contact us directly:

T +1 310 451 3051

Wilshire
1299 Ocean Avenue, Suite 700, Santa Monica, CA 90401

wilshire.com