Total Societal Impact

A NEW LENS FOR STRATEGY

BCG

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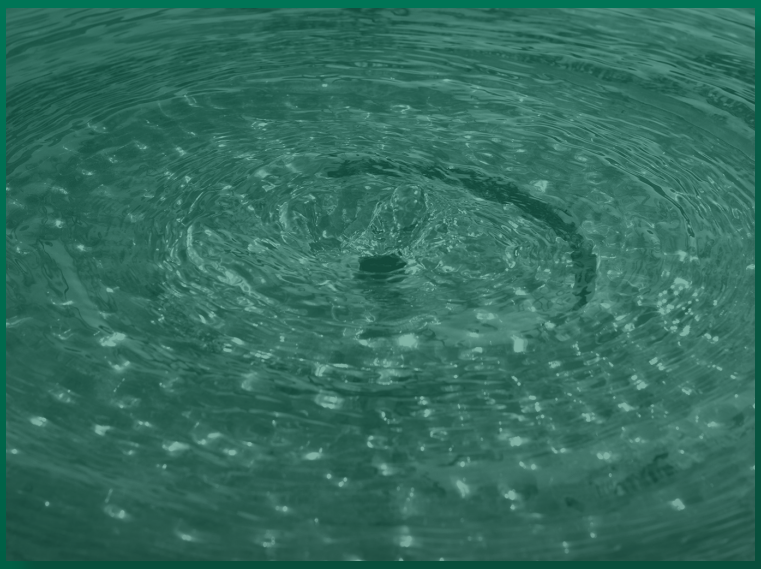

TOTAL SOCIETAL IMPACT

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CONTENTS

FOREWORD

The Boston Consulting Group's study of the impact of environmental, social, and governance (ESG) issues on company performance is an important addition to a growing body of research confirming the financial materiality of these attributes. But it also breaks new ground in trying to help companies capture the broader societal impact of their core businesses when it comes to global issues, such as drug availability and affordability, as well as important challenges related to economic, financial, and social inclusion. More important, it demonstrates how that approach can benefit total shareholder returns over the long term by improving margins and valuation multiples. The idea of a company's total societal impact (TSI), as the study describes it, and consideration of all stakeholders are areas many of the world's largest institutional investors are increasingly looking to measure and monitor.

As the third-largest investment manager in the world, we have been managing ESG strategies for more than 30 years.[1] Yet as the authors of this study suggest, we are at the dawn of profound new developments when it comes to thinking about ESG and impact investing. Investors have come a long way from the negative screening that characterized the early forms of what was initially called socially responsible investing (SRI). We have progressed toward positive, thematic ESG tilts such as State Street's gender diversity and carbon-neutral indexes and are now focusing on fully integrating ESG issues into our investment risk frameworks and those of our client institutions. That process has relied heavily on the insights and data provided by studies like this one. Efforts to quantify the financial implications of ESG factors help investment managers incorporate them into investment models, both as signals for identifying outperformance potential and as red flags for potential risks.

Still, we all have much more work to do, as the report indicates. A growing number of institutions around the world want to broaden their long-term investment objectives beyond traditional financial metrics to include the economic, environmental, and societal impact of their investment programs. This presents critical challenges for investment managers to come up with new kinds of performance scorecards that include attributes such as the carbon profile of an investment portfolio or scores related to workforce quality and supply chain sustainability. As the authors point out, many companies are able to measure the outcomes directly associated with their core businesses but have difficulty sizing their ultimate societal impact.

One of the most important preconditions for advancing to this new stage is access to high-quality and consistent data to assess these new factors when we are analyzing companies. As BCG notes, the ability to

measure the impact of environmental issues such as water resource management or carbon intensity is more advanced than the means of quantifying the influence of more intangible issues such as purpose-driven work cultures or community impact.

Fortunately, many organizations are working to address this data challenge. For example, with its recommended disclosure standards, the Financial Stability Board's Taskforce on Climate-Related Financial Disclosures (TCFD) has provided a foundation for improving our ability to assess and price appropriately climate-related risks and opportunities. Investment managers like us are also encouraging companies to provide more robust and consistent reporting of environmental, social, and governance issues. As one of the largest ETF and index managers in the world, we have made sustainability issues around ESG a central focus of our active stewardship practice. Because we are near-permanent capital (if a company is included in an index, we must own it on behalf of our clients), we have, by definition, a long-term perspective on how ESG issues can impact a company's ability to deliver attractive returns. For that reason, we have called upon companies to analyze and report in detail how sustainability issues might impact their long-term strategy and capital allocation decisions.

The BCG study rightly distinguishes the effects across sectors. The oil and gas industry, as the authors note, will obviously have different opportunities and challenges than biopharmaceuticals, technology, banking, or consumer packaged goods. We believe more industry-specific and regional-specific research is still needed.

As the report suggests, institutional investors, both asset owners and asset managers, have a crucial role to play in helping to advance this next frontier in impact investing. Global institutional assets under management represent trillions of capital firepower to put behind increasing industry knowledge and understanding.

Undeniably, there is a growing appreciation that companies need to consider the interests of a broader group of stakeholders beyond shareholders alone, including society as a whole. This, we believe, is the future. Integrating these issues into corporate strategy can fundamentally change the way businesses think about what makes them successful. As this research vividly demonstrates, successfully managing total societal impact can measurably improve total shareholder returns by motivating employees, building loyalty and trust with customers, and strengthening relationships with policymakers.

—Ronald P. O'Hanley,
President and CEO, State Street Global Advisors

Note
1. All rankings according to State Street Global Advisors, December 31, 2016. Data updated annually.

PREFACE

BREAKING THE COMPROMISE FOR BUSINESS'S CONTRIBUTION TO SOCIETY

As the CEO of BCG, I have the privilege of engaging with CEOs around the world. Most corporate leaders with whom I speak understand that business has an opportunity and a responsibility to help address major societal challenges.

All too often, however, other demands can take precedence. CEOs today are under enormous pressure on a number of fronts, from transforming their businesses for the digital age to adapting to significant geopolitical shifts to responding to the demands of activist investors and other shareholders. And while it is clear that both employees and customers are gravitating toward companies that operate with a sense of meaning and purpose, the fact remains that CEOs know missing earnings expectations or losing ground to competitors can come with severe penalties.

This report provides a much-needed shot of optimism for CEOs struggling with what may feel like conflicting goals. Our research revealed that, all else being equal, companies that outperform in important social and environmental areas achieve higher valuations and higher margins. No doubt more research can and should be done. But our analysis makes plain that one can develop a robust strategy to deliver positive contributions to society with confidence that such an approach will increase enterprise value rather than diminish it.

I believe all firms—including BCG—have a responsibility to explore how their core business model can be tuned to create a positive societal impact as well as outperform on traditional levers of shareholder value creation. At BCG, we have been working for more than a decade with social sector organizations such as Save the Children and the World Food Programme to help them improve their effectiveness and amplify their impact. That work will continue. But we can and will do more, including helping our corporate clients understand how they can leverage their core business to benefit society at large. The evidence is mounting that such an approach will be an important element of both competitive advantage and responsible leadership in the years to come.

—Rich Lesser
President and Chief Executive Officer, The Boston Consulting Group

EXECUTIVE SUMMARY

COMPANIES HAVE LONG FOCUSED on maximizing total shareholder return (TSR) for investors. Today, under increasing scrutiny from all stakeholders, companies must also consider their total societal impact. TSI is not a metric; it is a collection of measures and assessments that capture the economic, social, and environmental impact (both positive and negative) of a company's products, services, operations, core capabilities, and activities. Adding the TSI lens to strategy setting naturally leads companies to leverage their core business to contribute to society in a way that enhances TSR.

BCG conducted a comprehensive study of how companies in five industries—consumer packaged goods, biopharmaceuticals, oil and gas, retail and business banking, and technology—are integrating the pursuit of societal impact into their strategies and operations. Our study included a quantitative analysis of more than 300 companies, using metrics on company performance in environmental, social, and governance—commonly referred to as ESG—topics. We also interviewed in excess of 200 people in more than 20 companies in a range of industries, dozens of investment professionals, and employees of international development organizations and NGOs.

We found clear links between nonfinancial and financial performance. Our quantitative analysis showed that nonfinancial performance on certain ESG topics had a statistically significant impact on company valuations and on margins. These findings provide a new guidepost to leaders, helping them identify industry-specific areas where they have the best opportunity to enhance both TSI and TSR.

Several trends are prompting companies to focus more on their societal impact.

- Employees, customers, and governments are urging companies to play a more active role in social and environmental issues such as global health challenges, climate change, and gender inequality. There is broad recognition that meeting the UN's Sustainable

Development Goals will not be possible without the significant capabilities of and capital from the private sector.

- Investors are increasingly focused on ESG areas as evidence mounts of the link between performance in those areas and long-term shareholder returns. In 2016, global assets in the category of socially responsible investing hit nearly $23 trillion, up from $18 trillion in 2014, accounting for more than one-quarter of total managed assets.

- Data on ESG performance is becoming increasingly available and reliable, putting companies' actions in those areas under greater scrutiny, thus reinforcing investors' attention to them.

Companies that adopt the TSI lens when setting strategy or adjusting their business model reduce the risk of significant negative events (such as a major manufacturing accident or a sales practice scandal) and open up valuable new opportunities—thus likely increasing corporate longevity.

- A strategy that takes societal impact into account can help companies identify and gain access to new locations, markets, and customer segments.

- Adopting the TSI lens can spur innovation, helping companies identify new product features or attributes that can provide societal benefits or develop entirely new lower-cost products, services, and business models.

- Supply chains that are more inclusive—that draw on historically underrepresented individuals and companies—are more resilient and cost effective because they are less dependent on just a few suppliers and distributors and raw materials can be sourced closer to the end market.

- Companies known for products with positive environmental or social attributes, such as those that are responsibly sourced and have natural ingredients, can inspire customers' loyalty and trust. That can translate into increased sales and even premium pricing.

- A strong track record in positive contributions to society can energize the workforce and attract and retain talent.

- Companies that explicitly help a country meet its economic and social goals can strengthen relationships with governments, regulators, and other influential parties.

A quantitative analysis in four industries based on ESG data from MSCI and Oekom Research (the measures we deemed most relevant for our analysis were not available for technology) revealed the ESG topics in each industry that are linked to premium valuation multiples.

- It is important to note that ESG performance does not encompass all components of TSI—most notably, the intrinsic societal value

of a company's products and services. However, it is the best available proxy for quantifying societal impact.

- Most of the ESG topics that were linked to premium valuation multiples were related to minimizing risks and other negative impacts, such as health and safety or environmental issues. We call these downside topics.

- We found that the top performers for combined performance in downside topics had higher valuation multiples, all else being equal, than the median performers. The valuation multiple premium was 11% for consumer packaged goods, 12% for biopharmaceuticals, 19% for oil and gas, and 3% for retail and business banking.

We also found a positive relationship between ESG performance and margins. Our analysis examined margin premiums—the percentage point difference in margins of top performers and of median performers. In consumer packaged goods, biopharmaceuticals, and oil and gas, we analyzed gross margins and EBITDA margins (in most cases, the positive relationship showed up in both—we highlight the margin for which the correlation was strongest). In banking, we analyzed net income margins, which is a more relevant metric for this industry.

- In consumer packaged goods, gross margins were 4.8 percentage points higher, all else being equal, for companies that were the top performers in socially responsible sourcing than for the median performers. Margins were also higher, all else being equal, for the top performers in four environmental areas, including minimizing the impact of products and packaging and conserving water.

- In biopharmaceuticals, EBITDA margins were 8.2 percentage points higher, all else being equal, for the top performers in expanding access to drugs than for the median performers. Top performers in conducting ethical human clinical trials and promoting employee safety also had EBITDA margin and gross margin premiums.

- In oil and gas, EBITDA margins were 3.4 percentage points higher, all else being equal, for the top performers in maintaining process-oriented health and safety programs than for the median performers. There was also a strong link between margins and performance in employee training.

- In retail and business banking, net income margins were 0.5 percentage points higher, all else being equal, for top performers in promoting financial inclusion and 3.4 percentage points higher for top performers in environmentally responsible sourcing. There were also margin premiums for top performers in three topics related to ethical business practices: ensuring fair selling practices, ensuring fair debt collection, and avoiding and combating corruption. There were, however, two negative correlations: top performers in integrating environmental factors into credit risk analysis

and protecting and promoting equal opportunity had lower net income margins, all else being equal, than the median performers in those topics.

On the basis of our qualitative analysis and extensive case work, we have identified eight success factors for companies aiming to deliver both TSR and TSI.

- Companies need to choose a small and distinctive set of TSI themes: areas that are relevant to their industry and in which they can have a meaningful, positive impact.

- Companies must tell a clear, cohesive story of how TSI is part of their core business strategy and of the financial and societal benefits they expect to achieve.

- For each TSI area, companies need to select a limited number of high-priority initiatives that are integrated with and driven by business units. Each initiative should be based on a solid, detailed business and societal case and designed to be scaled.

- Companies should build deep partnerships with other organizations in order to create large-scale, high-impact initiatives.

- Companies need clear goals for the societal benefits they plan to create, and they must measure their performance against those goals as well as the effect of their TSI activities on financial performance.

- Companies should also engage directly with key stakeholders—including employees, customers, and governments—on the societal issues that are important to them.

- The external impact of TSI activities, as well as the effect on financial performance, must be integrated into all communications with investors.

- A robust TSI program requires the right management structure, governance, and incentives.

INTRODUCING TOTAL SOCIETAL IMPACT

For decades, most companies have oriented their strategies toward maximizing total shareholder return (TSR). This focus, the thinking has been, creates high-performing companies that produce the goods and services society needs and that power economic growth around the world. According to this view, explicit efforts to address societal challenges, including those created by corporate activity, are best left to government and NGOs.

Several trends are prompting corporate leaders to rethink the role of business in society.

Now, however, corporate leaders are rethinking the role of business in society. Several trends are behind the shift. First, stakeholders, including employees, customers, and governments, are pressuring companies to play a more prominent role in addressing critical challenges such as economic inclusion and climate change. In particular, there is recognition that meeting the UN's Sustainable Development Goals (SDGs) will not be possible without the private sector's involvement. Second, investors are increasingly focusing on companies' social and environmental practices as evidence mounts that performance in those areas affects returns over the long term. Third, standards are being developed for which environmental, social, and governance (commonly referred to as ESG) topics are financially material by industry, and data on company performance in these areas is becoming more available and reliable, increasing transparency and drawing more scrutiny from investors and others.

As these trends gain momentum, companies need to add a lens to strategy setting, one that considers what we call total societal impact. TSI is the total benefit to society from a company's products, services, operations, core capabilities, and activities. (See the sidebar "What Is Total Societal Impact?") The most powerful—and most challenging—way to enhance TSI is to leverage the core business, an approach that yields scalable and sustainable initiatives. If well executed, this approach enhances TSR over the long term by reducing the risk of negative events and opening up new opportunities. In the end, such an approach allows the company to survive and thrive.

Evidence of the power of this approach is mounting. Much of the research to date has focused on demonstrating the link between a company's overall ESG performance and its financial performance. However, CEOs tell us that it is unclear where they should put their energy. Which areas in their industry provide the best opportunities to create both societal benefits and financial returns? To help answer that question, we have gone deeper

WHAT IS TOTAL SOCIETAL IMPACT?

Every company has positive and negative economic, social, and environmental effects on the world. We refer to the aggregate of these as its total societal impact. TSI is a collection of measures and assessments, not a single metric. Companies should use TSI to help shape strategy.

A company's TSI includes the impact of its products and services, its operations, and its corporate social responsibility initiatives. It also includes the result of explicit decisions the company makes to adjust its core business to create positive societal benefits. Activities related to TSI often have a material impact on total shareholder return (TSR)—but not always.

TSI encompasses numerous elements. Examples include:

- The intrinsic benefit to society of a product or service (a drug that saves lives, for instance, or a bank loan that enables a farmer to buy a plow)
- Business practices, including strict adherence to ethical business rules and inclusive hiring policies, that directly or indirectly affect societies in the countries and communities where the company operates
- The jobs created as a result of the materials a company purchases and services associated with the company's supply chain
- The impact on the environment—both negative (such as the environmental footprint of operations) and positive (such as innovations that reduce pollution)

Impact is not an easy thing to measure. It is topic- and industry-specific and often requires data from outside the company. Many companies measure the outcomes of their efforts—but have difficulty measuring the ultimate societal impact. In the case of efforts aimed at expanding financial inclusion for women, for example, it may be fairly easy to measure an outcome, such as the number of women who join the banking system. The impact, on the other hand, which may be a decrease in gender income inequality, may be more difficult to measure.

No doubt, companies will make progress in identifying and tracking impact in the future. The objective, however, is not to come up with a single metric like TSR but to understand how a company's actions connect to impact and to adjust strategy to maximize TSI for the benefit of TSR.

and identified the link between individual ESG topics and financials in specific industries. Our study encompassed five industries: consumer packaged goods, biopharmaceuticals, oil and gas, retail and business banking, and technology.[1] For individual industries, we looked at the link between performance in specific ESG topics (such as ensuring a responsible environmental footprint or promoting equal opportunity) and market valuation multiples and margins, both contributors to TSR.[2] Our key findings:

- Nonfinancial performance (as captured by the ESG metrics) was statistically significant in predicting the valuation multiples of companies in all the industries we analyzed.
- In each industry, investors rewarded the top performers in specific ESG topics with valuation multiples that were 3% to 19% higher, all else being equal, than those of the median performers in those topics.
- Top performers in certain ESG topics had margins that were up to 12.4 percentage points higher, all else being equal, than those of the median performers in those topics.

ESG data is currently the best way to quantify a company's societal impact. However, it is important to note that ESG measures are not designed to measure a company's TSI. In particular, ESG provides a limited window onto the largest impact of a corporation: the intrinsic societal value created by its core products or services. The ESG measures that do relate to a company's products or services tend to focus on the incremental ways a company improves its products or makes those products more accessible. In banking, for example, ESG data is not designed to capture the full economic benefit of a bank's lending activities—but it does track the degree to which banks are lending in underserved markets. Consequently, most of our findings relate to how companies operate their business, not to the actual product or service they create.

Still, the clear links in each industry between performance in specific ESG topics and financial performance point business leaders to opportunities to enhance both TSI and TSR. Notably, we found just two negative correlations in our analysis of 65 topics (we studied 35 topics, 10 of which applied to all four industries)—suggesting that a well-executed investment in material ESG issues does not hurt financial performance.

Of course, many companies have already developed programs that aim to address various societal issues and generate business benefits. Examples include efforts to reduce greenhouse gas emissions, programs aimed at eradicating major diseases in developing countries, and initiatives that provide opportunities that can lift people out of poverty. But too often, the results are fragmented and lack scale. Moreover, even companies that have an effective, large-scale effort intended to increase both societal impact and TSR frequently fail to measure and communicate the results to investors, their employees, and the wider public. This diminishes the benefits to the brand, to employees, and to stock market performance that companies could realize from such efforts.

Based on extensive work with clients and numerous interviews, we have identified the key success factors for integrating TSI efforts into a company's strategy, organization, and business model. Companies that do this well will find they can not only create value for shareholders—but also make a real difference in the world.

Notes

1. For the purposes of this report, the technology industry includes software, information, and internet companies.
2. Because of the scarcity of data on certain ESG topics in the technology industry, we were unable to do a quantitative analysis.

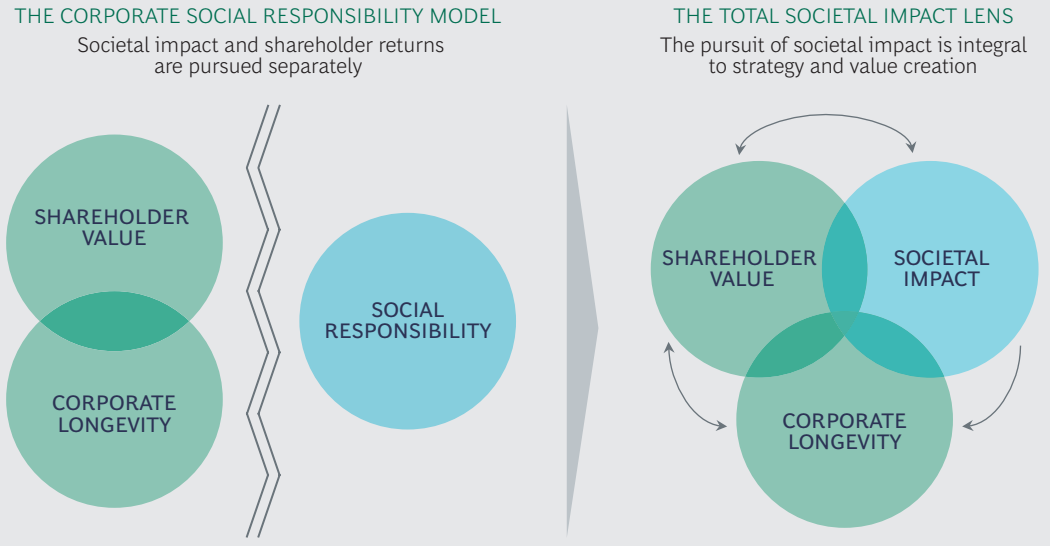
THE BUSINESS CASE FOR FOCUSING ON TSI

THE BUSINESS COMMUNITY HAS, of course, played a role in addressing societal challenges for many decades. Companies have long run their own foundations, for instance, and have established major corporate social responsibility programs.

Today, it's not enough for companies to pursue societal issues as a side activity. Instead, they must use their core business—and the scale advantages it offers—to create both positive societal impact and business benefits. The result can be a more reliable growth path, a reduced risk of negative, even cataclysmic, events, and, most likely, increased longevity. (See Exhibit 1.)

BCG conducted a comprehensive study of how this approach is being adopted in five industries. In addition to our quantitative analysis and a review of external studies, we spoke with in excess of 200 people at more than 20 companies both within and outside our five industries. We also spoke with dozens of investment professionals at pension funds, foundations, sovereign wealth funds,

EXHIBIT 1 | Total Societal Impact Cannot Be Separated from the Business



Source: BCG analysis.

asset managers, private equity firms, and financial advisors to understand how the investment community is assessing ESG performance and incorporating it into their decisions—and what those views mean for corporate leaders. Lastly, we spoke with international development organizations and NGOs to get their perspective on partnerships with the private sector.

The Imperative of Delivering TSI and TSR

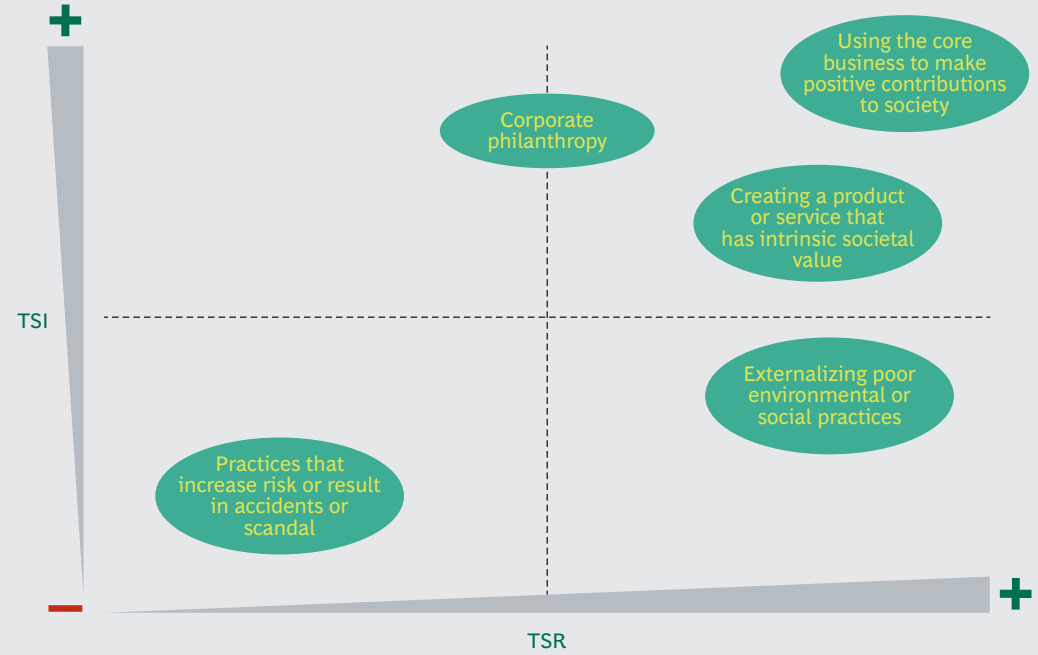
A company's significant activities ultimately have an impact both on society and on shareholder value. Company activities are often presented in a 2x2 matrix to illustrate how much they contribute to each. Following the example of others who have conducted research in this area, we have created a matrix that shows the positive and negative impacts of business practices and activities on society and on financial performance. (See Exhibit 2.)

Assessing How Business Practices and Activities Contribute to TSI and TSR. A company's business practices and activities ideally boost both TSR and TSI, falling in the upper-right quadrant. But placement within that quadrant—which reflects just how much these activities actually increase TSR and TSI—varies.

Philanthropy and donations, for example, can benefit society. But the impact on TSR, typically in the form of brand enhancement or employee engagement, is more variable. Some of these activities can enhance both TSI and TSR, putting them in the upper-right quadrant. But when these activities are not done well (or are done to excess), they can actually be a drag on TSR, putting them in the upper-left quadrant. A company may make donations that help society, for example, but do little to burnish its brand or engage employees.

Of course, even if companies apply a strict TSR lens, they are almost always creating some social dividends. That's because most companies in most industries sell a core product or service—a medicine that saves lives, a household appliance that makes chores easier, or auto insurance that protects drivers against financial loss, for instance—that has intrinsic societal value. As a result, their basic operations fall into the upper-right quadrant as well.

Exhibit 2 | All Business Practices and Activities Have an Impact on Both TSR and TSI



Source: Adapted from Jane Nelson, "Leveraging the Development Impact of Business in the Fight Against Global Poverty," in *Transforming the Development Landscape: The Role of the Private Sector*, The Brookings Institution, 2006.

The real question is how companies can identify activities that would fall farther up and to the right in that quadrant—business opportunities that generate significant shareholder returns as well as societal impact that goes well beyond the intrinsic benefit of a product or service. This requires explicitly identifying ways to leverage the core business to address social and environmental goals. How best to do so will vary by industry but can include changes to the supply chain, leveraging core capabilities of the business, and enhancements to existing products or services or the development of new ones.

Such activities can have a greater impact than most philanthropic efforts for a simple reason: they are scalable. In addition, while charitable giving can be among the first things on the chopping block in an economic downturn, a strategy built around enhancing TSI and TSR together is likely to be more sustainable because of the business benefits it aims to create.

Certainly, some activities fall in the other three quadrants, dragging down TSR, TSI, or both. For example, companies that have focused almost exclusively on delivering solid returns to shareholders have at times failed to invest in the best environmental practices or safety disciplines. However, societal expectations, regulations, and investors' attention to social and environmental issues have evolved, making many previously permitted activities untenable.

Consequently, companies find that activities that previously boosted TSR in the short term, but had a negative impact on society, ultimately become a drag on TSR. As a result, those activities move from the lower-right quadrant to the lower left, often damaging the brand in lasting ways and even threatening the company's survival.

The degree to which management has focused—and continues to focus—on TSR as the primary objective varies by region. In continental Europe, companies have long subscribed to the "stakeholder model," in which employee, community, and environmental interests are all considered in addition to shareholder interests. This culture has its roots in an industrial structure dominated by family-owned enterprises and a regulatory environment for large companies that is more alert to maintaining the balance among these constituencies than in the US. In Asia, the prevalence of state-owned enterprises and family-owned, publicly listed companies creates an environment in which companies are generally focused on a broader set of objectives than simply maximizing TSR. These objectives can include, for example, supporting a country's industrial policy.

The Trends Driving an Increased Focus on TSI. Several trends are converging that make it critical for all companies to expand their view to include both TSR and TSI.

Activities that used to boost TSR but not TSI have become a drag on TSR.

First, companies are under mounting pressure from a range of stakeholders to play a more active role in addressing social and environmental issues such as global health challenges, climate change, and gender inequality. Employees—millennials, in particular—not only want their employers to have a greater sense of purpose but also seek an active role in companies' societal impact efforts. In addition, customers are increasingly attuned to information related to a company's social and environmental impact—information that can shape their buying decisions. Some governments, meanwhile, expect companies to do more to solve economic and social problems and are looking to collaborate with companies in such initiatives. The need for greater private-sector involvement in these efforts is clear: the annual gap between the cost of achieving the SDGs and the available public funding is projected to be as much as $2.5 trillion—a shortfall that many believe the private sector must largely address.[1]

Second, the investment community is increasingly focused on companies' social and environmental performance. A decade or so ago, socially responsible investing (SRI) encompassed two primary approaches. The first was

negative screening, in which investors in public markets avoided stocks of companies whose products or services were deemed to have a negative impact on society. The second was impact investing, which involved relatively small investments in the private markets that would support an explicit social or environmental objective. These two approaches represented a relatively small slice of the overall investment market.

Today, however, investing with a focus on social and environmental factors is going mainstream, and investors are deploying many additional SRI strategies. Examples include thematic investing (in areas such as clean energy, education, and health care) and full ESG integration, in which managers incorporate material ESG measures into their investment models.

The TSI lens leads companies to spot completely new opportunities.

Global figures reflect the shift. In 2016, global SRI assets hit nearly $23 trillion, accounting for more than one-quarter of total managed assets and up from $18 trillion two years earlier. The overall share of SRI investing varies quite a bit regionally. In Europe and Australia and New Zealand, roughly half of all managed assets fell into the SRI category in 2016; in Canada, the share was nearly 40%. In the US, the percentage was just over 20%, but it grew at a compound annual rate of 15% from 2014 to 2016. SRI investing has not yet taken off in Asia, where the share was close to zero.[2]

Asset owners and asset managers, particularly those with a long investment horizon, are paying close attention to environmental and social factors for a simple reason: evidence is mounting that company performance in ESG areas has an impact on long-term shareholder returns.

A third trend that's moving TSI front and center is the growing availability and reliability of ever-more detailed data on company performance in ESG areas. A variety of standard-setting organizations and data vendors are behind this trend. Certainly, data challenges remain. For one thing, consensus is still emerging on which ESG topics are material for specific industries and on the appropriate ways to measure performance in those topics. And data quality and completeness need improvement. But information today is largely available and is rapidly becoming more reliable. As a result, companies will find their performance on social and environmental issues increasingly under scrutiny.

However, even if a company and many investors believe that societal and business benefits go hand in hand, several realities may make it difficult for CEOs to take this long view. These include the need to meet quarterly earnings as well as the increasing prevalence of activist investors, who may pressure the company to boost near-term shareholder returns at the expense of long-term value creation. In addition, some obstacles prevent companies from being fully rewarded by the investment community for their ESG efforts, such as the way companies and investors communicate about these issues. (See the sidebar "Bridging the Investor Divide.")

The Business Benefits of TSI

Companies that recognize these shifts and actively rethink how to improve their TSI stand to reap concrete business rewards. First, adding the TSI lens drives them to identify and address activities that will ultimately destroy TSR, activities that over time can undermine a company's performance and ultimately even threaten its survival.

Second, the TSI lens leads companies to spot completely new opportunities—both internal and external. The most prominent include the following:

- **Opening Up New Markets.** A strategy that considers societal impact can give a company access to new locations and markets, and to underserved customer segments in existing markets. Partnerships—both with other private-sector players and with development organizations—often help companies penetrate

BRIDGING THE INVESTOR DIVIDE

There are two main barriers that prevent publicly listed companies from getting full credit in the capital markets for their social and environmental efforts.

The first is the way companies and investors communicate with each other, which reflects the bifurcation between ESG and financial experts within companies, asset managers, and asset owners.

In a company, CFOs are focused on financial results described in well-defined metrics based on accounting standards. Consequently, they communicate less about ESG performance and how that performance affects the company's financial results. As a result, conversations with portfolio managers within the asset managers and asset owners tend not to involve ESG in a major way, focusing instead on the company's financial performance and plans.

Those portfolio managers, meanwhile, do not typically have ESG expertise. While a separate group of ESG experts does communicate directly with companies on issues these specialists believe are significant, such conversations do not generally happen in a regular and scheduled fashion.

The second barrier is that asset managers are typically hired and judged over a relatively short time frame by asset owners.[1] That creates less of an incentive to factor in ESG issues, where benefits often accrue over a long period.

These two barriers can create a vicious cycle. Many CFOs and investor relations leaders at companies say investors generally do not ask about ESG factors, giving them less impetus to develop detailed information and messages about them. Investors that do care about ESG, in turn, are often frustrated, arguing that the information they receive about social and environmental efforts and their contribution to financial performance are short on details and clear measures of success.

Both barriers can be surmounted. For the first barrier, ESG expertise needs to be integrated into the company's finance function and into investors' portfolio management activities. That said, because companies set the agenda for communications with their investors, it is their responsibility to include ESG issues in those conversations. The second barrier needs to be addressed by asset owners. They must extend the time frames under which they measure asset managers' performance.

The barriers are not a major issue in the private market, however. Private equity firms typically hold their investments for a fairly long period, usually five years or more. In addition, they often get board seats at the companies in which they invest, giving them significant influence over company strategy and the reporting of ESG performance.

No surprise, then, that a number of private equity firms we spoke with are integrating environmental and social factors into the life cycle of their investing strategy, making ESG a factor in due diligence and setting out ESG targets for companies in their portfolio. This reflects a belief among both general and limited partners that an ESG focus can ultimately help increase exit valuations. And it can help private equity firms attract more socially minded limited partners, such as development finance organizations and foundations.

In the end, the goal for companies is the same whether their shares are held in the public or private market: to receive full value for their ESG performance. That will not be possible unless companies effectively integrate that information in their communications with investors.

Note

1. See R. Eccles and M. Kastrapeli, *The Investing Enlightenment: How Principle and Pragmatism Can Create Sustainable Value Through ESG,* State Street, 2017.

these markets. Although these new markets may not be immediate money makers, entering them is often a preemptive or strategic move that leads to long-term, profitable growth opportunities.

- **Spurring Innovation.** Companies that adopt the TSI lens will often identify new product features or attributes that can provide societal benefits while boosting the appeal of those products. In addition, the TSI lens may lead companies to develop entirely new lower-cost products, services, and business models, all of which can open up new geographic or demographic market opportunities. These innovations, such as a new business model for an underserved community or a product that addresses a specific environmental issue, can often be successful in existing markets.

- **Reducing Cost and Risk in Supply Chains.** The development of more inclusive supply chains—those that draw on individuals or companies that have historically been left out—can make those networks more resilient and cost effective because they are less dependent on a few suppliers and distributors, and raw materials can be sourced closer to the end market.

- **Strengthening the Brand and Supporting Premium Pricing.** Companies known for products with positive environmental or social attributes, such as those that are responsibly sourced and have natural ingredients, can inspire customers' loyalty and trust. That can translate into increased sales and even premium pricing on certain products for certain market segments, a powerful benefit in particular for the consumer goods industry.

- **Gaining an Advantage in Attracting and Retaining Talent.** A strong track record in contributing to society can energize the workforce and give a company an edge in the ongoing war to attract, engage, and retain talent.

- **Becoming an Integral Part of the Economic and Social Fabric.** Companies that explicitly work to support a country's economic and social development goals can strengthen relationships with governments, regulators, and other influential parties.

Companies that are able to seize such opportunities while addressing potentially TSR-destroying activities increase the likelihood that they will grow and thrive over the long term. Such sustained success is increasingly difficult to achieve. BCG research has found that corporate longevity has plummeted. Public companies have a one in three chance of being delisted in the next five years, whether because of bankruptcy, liquidation, M&A, or other causes. That's six times the delisting rate of companies 40 years ago. (See "Die Another Day: What Leaders Can Do About the Shrinking Life Expectancy of Corporations," BCG Perspective, December 2015.)

Two big questions in C-suites today are which societal impact efforts yield concrete business benefits and whether those activities enhance financial performance. We set out to answer both.

Notes

1. United Nations Conference on Trade and Development, *World Investment Report 2014: Investing in the SDGs: An Action Plan,* 2014.
2. Global Sustainable Investment Alliance, *Global Sustainable Investment Review 2016,* 2017.

ASSESSING THE LINK BETWEEN TSI AND TSR

PAST RESEARCH HAS DEMONSTRATED a link between a company's performance in social and environmental areas and its financial returns. For example, a 2011 study showed that companies with good environmental and social policies not only have higher stock market returns but also perform better on return on assets and return on equity than companies that have not adopted good environmental and social policies.[1] In addition, research published in 2015 found that average stock returns for firms with good performance on material ESG topics are significantly higher than the returns for firms with poor ratings.[2] And a recent meta study of over 200 papers revealed that 80% find that better ESG is linked with better stock price performance.[3]

While these studies provide support for the value of contributing to society, they do not offer a blueprint for how companies can actually go about this. To that end, we quantified the relationship between specific topics and financial benefits in four industries to help companies understand which ESG topics they should focus on.[4]

The BCG Methodology

There is no well-established methodology for measuring the full economic, social, and environmental impact of a company's activities on society. We can, however, measure how well companies are performing in ESG topics.

Our first step was to identify the ESG topics that are most important in each industry we studied. These topics all relate to the companies' core business models and operations and concern both the creation of positive societal impact (such as expanding financial inclusion in retail and business banking) and the minimization of negative societal impact (such as reducing waste in oil and gas).

We identified the ESG topics that are most important in the industries we studied.

To identify these ESG topics, we gathered extensive input from BCG industry partners, clients, and industry experts. We also drew on information from many organizations, in particular, the Sustainability Accounting Standards Board (SASB), which has zeroed in on nonfinancial topics that it considers to be "material"—that is, likely to be of interest to investors because they can affect financial performance. Our list of important ESG topics by industry ultimately included topics deemed material by the SASB as well as additional topics that BCG believes are important

to society, irrespective of their current financial materiality in the industry.

After identifying the right topics, we determined which we could measure with available data. There are a number of sources that measure company performance on these topics. For this study, we used data from MSCI and Oekom Research, two of the leading providers of such information. We then selected for analysis the largest companies in each industry that collectively represented at least 80% of the industry's market capitalization and for which there was publicly available data for at least the past three years. This yielded 39 to 141 companies for each industry.

We found a concrete link between nonfinancial and financial performance.

We then analyzed, by industry, the relationship between nonfinancial (ESG) performance and two key financial variables: valuation multiples and margins (EBITDA margins and gross margins).[5] For banking, we used net income margin, a more relevant metric for that industry. Valuation multiples reflect investor sentiment about long-term prospects and risk, and margins reflect current value-added. Both are important contributors to corporate value creation, as reflected in TSR. The analysis looked at ESG performance and valuation multiples for 2013 through 2015, while the margin analysis used data from 2014 and 2015.

Our valuation analysis relied on Smart Multiple, BCG's well-established, proprietary approach for predicting quantitatively the valuation of public companies. (See *The 2013 Value Creators Report: Unlocking New Sources of Value Creation,* BCG report, September 2013.) The Smart Multiple approach uses a multiple regression model incorporating traditional financial performance measures such as margin levels, growth rates, debt leverage, and company size. By adding nonfinancial measures to the Smart Multiple model, we can determine the incremental impact on valuation of ESG performance, separate from financial performance. In our margin analysis, we used a similar approach to control for a variety of factors—for example, R&D spending—in order to zero in on the incremental impact of ESG performance.

We did, however, run up against some data limitations. Metrics for many of the areas on which technology companies are focused—such as using their products to improve social and economic inclusion—are not yet detailed and nuanced enough to adequately reflect the variety of emerging business models in the industry. For that reason, we could not include the technology industry in our quantitative analysis. However for the four industries we were able to analyze—consumer packaged goods, biopharmaceuticals, oil and gas, and retail and business banking—ESG data was available for two-thirds of the ESG topics we thought were relevant. (See the Appendix for more on our methodology.)

The Link Between ESG and Financial Performance

Our quantitative analysis revealed a concrete link between performance on specific ESG topics and both valuation multiples and margins. We found positive, statistically significant correlations on valuation multiples for 16 topics and positive, statistically significant correlations on margins for 17 topics out of a total of 65 topics examined across all industries.[6]

It is important to note that our analysis does not prove causality. In fact, in some cases it may be that higher margins, for example, allow companies to invest more in ESG initiatives, resulting in stronger ESG performance. However, in many cases it is likely that performance in these topics is contributing to financial performance. Ultimately, the two factors—strong ESG performance and strong financial performance—may be self-reinforcing.

The results of our valuation and margin analyses provide encouragement to companies focusing on ESG-related issues. We expect that evidence of the positive correlation between

ESG and financial performance will continue to emerge as data becomes more reliable and available and as companies actively pursue TSR and TSI in tandem.

The Link Between TSI and Valuation Multiples. We found that companies with strong performance in material ESG topics enjoyed a premium valuation multiple.[7]

This finding yields a powerful insight. While it has long been understood that fundamental financial factors such as margin structures, growth rates, and financial risk are key drivers of valuations, our results show that nonfinancial performance metrics—the ESG measures—add significant and incremental information that also affects valuations directly. Factoring in ESG made our valuation models more accurate. In oil and gas, for example, adding ESG factors to our model increased its predictive power, with nonfinancials explaining 9% of valuation and financials 74%. (See Exhibit 3.)

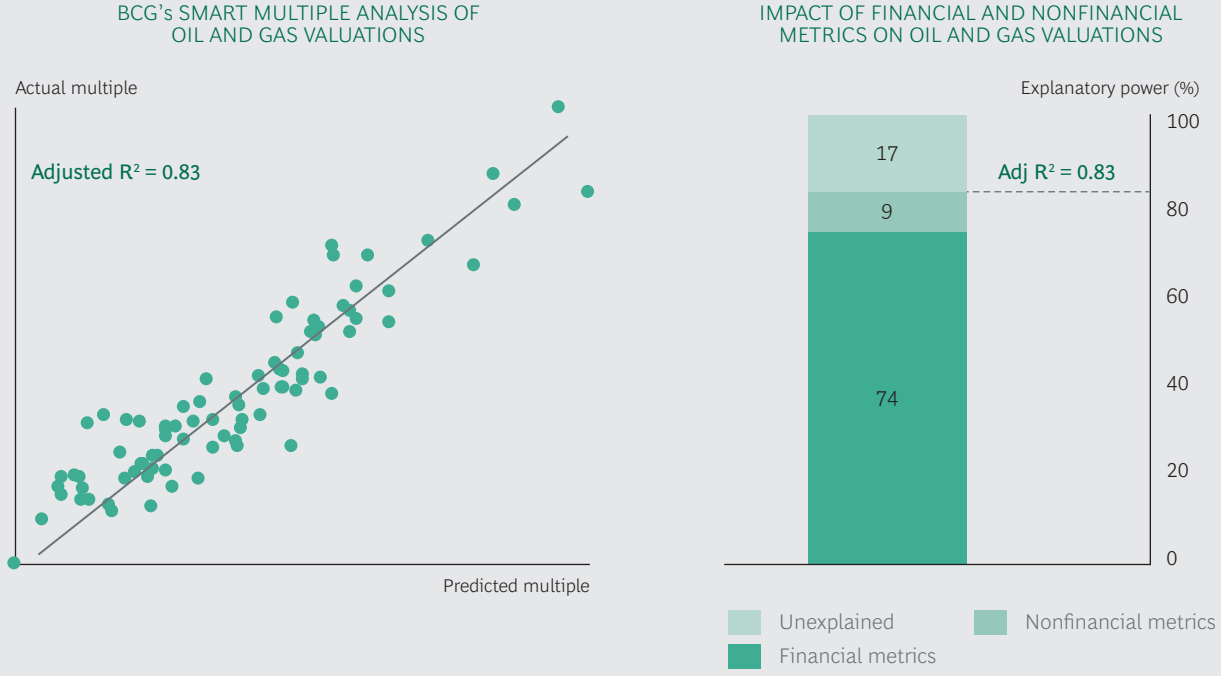
What does all this mean for executives? They need to know which ESG topics have a positive correlation with valuations in their industry. (See Exhibit 4.)

As we looked at those topics, we noted a pattern: nearly all are related to risks or other negative impacts that are particularly relevant in certain industries. Examples include ensuring a responsible environmental footprint and maintaining robust occupational and safety programs. We call these downside topics. The remaining topics are upside opportunities, optional activities that can generate revenue. Nearly every one failed to show a positive correlation to valuations.

We aggregated all downside topics and analyzed their combined connection to valuation multiples.[8] This revealed a linear, positive relationship between ESG performance and valuation multiples. To give a sense of the connection, we examined the difference in valuation multiples between top performers and those at the median for the entire group in the ESG topics. We defined top performers as those companies at the median of the top quintile (the 90th percentile).

In all four industries, top performers for combined performance in all downside topics had market valuation premiums relative to the median performers in those topics. This premium was 11% for consumer packaged goods,

EXHIBIT 3 | Nonfinancial Metrics Contribute to the Accuracy of BCG's Valuation Model



Sources: S&P Capital IQ; Oekom Research; MSCI; BCG Value Science Center.

EXHIBIT 4 | Higher Valuations Are Linked to Strong Performance in Certain ESG Topics

CONSUMER PACKAGED GOODS	BIOPHARMACEUTICALS	OIL AND GAS	RETAIL AND BUSINESS BANKING
• Conserving water • Ensuring a responsible environmental footprint • Implementing a food safety management program	• Avoiding and combating corruption • Conducting ethical human clinical trials • Preventing mistreatment of animals • Promoting employee safety • Promoting transparent lobbying • Protecting and promoting equal opportunity • Socially responsible sourcing	• Avoiding and combating corruption • Maintaining process-oriented health and safety programs • Reducing impact on biodiversity, water, and ecology	• Ensuring a responsible environmental footprint • Integrating environmental factors into credit risk analysis • Securing business and personal data

Sources: Oekom Research; MSCI; SASB; BCG analysis.
Note: ESG = environmental, social, and governance.

12% for biopharmaceuticals, 19% for oil and gas, and 3% for retail and business banking.

So, why would we see a correlation with downside topics but not upside opportunities? The downside topics are well known and so, not surprisingly, relatively good metrics have been developed to measure them. The upside opportunities, in contrast, tend to be newer concepts for which the relevant metrics might be difficult to collect or of weaker quality. If a bank aims to increase financial inclusion, for example, what would be the most meaningful measure to track that? It is possible that given the challenges of measuring upside opportunities, investors are not able to integrate them effectively into valuations.

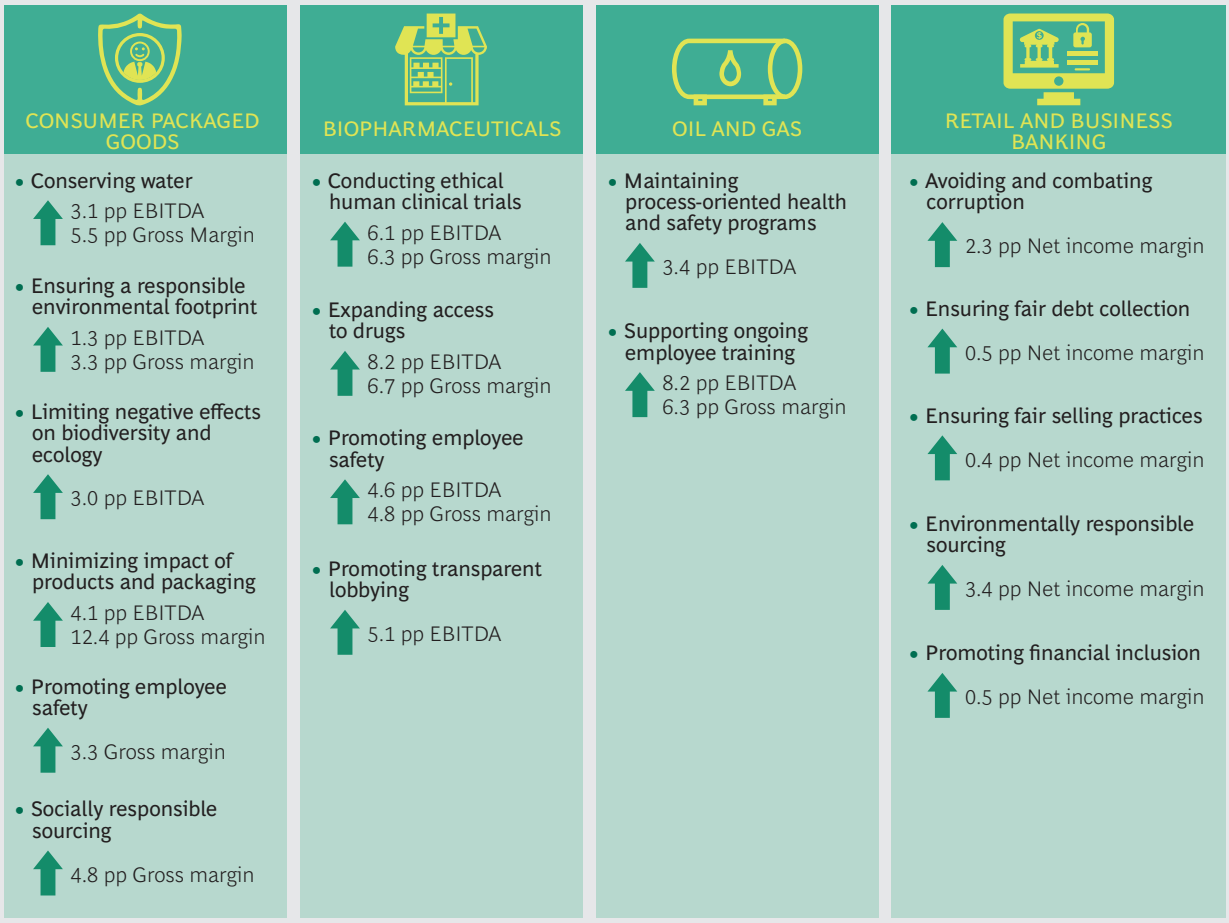
The Link Between TSI and Margins. We found a positive correlation between margins and both upside opportunity and downside ESG topics in consumer packaged goods, biopharmaceuticals, oil and gas, and retail and business banking. In our analysis, we examined margin premiums—the percentage point difference between margins for top performers in ESG topics and median performers. In oil and gas, for example, if median performers in the health and safety topic had an EBITDA margin of 30%, our analysis showed that the EBITDA margin for top performers in that topic—all other things being equal—was 33.4%. (See Exhibit 5.)

In most cases, for consumer packaged goods, biopharmaceuticals, and oil and gas, the positive relationship showed up in both EBITDA and gross margins. For the purposes of the industry discussions that follow below, we highlight the measure for which the correlation was strongest.

It is not difficult to understand why strong performance in the downside topics would contribute to higher margins. Many of them are related to practices that can lower costs, such as the reduction of water and energy use and minimizing the likelihood of a catastrophic operating incident.

While performance in many upside opportunity topics may not yet be rewarded by investors (as reflected in our valuation findings), it can have a direct effect on performance by helping a company create a sustainable com-

EXHIBIT 5 | Margin Premiums Are Linked to Strong Performance in Certain ESG Topics



Sources: Oekom Research; MSCI; SASB; BCG analysis.
Note: ESG = environmental, social, and governance. Figures represent the average margin premium (in percentage points) of top performers (90th percentile) in the specific ESG topic compared with median performers (50th percentile), all else being equal.

petitive advantage over rivals. A more inclusive supply chain, for example, can help a company attract a broader, more socially conscious customer base.

NOTES

1. R. Eccles, I. Ioannou, and G. Serafeim, "The Impact of Corporate Sustainability on Organizational Processes and Performance," Harvard Business School Working Paper, 2011.
2. M. Khan, G. Serafeim, and A. Yoon, "Corporate Sustainability: First Evidence on Materiality," Harvard Business School Working Paper, 2015.
3. G. Clark, A. Feiner, and M. Viehs, *From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance,* 2015.
4. See Goldman Sachs, "The PM's Guide to the ESG Revolution," 2017; and Bank of America, "Why Companies That Do Good May Be the Best Performers."
5. EBITDA (earnings before interest, taxes, depreciation, and amortization) margin is EBITDA divided by revenue; gross margin is gross income divided by revenue.
6. We looked at ten ESG topics that applied to all four industries and at industry-specific topics: five in retail and business banking, six in consumer packaged goods, six in biopharmaceuticals, and eight in oil and gas.
7. If median performers had a valuation multiple of 10x, and top performers had a 20% premium, the multiple for those top performers would be 12x.
8. This includes downside topics for which we did not find a correlation individually.

INSIGHTS ON SOCIETAL IMPACT BY INDUSTRY

Our quantitative analysis reveals the power of a focus on ESG. So, what ESG areas are linked to financial performance, and what are individual companies doing in those areas? Here we address those questions for each industry in our analysis. For the purposes of this report, we examine company activities related to topics where our analysis found a quantitative link—and a few where we did not.

A number of ESG topics are common across industries. Efforts to support diversity and to reduce the environmental impact of a company's operations, for example, are relevant for most corporations in all the industries we studied. In addition, there are some less obvious areas—most notably, efforts to address humanitarian crises—that are applicable to multiple industries. (See the sidebar "Business to the Rescue.") More often, however, areas where companies have the most leverage to deliver societal and business impact are distinct to their industries.

Consumer Packaged Goods: Helping Suppliers and Customers

The opportunity for consumer packaged goods (CPG) companies to have a positive impact on society exists in all elements of their operations, from sourcing to manufacturing to the types of products they sell. Our quantitative analysis of the consumer packaged goods industry found links between performance in certain ESG topics and both valuations and margins:

- **Valuations.** The 11% valuation premium for top performers in all downside ESG topics was due to three of those topics: implementing a food safety management program, conserving water, and ensuring a responsible environmental footprint.

- **Margins.** Gross margins were 4.8 percentage points higher, all else being equal, for top performers in integrating social factors into sourcing and procurement than for median performers and 3.3 percentage points higher for top performers in promoting employee safety. Margins were also higher, all else being equal, for top performers in four environmentally related areas—ensuring a responsible environmental footprint, limiting negative effects on biodiversity and ecology, minimizing the impact of products and packaging, and conserving water.

The importance of environmental issues for CPG companies was apparent in both our valuation and margin analyses. Why would this be? On the valuation side, investors are likely recognizing that consumers are gravitating toward companies with a strong environmental track record. When it comes to margins, the connection may be related to two factors.

BUSINESS TO THE RESCUE

Addressing humanitarian crises—whether a natural disaster, a flood of refugees, or a major health threat like the Ebola outbreak—cannot be a reactive endeavor. A comprehensive approach focusing on preparedness, response, and recovery is required. Historically, such efforts have been spearheaded by governments, the United Nations (through its Office for the Coordination of Humanitarian Affairs), agencies like the World Food Programme, and NGOs such as Save the Children. While some companies, such as logistics providers, have been deeply involved in disaster preparedness and response, the role for most private-sector companies has been limited to writing checks to fund efforts by governments and NGOs.

That is changing. Companies are increasingly bringing their knowledge, skill set, and assets to bear on some of the most pressing humanitarian crises around the globe.

Airbnb, for example, made a bold pledge in early 2017 to arrange short-term housing for 100,000 people in need over the next five years, including refugees, disaster survivors, relief workers, and other displaced people. The company has already provided homes during almost 50 global natural disasters to thousands of people. These efforts have not only provided visible social value but also have helped grow the business—almost 50% of hosts who join the platform during these disasters were not previously registered with Airbnb—and improve the company's standing with government leaders. For example, in Florida, ahead of Hurricane Irma in September 2017, Governor Rick Scott encouraged evacuees to find free accommodations on Airbnb through the company's disaster relief tool.

DHL, meanwhile, has created a series of disaster response teams. The sudden influx of supplies and aid can be overwhelming after a natural disaster, making it difficult to get those things to people who need them. DHL is able to use its logistics expertise—on a pro bono basis—to help solve that problem. After a devastating cyclone hit Fiji in 2016, DHL organized the logistical handling of all the relief supplies that came into Walu Bay or Nausori Airport and provided Fiji's National Disaster Management Office (NDMO) and NGOs with an accurate count of what aid was available and where.

In many cases, private-sector companies in an affected region are uniquely equipped to respond to a disaster given their on-the-ground presence. Consider steel and mining company ArcelorMittal, which has long invested in preparedness by tracking and monitoring potential risks to its operations and workforce around the world. During the Ebola crisis, which peaked in 2014, the company stepped forward to partner with the response agencies. It conducted Ebola initiatives focused on community awareness and screening and used its machinery and capacity to construct treatment centers. In addition, the company's leadership was instrumental in organizing in-country companies into a coalition called the Ebola Private Sector Mobilisation Group (EPSMG), which eventually included over 80 companies. This group shared information internally and became a single point of contact for the public sector. The coalition, with its long-term presence and commitment in the affected countries, became a powerful voice to governments on shaping policies in the midst of the crisis that supported rapid response and long-term recovery.

Coalitions like the EPSMG can amplify the impact of the private sector by bringing companies together. In the Philippines and Nigeria, company networks have been extremely valuable in responding to natural disasters. The UN, under the Connecting Business initiative, is seeking to support the creation of such national-level private-sector collective action around the world. Such moves will allow companies to leverage their scale in addressing major global crises, generating rewards both for the companies involved and for society at large.

First, some companies with a strong environmental record have been able to sell products at a price premium. Second, companies that take steps such as minimizing packaging waste or water use often lower their costs in the process.

Global CPG player Unilever sees tackling packaging waste as a key challenge—and opportunity. The company points out that by 2050, it is estimated that there will be more plastic than fish in the world's oceans. And given that the company purchases more than 2 million tons of packaging every year, Unilever recognizes it needs to be part of the solution.

Steps such as minimizing packaging waste and water use often lower costs.

That's why in 2010 the company committed to halve the waste associated with the disposal of its products and to increase recycling rates in key markets. Furthermore, Unilever committed to make all the company's plastic packaging fully reusable, recyclable, or compostable by 2025 and to increase the use of recycled plastic content in its packaging to at least 25% by 2025. Unilever notes that this is not only the right thing to do environmentally, but the business case for action is clear. Since 2010, the company has reduced its waste footprint per consumer by 28%, saving millions of euros in packaging costs across the portfolio annually. At the same time, Unilever says such efforts promote topline growth by appealing to the more than 50% of consumers who, research has shown, prefer brands that are responsible with their use of natural resources.

Companies in our analysis that integrate social issues into sourcing and procurement decisions also enjoyed a sizable margin benefit. The existing ESG measures in this area focus on working conditions and labor rights.

Many companies that have strong records in those areas have begun taking a more expansive view, evaluating the full range of challenges and needs in their supply chains. This includes everything from how small suppliers, such as farmers, can earn a living wage to how to create greater community support and financial empowerment for suppliers. Given the size and scale of the supply chains of large CPG companies, efforts in these areas can have a real impact on economic development in regions where the company sources. At the same time, it can make the company's supply chain more resilient and cost effective because it is less dependent on just a few suppliers and distributors and raw materials are sourced closer to the end market.

For PepsiCo, a reliable agricultural supply chain is critical to ensuring a consistent flow of high-quality raw materials. The company has made significant moves to strengthen its agricultural supply chain in ways that help farmers produce more and earn more in the process, while respecting human rights and protecting the environment. The company plans to expand its Sustainable Farming Initiative, an industry-leading program that promotes agricultural best practices, increased yields, and workers' rights, to reach more than 7 million acres by 2025, which collectively represents 75% of the company's agricultural spending. This protects a critical part of PepsiCo's global supply chain while helping to solve important economic, environmental, and social issues.

As part of the initiative, the company has developed a robust potato growing program in India, for example, that provides training to farmers, in part through a team of agricultural experts. The training, aimed at helping farmers grow the specific potatoes needed for the Lay's product line, covers topics such as the ideal distance between planted rows of potatoes. In addition, PepsiCo announces the prices it will pay for potatoes ahead of the growing season, allowing farmers to better plan, manage costs, and earn a sustainable income. The company uses its Sustainable Farming Initiative in 33 countries to date with growers on farms of all sizes, with varied crops. This effort pays real dividends for PepsiCo, guaranteeing access to high-quality raw materials in many locations and thus making the supply chain more resilient.

For certain ESG topics, our analysis of the consumer packaged goods industry did not find a link between ESG performance and financials where we would have expected to find one. Consider the work many leading food companies have done to improve the nutritional and health attributes of their product portfolio. The pressure from regulators and investors for food companies to address this issue continues to intensify. But our analysis did not show a correlation with valuations or margins. This might be because consumer packaged goods includes nonfood companies and our sample is primarily large publicly listed players. It is possible that correlations would emerge in an analysis with a narrower industry definition or one that looked at smaller companies that focus on healthy foods.

Biopharmaceuticals: Bringing Life-Saving Medicines to Those in Need

For the biopharmaceutical industry, the connection to societal impact is clear and direct. The industry's products improve human health and save lives. And the astounding medical advances driven by the biopharmaceutical industry over many decades have revolutionized health care. But that progress has presented challenges as well—most notably, how to ensure that life-saving medicines are accessible to as many people as possible, including those who cannot afford to pay for them. This issue is so critical that it is a major element of one of the UN's SDGs.[1]

Our quantitative analysis of the biopharmaceutical industry found links between performance in ESG topics and both valuations and margins:

- **Valuations.** The 12% valuation premium for top performers in all downside ESG topics was due to seven topics, including conducting ethical human clinical trials and avoiding and combating corruption.

- **Margins.** EBITDA margins were 8.2 percentage points higher and gross margins were 6.7 percentage points higher, all else being equal, for top performers in expanding access to drugs than for median performers. In addition, top performers in conducting ethical human clinical trials and promoting employee safety had EBITDA margin and gross margin premiums. And top performers in promoting transparent lobbying had an EBITDA margin premium.

> For biopharma, the connection to societal impact is clear and direct.

The valuation findings reflect the likelihood that companies with stellar records in human clinical trials and combating corruption tend to do well in controlling risk. In addition, companies that are known for excellence in R&D tend to adhere to the highest ethical standards in conducting human clinical trials. Such excellence is likely to be a key factor in both our valuation and margin findings.

The largest margin premium we saw was linked to expanding access to medicine. But determining cause and effect here is particularly difficult. Making products accessible in developing markets can, for example, drive valuable innovations, including changes in manufacturing and product technologies that ultimately lower costs. However, industry observers point out that margins tend to be lower in emerging markets and that the causality may go in the other direction: companies with healthy margins have more flexibility to invest in expanding into new, developing markets. Determining causality is also difficult because it is challenging for companies to determine the true cost of serving a developing market and to allocate resources appropriately.

For decades, companies have expanded access to medicine largely through donation programs. But increasingly, many are looking for ways to leverage the core business more directly to achieve that goal. Merck, for example, is harnessing its manufacturing operations and supply chain to make some critical drugs more accessible.

The company launched a program in 2010 with a goal of making its products accessible

to 80% of the world's population. The company employed a number of levers to achieve this. Some, such as deploying technologies like enzymatic bio-catalysis to improve costs and yield, had direct application to the global business. Others, such as improving the efficiency of procurement through localized sources of supply, could be more directly targeted at specific products and markets. Overall, these actions aimed to reduce manufacturing costs, improve yield, and create more environmentally friendly manufacturing processes. Additionally, Merck has made changes in packaging, distribution, and storage in developing markets to ensure that its products can reach patients in those markets. Such investments have allowed the company to expand the availability of products in developing markets, a necessary condition for meeting its accessibility goals.

Oil and Gas: Facing the Challenge of Climate Change

Oil and gas companies face a significant challenge to their traditional business model from climate change. The industry's attention to this issue reflects an intensifying focus on climate from large investors, some of which are pressuring oil and gas companies to adjust the value of their reserves to reflect potentially stranded assets. As countries around the world commit to limit global temperature increases, some oil and gas reserves may never be developed. In addition, a recent taskforce led by Michael Bloomberg recommended that companies should disclose climate risk information in their public filings.

Our quantitative analysis of the oil and gas industry found links between performance in ESG topics and both valuations and margins:

- **Valuations.** The 19% valuation premium for top performers in all downside ESG topics was due to three topics: maintaining process-oriented health and safety programs; reducing the impact on biodiversity, water, and ecology; and avoiding and combating corruption.

- **Margins.** EBITDA margins were 3.4 percentage points higher, all else being equal, for top performers in maintaining process-oriented health and safety programs than for median performers. There was also a strong link between margins and performance in supporting ongoing employee training.

It is hardly a surprise that health and safety issues are linked to higher valuations.

It is hardly a surprise that health and safety and environmental issues are linked to higher valuations. Minimizing accidents and environmental damage, after all, is a well-understood factor in shareholder returns. At the same time, a top-tier health and safety record, as well as solid employee training, is linked to a clear boost in margins. Companies that excel in both areas are more likely to avoid long and expensive disruptions from accidents or other negative events.

Given the importance of climate change, it is notable that we did not find a link between oil and gas companies' efforts to address climate change and financial performance. Our analysis examined two measures in this area—investing in alternative energy and minimizing carbon intensity in reserves—and found no connection to either valuations or margins. This is understandable. Investments in alternative energy programs and the resulting revenues are both very small compared with investments in and revenues from oil and gas exploration. And the ultimate impact of reduction of the carbon intensity of reserves on valuations remains unclear given the uncertainty of policies, such as potential carbon taxes. This will become clearer over the long term.

Despite the complexity surrounding the climate change challenge, some companies are taking action. Total, for example, has been integrating climate change into its decision making since 2000. The company made several significant changes to its strategy, including reducing oil and increasing natural gas in its portfolio, exiting the coal business in 2015, and increasing R&D and pilot projects in CO_2 capture and storage.

This effort has required some difficult decisions. When faced with the opportunity to pursue a very profitable coal-related project in China, for example, Total first attempted to make the project more sustainable. Ultimately, however, the company abandoned the project altogether, deciding it was incompatible with its commitment to move away from coal.

We did not find a correlation between externally facing social areas, like community involvement, and either valuations or margins. This may be because data on community activities is difficult to track, particularly given the many communities in which oil and gas companies operate.

Measurement issues aside, oil and gas companies have long recognized the importance of community relations to the success of the business. They often operate in remote, less developed regions, where their business practices, including safety, compliance, and sourcing, have significant implications for the local population. And they often work with local governments and other groups to support the development of local businesses that can become suppliers to the company.

In addition, there is an opportunity for forward-looking companies to support national-level initiatives. This can take many forms. Companies can help governments determine how best to use the funds they receive from energy revenues—to help develop national infrastructure or the education system, for example. They can also contribute expertise to governmental economic development programs.

Retail and Business Banking: Innovating to Expand Financial Inclusion

The role of financial institutions, including banks, is to finance the real economy. The tremendous growth in the financial sector over the past couple of decades, however, has highlighted that some in the industry have shifted away from that role. The result has been the development of ever-more-complex financial instruments and greater risk, which contributed significantly to the financial crisis of the past decade. In addition, company-specific scandals involving retail banking customers have further eroded trust in the industry. As a result, many banks are now realizing that a renewed effort to make positive contributions to society can help rebuild their own and their industry's standing.

Many banks realize that contributing to society can rebuild the industry's standing.

- **Valuations.** The 3% valuation premium for top performers in all downside ESG topics was due to three topics: securing business and personal data, ensuring a responsible environmental footprint, and integrating environmental factors into credit risk analysis.

- **Margins.** Net income margins were 0.5 percentage points higher, all else being equal, for top performers in promoting financial inclusion and 3.4 percentage points higher for top performers in integrating environmental factors into sourcing and procurement. There were also margin premiums for top performers in three topics related to ethical business practices: ensuring fair selling practices, ensuring fair debt collection, and avoiding and combating corruption. There were, however, two negative correlations: top performers in integrating environmental factors into credit risk analysis and protecting and promoting equal opportunity had lower net income margins, all else being equal, than median performers in those topics.

The connection between valuations and securing business and personal data is fairly obvious given that such protection is now considered table stakes in an age of more frequent cyberattacks.

Some of the other links we found, however, are more complex. Consider the connection between valuations and the integration of environmental factors into credit risk analysis. This correlation indicates that investors recognize that borrowers with poor environmen-

tal practices can be higher credit risks and are rewarding banks that factor this into their lending with higher valuations. However, this topic had a negative correlation with margins, indicating that near-term financial performance may take a hit when banks factor environmental issues into lending decisions and thus forgo loans that are profitable in the short term.

Banks have an opportunity to influence the projects they finance.

Not all banks, however, are suffering negative effects from such practices. Spurred in part by several shareholders and environmental groups, PNC decided in 2015 to reduce its lending to coal-mining companies, particularly those involved in mountaintop removal mining (MTR). Since then, PNC has continued to reduce its exposure to coal mining and now prohibits lending to coal producers with anything more than a minor exposure to MTR. While the business predicted a small financial hit, its decision ended up being a good economic move, reducing risk in its portfolio and bringing in some new clients that embrace the new policies. A supportive board of directors, as well as a strong risk committee that understood how to integrate social and environmental issues into long-term risk assessment, helped PNC make a strategic move that has paid off.

Of course, banks can go beyond just saying yes or no to borrowers on the basis of their environmental or social practices. We think banks have a real opportunity to influence the projects they finance. They can, for example, provide insight to borrowers on best practices in social and environmental issues and encourage those borrowers to adopt such approaches.

The positive correlation we found between promoting financial inclusion and margins may reflect recent advances. In the past, many banks considered expanding service offerings to unbanked or underbanked groups to be a cost of doing business in order to comply with government mandates. More are now looking at this as an opportunity, as new financial technology (fintech) solutions and partnership models make it easier to profitably offer affordable financial products and services to underserved groups.

At the same time, such activities can yield meaningful social benefits. BCG's 2016 Sustainable Economic Development Assessment (SEDA) found a concrete connection between a country's level of financial inclusion and its overall well-being. (See *The Private-Sector Opportunity to Improve Well-Being,* BCG report, July 2016.)

To expand financial inclusion and derive business benefits, banks must get creative. And they need to adapt their approach to the regulatory environment and market dynamics in the locations where they operate.

Consider Standard Bank. In South Africa, under the government program known as Enterprise Development, banks must direct 0.2% of their profit to support black-owned small and midsize enterprises (BSMEs). That requirement is generally met simply by making donations or grants to black entrepreneurs or BSMEs. Standard Bank, however, has taken a different approach. The bank invested a portion of the money into an independent trust to be used as collateral for loans to aspiring black entrepreneurs, none of whom would have qualified for loans. The bank used other enterprise development funds to provide support to those businesses, such as technical advice and services. This approach allowed the bank to provide business loans to a larger number of BSMEs and to help improve the performance of those businesses. Moving forward, Standard Bank plans to expand parts of the BSME financing model to other SMEs. (For more information on financial inclusion, see *Improving Financial Inclusion in South Africa,* BCG Focus, April 2017.)

Bank margins were also bolstered by a strong track record in ethical business practices. It is likely that such actions not only protect the bank brand but also reduce costs. Fair selling practices, for example, can lower customer attrition rates and minimize fines because the

bank is not selling inappropriate products to its customers. Fair debt collection, meanwhile, can also reduce customer attrition. And banks that avoid and combat corruption are likely to face lower costs related to fraud, including lawsuits and government penalties.

In addition to the negative correlation noted above related to integrating environmental factors into credit risk analysis, we also saw a negative correlation between performance in protecting and promoting equal opportunity and net income margins. It is possible that such efforts may be associated with investments in the short term, which affect margins.

Technology: Expanding Economic and Social Inclusion

In our interviews, it was clear that technology companies often view their core business as making dramatic contributions to the overall good of society. A number of online platforms, for example, give people in remote areas access to information and to global marketplaces, a development that supports economic inclusion and equity.

We were unable to analyze the relationship between ESG performance and financial performance, as we did for the other four industries, because of data challenges. In particular, data is not currently tracked for a number of the areas in which we believe technology companies can have a significant societal impact. This may be in part because business models vary so dramatically in this industry. As a result, a fixed set of data that is relevant for all technology companies is much harder to identify than for, say, banks.

Despite such issues, our study highlighted technology companies' strong commitment to making a positive societal impact. Perhaps their most compelling opportunity is to promote social and economic inclusion among marginalized and underserved groups. Given the wide variety of business models, the routes to achieving that can vary considerably.

Airbnb, for example, is helping to draw tourism dollars into neighborhoods that wouldn't ordinarily attract visitors. In fact, about 74% of Airbnb listings are located outside the main hotel districts of the cities where the company operates. The company's activities also provide economic benefits to hosts that need it: 62% of US Airbnb hosts say that hosting helped them pay their mortgages and hence stay in their homes.

Mastercard's partnership with SASSA (South African Social Security Agency) is a prime example of how a technology platform can support societal inclusiveness.[2] The partnership provides social security payments electronically through a biometrically authenticated card. The program not only increased financial inclusion in South Africa from 67% to 75% in the first year but also slashed government costs by $375 million over five years, strengthening the company's government relations. At the same time, the program demonstrated the power of a business model that can be tailored to other markets.

Online platforms can support economic inclusion and equity.

Facebook, meanwhile, says that it is committed to ensuring that every person can participate in the global digital community, regardless of their location, socioeconomic status, or physical limitations. The company builds innovative tools to connect them, including Free Basics, which offers services via smartphones in countries where internet access may be prohibitively expensive for many people. The services, which include content on news, employment, health, and education are available for free without data charges through a partnership with local telecommunications companies. Free Basics has launched in more than 65 countries and provides more than 1,000 services worldwide. The company also built Facebook Lite, a version of Facebook for people with low-bandwidth internet. Today 200 million people around the world use Facebook Lite to connect.

Microsoft, for its part, is focused on a major inclusion issue in the US: internet access. The

company recently announced its Rural Airband Initiative in support of bringing broadband access to 23 million people in the rural US. As part of that initiative, Microsoft proposed an ambitious goal for the nation: to eliminate the rural broadband gap by July 4, 2022. Microsoft believes that hitting this goal will require a mix of technologies, including fiber, fixed wireless, satellite, and TV white spaces (a technology that leverages unused spectrum in the UHF television bands). Microsoft will provide seed capital to companies that are deploying and developing TV white spaces technology with the aim of connecting 2 million rural Americans to broadband. The company will also contribute its relevant patent portfolio, free of charge, to organizations investing in and using the TV white spaces technology.

Notes

1. United Nations Development Programme, Goal 3: Good Health and Well-Being.
2. Mastercard is included here because its core business is digital payment technology.

KEY SUCCESS FACTORS FOR IMPROVING TSI AND TSR

Companies have long designed their strategies and business models to maximize TSR. While many companies now have clear objectives related to increasing their contribution to TSI, most have not revamped their strategies and tuned their business models to include TSI objectives.

Drawing on client work and our research, we have identified eight success factors for making this shift. Few, if any, companies—even extremely well-run companies—are best in class in all of these factors.

1. Understanding Where You Are Today—and Where You Need to Go. Companies must fully understand the total societal impact of their products and services, and they must determine where they can make additional positive contributions. All too often, companies focus on areas that are not clearly connected to their business—consider a bank that supports efforts to rid oceans of plastic waste. As a result, they have less impact and less credibility than if they target areas where they have expertise and unique resources. Companies need to choose a small and distinctive set of TSI themes, areas that are relevant to their industry and where they can make meaningful contributions.

   When Visa announced the launch of its foundation, in 2017, the company decided to review its overall societal impact agenda. As a result, Visa is moving away from a large number of fragmented activities and a wide range of small-scale partnerships to a focus on an anchor pillar that aligns closely with the company's mission and philosophy of societal change. This pillar, focused on the financial empowerment of microenterprise owners, will not only become the core platform for the foundation and much of Visa's other corporate philanthropy efforts, but will also include business initiatives aimed at creating societal and business value. Visa and Visa Foundation will now pursue only a few activities, but at global scale and with a few highly credible partners.

2. Creating a Cohesive Narrative. After identifying the right themes, companies must tell a clear, cohesive story of how TSI is integrated into their corporate and business strategies. It is hard for stakeholders, whether employees, customers, investors, or governments, to understand what the company is doing without such a narrative. When companies are able to tell a consistent and credible story about their societal impact efforts, they are more likely to get credit for them from those stakeholders.

3. Building a Portfolio of Scalable Initiatives Leveraging the Core Business. For each

area on which a company focuses, it needs to select a limited number of high-priority initiatives that are integrated with and driven by the company's business units. Each should be based on a solid, detailed business and social impact case and designed ultimately to reach scale.

This last point is critical. A company's TSI efforts and aspirations should be commensurate with its scale and reach. If these efforts center on a large number of disparate projects, they may not reach scale—and therefore won't move the needle much on societal issues or the bottom line.

A company's TSI aspirations should be commensurate with its scale and reach.

Facebook has effectively built a portfolio of initiatives around a clear narrative. Mark Zuckerberg's 2017 letter, "Building Global Community," laid out a clear vision of how Facebook should drive societal impact. The company's goal, Zuckerberg wrote, should be to "develop the social infrastructure to give people the power to build a global community that works for all of us." He also spelled out how Facebook should go after that goal by focusing on five pillars, including safe communities, civically engaged communities, and supportive communities. These pillars directly shape how business unit leaders develop new products and services. Facebook's voting reminder features and voter knowledge platforms (which, among other things allow local politicians to share their positions and hold virtual town halls), for example, support the pillar of building civically engaged communities. The safe community pillar is supported by products such as Safety Check, which allows people to let friends and loved ones know they are safe in times of disaster or crisis, and by the company's charitable giving tools, including fundraisers and donations, which help people come together to support one another after a crisis.

4. Forging Partnerships to Amplify the Impact. Nearly all companies have partnerships with organizations such as NGOs, development organizations, other companies, and governments. But often there are too many partnerships, and they don't focus on large-scale initiatives.

Successful companies build deep relationships with a few "anchor" partners in order to create large-scale, high-impact initiatives. The NGOs we spoke with noted a similar desire for fewer but deeper partnerships.

Partners often offer complementary capabilities, such as deep societal impact knowledge, distribution channels in new markets, and strong relationships with local governments. Partners such as development organizations and governments can also be a source of direct funding. As a result, strong partnerships can mean the difference between the success and failure of an initiative. Finally, partners that engage with the company in large-scale initiatives can be a credible voice when it comes to communicating the company's impact.

Merck's flagship Merck for Mothers program, focused on ending preventable maternal mortality, involves a number of partnerships. One, with Ferring Pharmaceuticals and the World Health Organization (WHO), focuses on postpartum hemorrhage (PPH), the number one cause of maternal mortality worldwide. A study called Champion—conducted by the WHO and supported by Merck and Ferring—is comparing the proprietary, room-temperature-stable formulation of Ferring's medicine carbetocin with oxytocin for the prevention of PPH following vaginal birth. While oxytocin is listed as a WHO Essential Medicine for the prevention of PPH, it requires refrigeration during shipping and storage, and often suffers from inconsistent quality of manufacture. If the study, an international, multicenter trial involving as many as

30,000 women, demonstrates the effectiveness of Ferring's drug, Ferring will seek registration approval to market the product in approximately 90 low- and middle-income countries. The WHO, Ferring, and Merck will then work in partnership to make Ferring's product accessible and affordable in those countries. Such an effort could reduce PPH, particularly in the many areas of the world where cold storage is difficult to achieve and maintain.

Partnerships can also be used to leverage the collective buying power of an entire industry. In 2011, global chemical player Solvay, along with five other industrial companies, founded Together for Sustainability (TfS) to standardize sustainability assessment criteria for suppliers. TfS's member base has been steadily growing. Today, the initiative has 19 full members in Europe and North America with a combined $333 billion in revenues. TfS rates the sustainability of suppliers by tracking metrics in a number of areas, including the environment and labor practices. Currently, over 7,600 suppliers are on the TfS platform. Through the coalition's leverage, Solvay is able to influence its suppliers—particularly its 1,100 core suppliers—to adopt more sustainable practices. The impact has been impressive: latest measurements reveal that 67% of Solvay suppliers that have been assessed a second time have improved their sustainability score. For suppliers that do not score well under TfS, Solvay works with them to come up with a corrective action plan.

5. Defining Goals and Measuring Results. Few companies set clear metrics and goals for the societal benefits they plan to create. Even fewer effectively measure their performance against those goals and the impact of their TSI-related activities on financial performance. Our interviews and work with clients show that setting goals and measuring progress remain the biggest gaps for most companies.

   Successful companies are defining the right metrics, often aligning them with the goals of external stakeholders. If a government, for example, sets goals for reducing infant mortality or bringing women into the financial system, companies with initiatives in those areas should measure their progress using the same metrics the government does. Partners such as NGOs may have the insight and expertise to assess the real-world impact of specific company activities. Companies also need to design internal cause-and-effect models to tie societal impact activities to business performance.

Setting goals and measuring progress remain the biggest gaps for most companies.

   Some companies are beginning to solve the measurement problem. Standard Bank has developed what it calls the SEE framework, which helps each business line take account of its social, economic, and environmental (SEE) impacts. In one case, the agribusiness unit found that by restructuring debt for 38 of Standard Bank's South African agribusiness clients' loans during a drought, the bank indirectly saved over 700 jobs, kept 120,000 acres of land agriculturally productive, and maintained more than $14 million in economic activity within the local economy from those clients. The bank has adopted the SEE framework as one of five value drivers (others include employee engagement and client focus), which guide decision making and reporting. The goal of this initiative is to make the bank's purpose—supporting Africa's growth—tangible to its employees, clients, and stakeholders.

6. Engaging with Key Stakeholders on the Issues That Matter to Them. The company should also engage directly with key stakeholders—including employees, customers, and governments—in order to understand and work with them on the societal issues that matter to them. If companies focus on issues that are not

relevant to these stakeholders, their efforts are likely to yield little benefit to the company.

As part of its exploration and production activities, BP not only engages with communities but also works with national governments to agree on local content requirements for materials and services, align on local workforce targets, and collaborate on economic development. In the Bintuni Bay area of Indonesia's Papua Barat province, where the company operates its Tangguh liquefied natural gas (LNG) project, BP has various initiatives, including efforts aimed at reducing malaria and increasing local villages' access to energy. The company also hosts and participates in the TIAP (Tangguh International Advisory Panel), a large group that engages with national and local government agencies, international NGOs, and community leaders to review important social and environmental issues related to the Tangguh project. In addition, every six months BP provides reports on those issues to the Indonesian government.

The board must be involved in integrating TSI activities into the business.

BP's collaborative approach to government partnership helps earn the company a seat at the table with government leaders around the world. When the government of Azerbaijan created a strategic roadmap for economic reform in 2016, for example, it asked BP for input on the energy sector component of the plan.

PNC, for its part, engages with both employees and customers through the creation of Regional Diversity and Inclusion Councils in each market, which are led by the regional president and retail market manager. The councils are made up of representatives from all lines of business, from retail banking to wealth management. Their objective is to generate revenue by attracting new customers, partnering with diverse suppliers, hiring diverse employees who reflect their respective markets, and strengthening the bank's relationships with communities.

7. Making TSI Integral to Investor Engagement. Information on the effect of TSI activities externally as well as on financial performance needs to be integrated into all communications with investors. Companies should include this information in both their annual reports and all regular communications and events with investors throughout the year. Forward-looking CEOs believe that such integrated communications may increase the proportion of long-term investors.

   Some companies are taking creative approaches to investor communications. BP, for example, splits its investor relations function in two. While the bulk of IR reports to the CFO and engages with investors on financial and strategic issues, a smaller IR team that is part of the strategy group engages with socially responsible investors and with mainline investors on societal impact topics. This structure reflects the company's view that key societal impact topics are directly tied to BP's strategy.

8. Establishing the Right Governance and Incentives. The involvement of the board of directors is critical to integrating societal impact activities into the business. Unfortunately, evidence indicates that directors are not taking the lead in this regard. According to the 2017 MIT/BCG study *Corporate Sustainability at a Crossroads,* 86% of company respondents said that boards should play a strong role in a company's sustainability efforts, but only 30% believed that their company had strong board-level oversight in this area.

   A major reason for this is that most directors believe their fiduciary duty is to shareholders. In fact, the duty of the board is to the corporation itself. The board can and should decide on the time frames for creating shareholder value and

support a strong TSI focus in the company's strategy. The board and long-term shareholders can provide a strong line of defense to the CEO when activist investors come along who are only looking for short-term gains and may care less about the long-term viability of the company.

In addition to a supportive and engaged board, companies need an appropriate structure for managing TSI activities. Typically, this has been the responsibility of a dedicated team, often called Corporate Social Responsibility or Corporate Sustainability. The activities of such teams, however, have not necessarily been integrated into the business. A better approach is for business units to take responsibility for their own TSI-related activities. The CSR function can be reinvented as a center of excellence focused on delivering TSI and TSR in tandem. This newly empowered function can provide support and input to the business units and other teams, including investor relations. It should also be directly connected to the corporate strategy-setting process.

Finally, companies should create incentives for pursuing TSI efforts. For instance, a portion of senior managers' compensation should be tied to relevant social and environmental metrics. If those leaders are held to account for meeting TSI objectives, that focus will permeate the organization. In addition, formal programs should be established to recognize individuals who make major contributions to TSI.

Solvay has made a concerted effort to ensure that its organization and governance support its social and environmental efforts. The company's CEO tapped the head of energy services to serve as chief sustainability officer in order to ensure that the person in that role would understand the perspectives of business leaders. The deep connection to the business helps the CSO challenge executives to integrate social and environmental issues into day-to-day operations. Notably, he helped embed 40 sustainability champions in the global business units and functions.

Solvay is also holding senior management accountable for progress. The company tracks a series of metrics in five areas—safety, business solutions, carbon intensity, employee engagement, and societal actions—and links senior management compensation to the company's performance in those areas. In 2017, for example, adjustments were made so that 20% of the long-term compensation of Solvay's CEO will be tied to a metric on greenhouse gas emissions.

A CALL TO ACTION

THE EFFORT TO MAKE meaningful contributions to society must start at the top. All CEOs should ask themselves the following questions: Do I believe we are telling our stakeholders the full story about the societal value we are adding? Is the company fully integrating a TSI perspective into strategy setting and the tuning of the business model? Do we make TSI explicit in strategy goals, operating plans, and targets?

If the answer to those questions is no, the company is likely not realizing its full potential in TSI and is missing out on significant opportunities.

TSI cannot be the sole responsibility of one team in the organization.

There are four things the CEO can do to help the company improve its TSI and TSR. First, the CEO should envision what the company's societal impact should be. In particular, CEOs need to look into the future to gain insight on how their core product or service should evolve to be in step with changing societal expectations and demands and evolving regulations. Even if shifts to the product or service portfolio may not offer near-term profits, thoughtful adjustments that factor in societal impact will likely pay off over the long term.

Second, CEOs should communicate that aspiration and concrete goals to shareholders and other stakeholders. Done well, this can renew and strengthen the sense of purpose in the organization, the meaning of the brand, and the legacy of the CEO.

Third, the CEO needs to assess the company's current TSI. This requires a comprehensive review of the economic and societal benefits of everything the company does, from the full value of its products and services to the way it sources raw materials to the way it sells and distributes to the role it plays in its industry.

Fourth, the CEO must turn vision into action by integrating TSI concepts into strategy setting and the business model. Our research shows that absent demonstrated commitment from the top, it is difficult for the TSI mindset to become embedded in corporate thinking and operations.

TSI cannot be the sole responsibility of one team in the organization. Rather, it must be elevated alongside the goal of creating value for shareholders and become an essential part of the senior team's agenda.

APPENDIX

BACKGROUND AND OUTPUTS OF QUANTITATIVE ANALYSIS

Our quantitative study is based on an analysis of 343 global companies for the three-year period from 2013 through 2015. The sample includes 97 companies in consumer packaged goods, 39 in biopharmaceuticals, 66 in oil and gas, and 141 in retail and business banking.

For all companies in the sample, we gathered financial data from S&P Capital IQ and environmental, social, and governance (ESG) data from MSCI and Oekom Research, two ESG data vendors. Data was collected for 2013 through 2015 because of the availability of financial data and the completeness of ESG reporting for the companies in our sample. Our analyses are on the company-year level, meaning that we have up to three observations per company.

In creating our industry-specific topic scores, we took the following steps: First, we mapped the ESG metrics provided by MSCI and Oekom against the ESG topics we had developed and selected the most appropriate metrics for each topic. (See Table 1 for important ESG topics by industry.) Second, we normalized all ESG measures across all four industries from the two data vendors to adjust for differences in reporting scales by using a z-score method.[1] If there were fewer than 30 companies reported for an individual measure, we removed the measure from the analysis. Finally, we averaged similar normalized individual measures to create the topic scores. (See Table 2 for a complete list of topics and metrics, where applicable, by industry.)

Valuation Analysis

We categorized each topic as either downside topic or upside opportunity. We leveraged BCG's proprietary Smart Multiple methodology to analyze the impact of each topic as well as the combined downside and combined upside measures on a company's valuation multiple.[2] Smart Multiple is a multivariate model that uses fundamental inputs to generate a valuation for the business at a certain point in time. Using this approach, we have found it possible to identify what differentiates multiples in an industry and, in this way, to explain why different companies have different multiples.

We added each ESG topic to the existing (financial) drivers of valuation multiples within the multivariate regression model. As a multivariate regression model, Smart Multiple allows us to independently identify and quantify the relationship between valuation multiples and ESG scores. Unless otherwise noted, all results of our two-tailed t-tests are significant at the 95% level ($p < 0.05$ and $|t| > 1.96$).

We found that several individual topics (as well as the aggregated downside topics) have a positive, statistically significant relationship

with valuation multiples. (See Table 3 for detailed outputs for all topics with statistically significant outcomes.)

Margin Analysis

Our analysis of the association between industry margins and ESG topic scores is also a multivariate model, which allows us to identify the relationship between our individual ESG topic scores and a company's fundamentals. As in our valuation analyses, the multivariate regressions allow us to independently identify and quantify the relationship between a company's margin and its key drivers. As controls in the multivariate analysis, we include the effects of several other financially related margin inputs, such as R&D costs. Unless otherwise noted, all results of our two-tailed t-tests are significant at the 95% level ($p < 0.05$ and $|t| > 1.96$).

We found several individual topics that have a positive, statistically significant relationship with EBITDA margins and/or gross margins in consumer packaged goods, biopharmaceuticals, and oil and gas, and with net income margin in retail and business banking. (See Table 4 for detailed outputs for all topics with statistically significant outcomes.)

NOTES

1. Z-score = (x – population mean)/ standard deviation; population are companies in the same industry and measure.
2. For more information the Smart Multiple model see, see *Unlocking New Sources of Value Creation: The 2013 Value Creators Report*, BCG, September 2013.

TABLE 1

Important ESG Topics in All Five Industries

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement	• Environmentally responsible sourcing	• Socially responsible sourcing	
Manufacturing and business practices	• Ensuring a responsible environmental footprint – Pursuing efficient energy consumption and resource use; minimizing harmful emissions	• Implementing fair and responsible compensation practices – Pursuing living wages for employees; encouraging long-term thinking in compensation structures • Promoting employee safety – Ensuring robust health and safety management systems • Promoting workplace flexibility – Providing adequate benefits (e.g., health care, leave); prioritizing employee happiness and satisfaction • Protecting and promoting equal opportunity – Ensuring nondiscrimination in hiring and advancement; encouraging and valuing diversity • Supporting local community development – Donating to local nonprofits and providing benefits to the community • Supporting ongoing employee training – Investing in training, education, and development for current employees and the workforce of the future	• Avoiding and combating corruption – Maintaining strict ethical standards; working against multiple forms of corruption • Avoiding anticompetitive behavior – Ensuring that no business practices unduly prevent, reduce, or manipulate competition in a marketplace • Maximizing impact of corporate giving programs – Leveraging core business and employee skills to maximize the benefit of traditional corporate philanthropy programs • Promoting transparent lobbying – Reporting on contributions to lobbyists and all lobbying efforts
OUTPUTS			
Products and services; distribution		• Providing support in humanitarian crises	

Important ESG Topics in Consumer Packaged Goods

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement	• Conserving water		
Manufacturing and business practices	• Limiting negative effects on biodiversity and ecology – Managing impacts on wildlife, air, land, and groundwater • Reducing waste – Minimizing levels of waste, including food waste	• Investing in health and safety best practices for migrant workers – Maintaining best practices in light of commonly disenfranchised and unorganized migrant workers • Preventing mistreatment of animals – Treating animals well and planning for increased animal welfare regulation	• Lobbying for industry-wide standards and norms – Creating better standards; lobbying for those standards
OUTPUTS			
Products and services; distribution	• Minimizing impact of products and packaging – Reducing solid waste sent to landfills through better design of products and packaging – Investing in capacity to recycle postsale	• Ensuring that products reach bottom of pyramid – Investing in products appropriate for BOP and ensuring that they reach underserved areas • Fair marketing and accurate labeling – Demonstrating the benefits of consumption in an ethical manner and labeling accurately • Implementing a food safety management program – Avoiding spoilage and contamination; investing in supply chain traceability • Improving nutritional and health attributes of product portfolio – Taking into account key nutritional and health concerns in the creation of products	• Implementing an efficient and effective recall process – Monitoring for adverse events; recalling products when necessary

Important ESG Topics in Biopharmaceuticals

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement			
Manufacturing and business practices		• Conducting ethical human clinical trials – Developing robust protocols; ensuring that patients are not exposed to unnecessary risks; protecting vulnerable populations • Preventing mistreatment of animals – Ensuring ethical and humane treatment of animals in research and testing	• Investing and participating in precompetitive scientific research – Developing, aggregating, and sharing data essential to innovation but that provides little competitive advantage
OUTPUTS			
Products and services; distribution	• Minimizing impact of products and packaging – Reducing improperly disposed waste or waste sent to landfills postsale through turn-in and recycling programs	• Expanding access to drugs – Providing necessary drugs to markets in need with fair, affordable pricing structures • Investing in disease and treatment education – Educating the public (especially underserved populations) beyond traditional marketing • Practicing ethical marketing – Promoting products responsibly and reporting risks and benefits accurately • Reducing spread of counterfeit drugs – Developing anticounterfeit technologies; cooperating with law enforcement; pursuing relevant partnerships; informing customers • Supporting orphan and neglected diseases – Developing an R&D pipeline targeting orphan and neglected diseases	• Committing to responsible/value-based pricing – Pricing on the basis of value even in the absence of competition • Maintaining product quality and safety – Implementing robust processes to minimize recalls and audit raw materials

Important ESG Topics in Oil and Gas

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement	• Minimizing carbon intensity in reserves – Understanding the risk of future reserve devaluation	• Investing in science education to build talent and labor pipeline – Engaging and educating the public on importance of STEM and energy use	
Manufacturing and business practices	• Reducing impact on biodiversity, water, and ecology – Minimizing effects of extraction, refinement, storage, and transport • Reducing waste – Minimizing waste as prospecting becomes increasingly hard	• Investing in community relations • Investing in direct economic and capacity support (e.g., infrastructure) – Improving local infrastructure and services with public-private partnerships, especially in the developing world • Maintaining process-oriented health and safety programs – Ensuring efficient and effective personal and process safety • Providing direct support to communities with particularly vulnerable populations – Especially indigenous people, conflict zones, areas with weak governments • Respecting human rights • Supporting economic development – Advising national and regional governments on national social/economic development • Supporting emergency preparedness and response	
OUTPUTS			
Products and services; distribution	• Investing in alternative energy – Advanced biofuels, solar • Investing in energy efficiency education for end users		• Developing robust disaster management and response plans – Championing a safety culture

Important ESG Topics in Retail and Business Banking

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement		• Developing training and outreach programs to support students and build talent pipeline – Developing internships for high-performing youth from disadvantaged backgrounds or underrepresented groups	
Manufacturing and business practices		• Ensuring responsible stewardship of data – Appropriately capturing and using data; transparently informing customers about data policies • Securing business and personal data – Safeguarding against unauthorized access • Shaping regulatory environment and policy – Especially through public-private partnerships	
OUTPUTS			
Products and services; distribution	• Supporting organizations promoting climate action – Lending to organizations (e.g., SMEs and NGOs) devoted to environmental protection and clean energy	• Ensuring fair debt collection – Avoiding deceptive collection practices • Ensuring fair selling practices – Providing transparent, culturally sensitive, and sound advice • Investing in organizations promoting social development – Lending to organizations (e.g., SMEs and NGOs) with clear social missions • Promoting financial education – Providing consumers with money management education (e.g., retirement planning) • Promoting financial inclusion – Increasing access and affordability for individuals in underserved markets • Promoting SMEs	• Integrating environmental factors into credit risk analysis – Considering industry-specific environmental factors in lending, investment, and due diligence • Maximizing benefit of government-mandated financial community contributions – Selecting high-social-impact programs; implementing them effectively; measuring their impact

Important ESG Topics in Technology

	ENVIRONMENTAL	SOCIAL	GOVERNANCE
INPUTS			
Sourcing and procurement		• Developing training and outreach programs to support students and build talent pipeline – Developing internships for high-performing youth from disadvantaged backgrounds or underrepresented groups	
Manufacturing and business practices		• Securing business and personal data – Safeguarding and protecting data against unauthorized access and intrusion	
OUTPUTS			
Products and services; distribution	• Developing technology products and services that help protect the environment – Developing and expanding access to products and services that protect the environment	• Creating inclusive products – Designing products specifically for use by marginalized groups • Leveraging data for social good • Making existing products inclusive – Developing adaptations to existing products for marginalized groups	• Advocating open access to technology and the internet

Sources: SASB; GRI; MSCI; Oekom Research; expert interviews; BCG analysis.

Table 2

Consumer Packaged Goods

TOPIC	METRIC	VENDOR
Conserving water	Measures to ensure water conservation in agricultural production along the value chain	Oekom Research
Fair marketing and accurate labeling	Policy on responsible marketing	Oekom Research
Implementing a food safety management program	Implementation of a food safety management system	Oekom Research
Improving nutritional and health attributes of product portfolio	Nutrition targets relating to product portfolio	Oekom Research
	Position on health and nutrition aspects of products	
Limiting negative effects on biodiversity and ecology	Measures to promote sustainable soil and biodiversity management in agricultural production along the value chain	Oekom Research
Minimizing impact of products and packaging	Development of the packaging ratio	Oekom Research
	Measures to reduce the impact of packaging	Oekom Research
Avoiding and combating corruption	Avoiding and combating corruption	MSCI
	Business Ethics	MSCI
	Code of business ethics	Oekom Research
	Compliance procedures	Oekom Research
	Major controversies relating to business ethics	Oekom Research
Ensuring a responsible environmental footprint	Certification of the environmental management system to an international standard	Oekom Research
	Energy efficiency	MSCI
	Ensuring responsible environmental footprint	MSCI
	Minimizing carbon intensity in reserves	MSCI
	Position on climate change	Oekom Research

Green: Industry-specific topics
Blue: Cross-industry topics

Consumer Packaged Goods (continued)

TOPIC	METRIC	VENDOR
Environmentally responsible sourcing	Environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Environmental supplier standard	Oekom Research
	Procedures to ensure compliance with the environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Procedures to ensure compliance with the environmental supplier standard	Oekom Research
Implementing fair and responsible compensation practices	Position on non-regular employment	Oekom Research
	Public disclosure of CEO-to-employee compensation ratio	Oekom Research
Promoting employee safety	Certification of the health and safety management system to an international standard	Oekom Research
	Health and safety management system	Oekom Research
	Implementation of a health and safety management system	Oekom Research
Promoting transparent lobbying	Political contributions	Oekom Research
	Transparency on participation in public-policy making and lobbying activities	Oekom Research
Promoting workplace flexibility	Dependant care and special leave	Oekom Research
	Workplace flexibility and working time reduction	Oekom Research
Protecting and promoting equal opportunity	Gender distribution	Oekom Research
	Measures to promote equal opportunities and diversity	Oekom Research
	Policy on non-discrimination	Oekom Research
Socially responsible sourcing	Measures to enable key suppliers to safeguard labor rights and improve working conditions	Oekom Research
	Procedures to ensure compliance with the supplier standard on labor rights and working conditions	Oekom Research
	Supplier standard with regard to labor rights and working conditions	Oekom Research
Supporting ongoing employee training	Strategic training management	Oekom Research
	Supporting ongoing employee training	MSCI
Ensuring that products reach bottom of pyramid	Not available	
Implementing an efficient and effective recall process	Not available	
Investing in health and safety best practices for migrant workers	Not available	
Lobbying for industry-wide standards and norms	Not available	
Preventing mistreatment of animals	Not available	
Reducing waste	Not available	
Avoiding anticompetitive behavior	Not available	
Maximizing impact of corporate giving programs	Not available	
Providing support in humanitarian crises	Not available	
Supporting local community development	Not available	

Biopharmaceuticals

TOPIC	METRIC	VENDOR
Conducting ethical human clinical trials	Protection of vulnerable trial participants	Oekom Research
	Strategy to ensure the ethical design of clinical trials	Oekom Research
Expanding access to drugs	Expanding access to drugs	MSCI
	Patents and licensing	Oekom Research
	Pricing and availability	Oekom Research
	Strategy and management approach regarding access to medicine	Oekom Research
Maintaining product quality and safety	Maintaining product quality and safety	MSCI
	Good manufacturing practice	
	Monitoring of products after market launch	
	Anticounterfeiting	Oekom Research
Practicing ethical marketing	Disclosure of performance data on marketing compliance	Oekom Research
	Major controversies relating to responsible marketing	Oekom Research
	Policies on responsible marketing and interactions with patients and the public	Oekom Research
Preventing mistreatment of animals	Replacement, reduction and refinement of animal testing	Oekom Research
Supporting orphan and neglected diseases	R&D into neglected diseases affecting mainly developing countries	Oekom Research
Avoiding and combating corruption	Avoiding and combating corruption	MSCI
	Business Ethics	MSCI
	Code of business ethics	Oekom Research
	Compliance procedures	Oekom Research
	Major controversies relating to business ethics	Oekom Research
Ensuring a responsible environmental footprint	Certification of the environmental management system to an international standard	Oekom Research
	Energy efficiency	MSCI
	Ensuring responsible environmental footprint	MSCI
	Minimizing carbon intensity in reserves	MSCI
	Position on climate change	Oekom Research
Environmentally responsible sourcing	Environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Environmental supplier standard	Oekom Research
	Procedures to ensure compliance with the environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Procedures to ensure compliance with the environmental supplier standard	Oekom Research
Implementing fair and responsible compensation practices	Position on non-regular employment	Oekom Research
	Public disclosure of CEO-to-employee compensation ratio	Oekom Research
Promoting employee safety	Certification of the health and safety management system to an international standard	Oekom Research
	Health and safety management system	Oekom Research
	Implementation of a health and safety management system	Oekom Research
Promoting transparent lobbying	Political contributions	Oekom Research
	Transparency on participation in public policy making and lobbying activities	Oekom Research
Promoting workplace flexibility	Dependant care and special leave	Oekom Research
	Workplace flexibility and working time reduction	Oekom Research
Protecting and promoting equal opportunity	Gender distribution	Oekom Research
	Measures to promote equal opportunities and diversity	Oekom Research
	Policy on non-discrimination	Oekom Research
Socially responsible sourcing	Measures to enable key suppliers to safeguard labor rights and improve working conditions	Oekom Research
	Procedures to ensure compliance with the supplier standard on labor rights and working conditions	Oekom Research
	Supplier standard with regard to labor rights and working conditions	Oekom Research

Biopharmaceuticals (continued)

TOPIC	METRIC	VENDOR
Supporting ongoing employee training	Strategic training management	Oekom Research
	Supporting ongoing employee training	MSCI
Committing to responsible/ value-based pricing	Not available	
Investing and participating in precompetitive scientific research	Not available	
Investing in disease and treatment education	Not available	
Minimizing impact of products and packaging	Not available	
Reducing spread of counterfeit drugs	Not available	
Avoiding anticompetitive behavior	Not available	
Maximizing impact of corporate giving programs	Not available	
Providing support in humanitarian crises	Not available	
Supporting local community development	Not available	

Oil and Gas

TOPIC	METRIC	VENDOR
Developing robust disaster management and response plans	Measures to enhance emergency response and preparedness	Oekom Research
Investing in alternative energy	Alternative Energy	MSCI
	Promotion of alternative fuels	Oekom Research
Maintaining process-oriented health and safety programs	Accident rate	Oekom Research
	Maintaining robust occupational health and safety programs, with a focus on process safety	MSCI
	Occurrence of fatal accidents	Oekom Research
Minimizing carbon intensity in reserves	Carbon intensity of fossil fuel reserves (MtCO2/mmboe)	MSCI
	Transparency on accessibility and types of reserves	Oekom Research
Investing in community relations	Community involvement	Oekom Research
Reducing impact on biodiversity, water, and ecology	Biodiversity management	Oekom Research
	Limiting negative impacts to biodiversity and ecology	MSCI
	Reducing impact on biodiversity, water, and ecology	MSCI
Reducing waste	Disposal of hazardous wastes from oil and gas exploration and production	Oekom Research
	Environmentally safe operation of facilities	Oekom Research
	Hazardous waste intensity	Oekom Research
	Reduction of gas flaring and venting	Oekom Research
Respecting human rights	Human rights due diligence procedures	Oekom Research
	Major controversies relating to human rights	Oekom Research
	Policy on human rights	Oekom Research
Avoiding and combating corruption	Avoiding and combating corruption	MSCI
	Business Ethics	MSCI
	Code of business ethics	Oekom Research
	Compliance procedures	Oekom Research
	Major controversies relating to business ethics	Oekom Research

Oil and Gas (continued)

TOPIC	METRIC	VENDOR
Ensuring a responsible environmental footprint	Certification of the environmental management system to an international standard	Oekom Research
	Energy efficiency	MSCI
	Ensuring responsible environmental footprint	MSCI
	Minimizing carbon intensity in reserves	MSCI
	Position on climate change	Oekom Research
Environmentally responsible sourcing	Environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Environmental supplier standard	Oekom Research
	Procedures to ensure compliance with the environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Procedures to ensure compliance with the environmental supplier standard	Oekom Research
Implementing fair and responsible compensation practices	Position on non-regular employment	Oekom Research
	Public disclosure of CEO-to-employee compensation ratio	Oekom Research
Promoting employee safety	Certification of the health and safety management system to an international standard	Oekom Research
	Health and safety management system	Oekom Research
	Implementation of a health and safety management system	Oekom Research
Promoting transparent lobbying	Political contributions	Oekom Research
	Transparency on participation in public policy making and lobbying activities	Oekom Research
Promoting workplace flexibility	Dependant care and special leave	Oekom Research
	Workplace flexibility and working time reduction	Oekom Research
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	Measures to promote equal opportunities and diversity	Oekom Research
	Policy on non-discrimination	Oekom Research
Socially responsible sourcing	Measures to enable key suppliers to safeguard labor rights and improve working conditions	Oekom Research
	Procedures to ensure compliance with the supplier standard on labor rights and working conditions	Oekom Research
	Supplier standard with regard to labor rights and working conditions	Oekom Research
Supporting ongoing employee training	Strategic training management	Oekom Research
	Supporting ongoing employee training	MSCI
Investing in direct economic and capacity support (e.g., infrastructure)	Not available	
Investing in energy efficiency education for end users	Not available	
Investing in science education to build talent and labor pipeline	Not available	
Providing direct support to communities with particularly vulnerable populations	Not available	
Supporting economic development	Not available	
Supporting emergency preparedness and response	Not available	
Avoiding anticompetitive behavior	Not available	
Maximizing impact of corporate giving programs	Not available	
Providing support in humanitarian crises	Not available	
Supporting local community development	Not available	

Retail and Business Banking

TOPIC	METRIC	VENDOR
Ensuring fair debt collection	Responsible treatment of clients with debt repayment problems	Oekom Research
Ensuring fair selling practices	Measures to ensure responsible sales practices	Oekom Research
Integrating environmental factors into credit risk analysis	Environmental aspects in the retail credit rating process	Oekom Research
	Integrating environmental factors into credit risk analysis	MSCI
Investing in organizations promoting social development	Socially responsible investment products and services	Oekom Research
	Volume of strict and diligently-selected socially responsible investments	Oekom Research
Promoting financial inclusion	Equal access to financial services	Oekom Research
	Social financial services	Oekom Research
Securing business and personal data	Certification of the information security management system to an international standard	Oekom Research
	Implementation of an information security management system	Oekom Research
	Measures to ensure customer security	Oekom Research
	Securing business and personal data	MSCI
Avoiding and combating corruption	Avoiding and combating corruption	MSCI
	Business Ethics	MSCI
	Code of business ethics	Oekom Research
	Compliance procedures	Oekom Research
	Major controversies relating to business ethics	Oekom Research
Ensuring a responsible environmental footprint	Certification of the environmental management system to an international standard	Oekom Research
	Energy efficiency	MSCI
	Ensuring responsible environmental footprint	MSCI
	Minimizing carbon intensity in reserves	MSCI
	Position on climate change	Oekom Research
Environmentally responsible sourcing	Environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Environmental supplier standard	Oekom Research
	Procedures to ensure compliance with the environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Procedures to ensure compliance with the environmental supplier standard	Oekom Research
Implementing fair and responsible compensation practices	Position on non-regular employment	Oekom Research
	Public disclosure of CEO-to-employee compensation ratio	Oekom Research
Promoting employee safety	Certification of the health and safety management system to an international standard	Oekom Research
	Health and safety management system	Oekom Research
	Implementation of a health and safety management system	Oekom Research
Promoting transparent lobbying	Political contributions	Oekom Research
	Transparency on participation in public-policy making and lobbying activities	Oekom Research
Promoting workplace flexibility	Dependant care and special leave	Oekom Research
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Protecting and promoting equal opportunity	Gender distribution	Oekom Research
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	Policy on non-discrimination	Oekom Research
Socially responsible sourcing	Measures to enable key suppliers to safeguard labor rights and improve working conditions	Oekom Research
	Procedures to ensure compliance with the supplier standard on labor rights and working conditions	Oekom Research
	Supplier standard with regard to labor rights and working conditions	Oekom Research

Retail and Business Banking (continued)

TOPIC	METRIC	VENDOR
Supporting ongoing employee training	Strategic training management	Oekom Research
	Supporting ongoing employee training	MSCI
Developing training and outreach programs to support students and build talent pipeline	Not available	
Ensuring responsible stewardship of data	Not available	
Maximizing benefit of government-mandated financial community contributions	Not available	
Promoting financial education	Not available	
Promoting SMEs	Not available	
Shaping regulatory environment and policy	Not available	
Supporting organizations promoting climate action	Not available	
Avoiding anticompetitive behavior	Not available	
Maximizing impact of corporate giving programs	Not available	
Providing support in humanitarian crises	Not available	
Supporting local community development	Not available	

Technology

TOPIC	METRIC	VENDOR
Securing business and personal data	Certification of the information security management system to an international standard	Oekom Research
	Implementation of an information security management system	Oekom Research
	Measures to ensure customer security	Oekom Research
	Securing business and personal data	MSCI
Avoiding and combating corruption	Avoiding and combating corruption	MSCI
	Business Ethics	MSCI
	Code of business ethics	Oekom Research
	Compliance procedures	Oekom Research
	Major controversies relating to business ethics	Oekom Research
Ensuring a responsible environmental footprint	Certification of the environmental management system to an international standard	Oekom Research
	Energy efficiency	MSCI
	Ensuring responsible environmental footprint	MSCI
	Minimizing carbon intensity in reserves	MSCI
	Position on climate change	Oekom Research

Technology (continued)

TOPIC	METRIC	VENDOR
Environmentally responsible sourcing	Environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Environmental supplier standard	Oekom Research
	Procedures to ensure compliance with the environmental standard for the sourcing of renewable raw materials and/or bio-based products	Oekom Research
	Procedures to ensure compliance with the environmental supplier standard	Oekom Research
Implementing fair and responsible compensation practices	Position on non-regular employment	Oekom Research
	Public disclosure of CEO-to-employee compensation ratio	Oekom Research
Promoting employee safety	Certification of the health and safety management system to an international standard	Oekom Research
	Health and safety management system	Oekom Research
	Implementation of a health and safety management system	Oekom Research
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Socially responsible sourcing	Measures to enable key suppliers to safeguard labor rights and improve working conditions	Oekom Research
	Procedures to ensure compliance with the supplier standard on labor rights and working conditions	Oekom Research
	Supplier standard with regard to labor rights and working conditions	Oekom Research
Supporting ongoing employee training	Strategic training management	Oekom Research
	Supporting ongoing employee training	MSCI
Advocating open access to technology and the internet	Not available	
Creating inclusive products	Not available	
Developing technology products and services that help protect the environment	Not available	

Technology (continued)

TOPIC	METRIC	VENDOR
Developing training and outreach programs to support students and build talent pipeline	Not available	
Leveraging data for social good	Not available	
Making existing products inclusive	Not available	
Avoiding anticompetitive behavior	Not available	
Maximizing impact of corporate giving programs	Not available	
Providing support in humanitarian crises	Not available	
Supporting local community development	Not available	

TABLE 3

Valuation Analysis

INDUSTRY	TOPIC	DIFF. BETWEEN TOP QUINTILE AND MEDIAN (%)	T-STAT (STAT. SIG. IF |T|>1.96)
Consumer packaged goods	Conserving water	5	3.08
	Ensuring a responsible environmental footprint	4	3.08
	Implementing a food safety management program	7	2.28
Biopharmaceuticals	Avoiding and combating corruption	4	2.14
	Conducting ethical human clinical trials	16	2.09
	Preventing mistreatment of animals	31	4.52
	Promoting employee safety	16	2.68
	Promoting transparent lobbying	18	3.14
	Protecting and promoting equal opportunity	28	3.43
	Socially responsible sourcing	20	2.01
Oil and gas	Avoiding and combating corruption	12	3.21
	Maintaining process-oriented health and safety programs	21	6.21
	Reducing impact on biodiversity, water, and ecology	18	2.94
Retail and business banking*	Ensuring a responsible environmental footprint	11	1.93
	Integrating environmental factors into credit risk analysis	4	1.72
	Securing business and personal data	8	1.73

*In banking, no individual topics had a statistically significant correlation with valuation multiples. However, when analyzed collectively, the topics were statistically significant. For this reason, we have included in the table the individual topics that were closest to having statistical significance.

TABLE 4

Margin Analysis

INDUSTRY	TOPIC	FUNDAMENTAL	AVERAGE MARGIN PREMIUM OF TOP VS. MEDIAN PERFORMERS (PP)	T-STAT (STAT. SIG. IF |T|>1.96)
Consumer packaged goods	Conserving water	EBITDA margin	3.1	4.03
		Gross margin	5.5	3.36
	Ensuring a responsible environmental footprint	EBITDA margin	1.3	4.88
		Gross margin	3.3	5.82
	Limiting negative effects on biodiversity and ecology	EBITDA margin	3.0	2.54
	Minimizing impact of products and packaging	EBITDA margin	4.1	5.34
		Gross margin	12.4	8.52
	Promoting employee safety	Gross margin	3.3	2.61
	Socially responsible sourcing	Gross margin	4.8	3.11
Biopharmaceuticals	Conducting ethical human clinical trials	EBITDA margin	6.1	3.45
		Gross margin	6.3	3.11
	Expanding access to drugs	EBITDA margin	8.2	4.08
		Gross margin	6.7	2.72
	Promoting employee safety	EBITDA margin	4.6	2.28
		Gross margin	4.8	2.07
	Promoting transparent lobbying	EBITDA margin	5.6	3.49
Oil and gas	Maintaining process-oriented health and safety programs	EBITDA margin	3.4	2.23
	Supporting ongoing employee training	EBITDA margin	8.2	5.30
		Gross margin	6.3	2.78
Retail and business banking	Avoiding and combating corruption	Net income margin	2.3	5.36
	Ensuring fair debt collection	Net income margin	0.5	3.53
	Ensuring fair selling practices	Net income margin	0.4	3.61
	Environmentally responsible sourcing	Net income margin	3.4	2.67
	Integrating environmental factors into credit risk analysis	Net income margin	–3.3	–3.6
	Promoting financial inclusion	Net income margin	0.5	3.61
	Protecting and promoting equal opportunity	Net income margin	–3.1	–2.12

NOTE TO THE READER

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Founded in 1993, oekom research is one of the world's leading global ESG research and rating providers. The oekom Corporate Rating provides a detailed assessment of a company's environmental, social and governance (ESG) performance. With a pool of over 700 indicators in its research database (90% of which are industry specific), oekom research delivers a highly relevant and material analysis for every company in its research universe. The areas and indicators assessed by oekom research are influenced by several factors such as international norms and conventions, social debate, regulatory changes and technological progress. In order to analyze a company's management of ESG issues within its core business, oekom's sector specialists select a set of about 100 criteria from the pool of indicators available in the database.

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