LONG-TERM INVESTING: AN OPTIMAL STRATEGY IN SHORT-TERM ORIENTED MARKETS

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Paper Presentation I

THE IMPACT OF A CORPORATE CULTURE OF SUSTAINABILITY ON CORPORATE BEHAVIOR AND PERFORMANCE*

(Eccles, Ioannou & Serafeim, 2011)

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ROBERT ECCLES: Let me give you just some brief background about my research interest and the context this paper came from, and then I'll go through my presentation and let my discussant, Danyelle Guyatt, have an opportunity to respond. Then we'll open it up for questions.

Background and Context

My overarching interest is the role of the corporation in society. I am not unique in that regard; a lot of people are thinking about it. If you look at the world's 1,000 largest companies in 1980 and add up their revenues, they represented about 30% of the GDP of the OECD countries, so it was a fair amount. If you fast-forward 30 years to 2010, that percentage is about 72%. You see an increasing concentration of assets and economic activity in the world's largest corporations.

There is even more concentration on the investor side. The top twenty asset managers represent something like one third of the total assets under management. It could be even more than that. Sovereign wealth funds as asset owners are particularly interesting. My colleague, George Serafeim, and I are trying to understand what that means for what's going on in the world today with these increasing pressures around sustainability—broadly defined as environmental and social concerns. These large corporations are under increasing pressure to respond to things that historically they

* *Remarks have been edited for clarity.*

have not had to pay much attention to. If you look at the 172nd largest company, it would be as big as the 72nd largest country—the Russian oil company, Rosneft, is as big as Uruguay. I think you see responsibilities shifting from the state—in a number of cases struggling and failing states—to the corporation. Companies have increasing concerns around sustainability, but this is a term that means different things to different people.

George and I have developed an executive education version of our second-year MBA course called "Innovating for Sustainability." We define a sustainable strategy for a company as one that enables it to create value for shareholders, over the long-term, while contributing to a sustainable society. I would echo the comments that Frederic Samama and Patrick Bolton made about the importance of having a long-term perspective. In the short version, that means minimizing negative externalities and trying to maximize positive externalities, but again within the context of creating value for shareholders by taking this longer-term view. We find that as companies are under pressure to simultaneously improve financial and so called non-financial performance around environmental, social and governance domains, they need to innovate; old ways won't do it. Typically there is a tradeoff, so you need to innovate in terms of processes, products, and business models.

An innovation that I am especially interested in is corporate reporting. Some of you may be familiar with integrated reporting. I wrote the first book on it. It's funny, because I didn't invent the idea, but I had a glimmer of it, and I found out companies were already doing it. The International Integrated Reporting Council, which I was involved in starting, has developed a framework for integrating reporting that enables companies to pull together their financial performance and their non-financial performance and report on it in an integrated way. I'll give you some hints of what those data would look like in this talk here. More recently, an organization called the Sustainability Accounting Standards Board (SASB) was started. I am the chairman of SASB, full disclosure. Our mission is to develop standards for non-financial information on environmental, social, and governance (ESG) that would enable you to have the same comparability on non-financial performance that you have for financial performance, where we have standards from accounting. If companies are going to adopt sustainable strategies and if investors are going to be able to make decisions about what companies are doing in that regard, one of the barriers turns out to be the lack of standards. There is also a requirement around disclosures, and as you'll see in my talk, measurement and disclosure turn out to be an important characteristic that differentiates so called "high sustainability firms" from "low sustainability" firms.

Increasing Interest in Corporate Sustainability

Let me jump into the substance of my talk with some brief background.

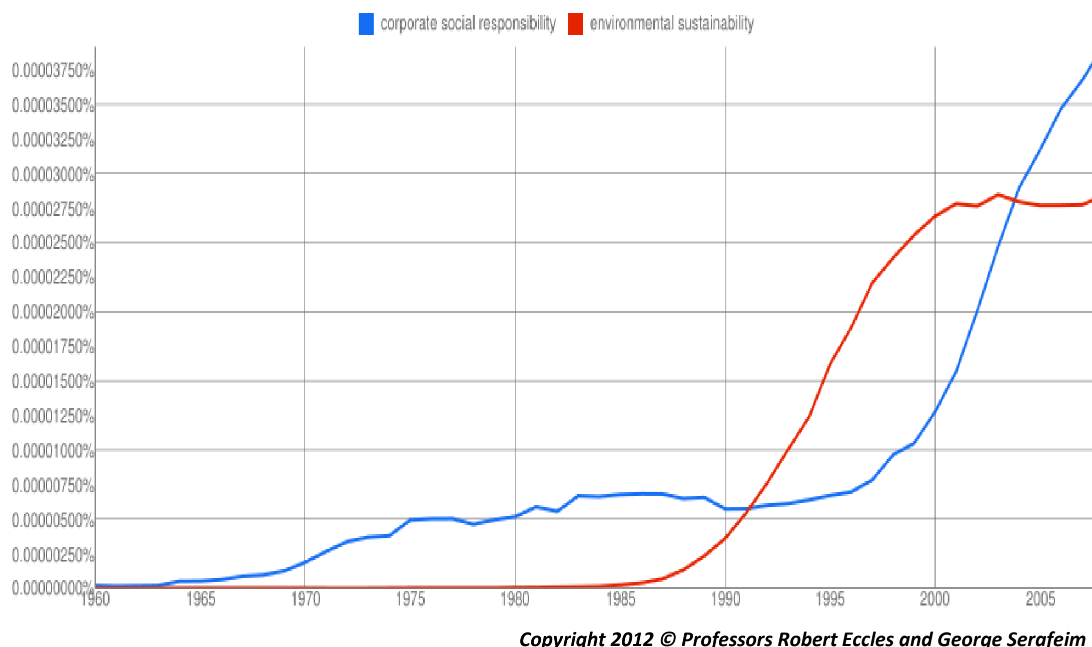
Interest in sustainability is clearly growing. CEOs talk a lot about sustainability, so a fair question to ask is if they mean it, or if it is a kind of green-washing? Or a combination of the two? We think we have ways of finding out if the company is the real deal. If you're an investor, the question is whether you can find them before some of the benefits that we'll talk about have been incorporated. CFOs tend to be more skeptical and tend to be a barrier to integrated reporting. The corporate social responsibility (CSR) officer obviously cares about sustainability. One of the best clues I have that a company has CSR as more of an ancillary activity is that they talk a lot about programs, and they have a CSR officer as opposed to having it embedded inside the company. There are good reasons for doing that. Employees increasingly care about CSR, particularly younger employees. It is a consideration that they factor into their decision whether to join a company and whether to stay.

Customers increasingly pay attention to sustainability. There's a valid question here that I don't have a good answer for: will customers pay for green? The evidence is that they probably will not pay much, but it is becoming an increasing attribute. The expectation is that, this is something else that I want to see in the products that I'm purchasing, but I don't want to pay more. This is an example of why innovation is important in terms of products and processes.

You see some increasing interest on the part of investors, including the growth of SRI funds. I think more importantly, some of the very large asset owners are starting to take sustainability issues into account, and trying to find ways to incorporate ESG issues into their decision-making across all asset classes. Patrick mentioned private equity, which is actually very interesting. There's something called the Private Equity Growth Council, which comprises most of the large private equity firms. They have a formal commitment to sustainability in ESG. Holding periods for private equity firms and their portfolios are on average five to seven years longer than for most public equities, so they really are taking this longer-term view, where they can get the benefits of incorporating policies around ESG.

Method

I will keep this real simple. I'm not a finance professor or an accounting professor; I'm a professor of organizational behavior. In fact, the first time I set foot on the Columbia campus was to interview for a job in 1979 where I talked about my dissertation on the construction industry, so it is a long and winding road from the construction industry to today.



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This is a Google end-word search of the terms corporate social responsibility and environmental sustainability. There is a relatively flat or sort of modest increasing until you get to the early nineties. At that point, the curve becomes fairly exponential. There are a whole variety of reasons that go into that. Concerns around climate change started to kick in, as well as concerns around globalization and human rights. I think all of these things combined together led to exponential growth. That curve turns out to be important when we think about the sample of firms that we constructed, because we were looking to identify a set of firms that had incorporated policies and a true commitment to sustainability and ESG issues before it became trendy. It was in the early to the middle 1990s when it started to become trendy, and that is why it is tricky to separate out the real deal from what is essentially green-washing.

The questions asked in our paper with Professor Ioannis Ioannou were, do the governance structures of sustainability firms differ from traditional ones? Do sustainable firms differ in terms of stakeholder engagement? Very consistent with the theme of this conference, are there longer-term time horizons on the part of these sustainable firms? Are the information and performance measures they take and disseminate different? And finally, what does this have to do with performance? As I'll show later, you can argue it both ways. A commitment to sustainability could actually be deleterious to financial performance—and it may be in the short-term—but there are arguments you can make that with commitment over the long-term, it will actually be positive.

We put together a matched sample of companies, with 90 high sustainability and 90 low sustainability firms. Very briefly, the methodology is that we used a database from a company called ASSET4 that assesses, through fairly objective data, the practices of firms. We identified a sample in the mid-2000s of companies that ranked high. We then went back to the early 1990's to see if we had separate evidence to identify those

companies that had adopted the practices that were being reported in the mid-2000s, because we wanted to be able to take a long-term view. We had a few hundred firms, so we went through this laborious process of looking through documents and their websites to see what they were saying at the time. We identified a set of 90 firms, that we had credible evidence about, who had adopted a set of policies around sustainability as defined by ASSET4, and said that these are the so-called "high sustainability" firms. The baseline we took to separate those out was '93, but if you look at a plus or minus a year it's not all that different.

		Total assets		ROA		Leverage		Turnover		MTB	
Sustainability	N	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.
Low	90	8,182	28,213	7.54	8.02	0.57	0.19	1.05	0.62	3.41	2.18
High	90	8,591	22,230	7.86	7.54	0.56	0.18	1.02	0.57	3.44	1.88
p-value diff		0.914		0.781		0.726		0.703		0.927	

Source: WorldScope

Then, through propensity score matching, we lined them up with 90 firms that were ranked low by ASSET4. We did it at the subsectoral level, and when there was not a good match, we did it at the sectoral level. Our paper shows the sectors; they were represented across a broad range. We have 90 high sustainability firms and 90 so-called traditional firms that have not adopted these policies. From the statistics, you can see that back in 1993 by total assets, return on assets, leverage turnover, and market to book, they basically look the same. As sets of firms, they are sort of the same size, with the same growth prospects, and the same financial performance.

Corporate Governance

We analyzed these firms along a number of different dimensions, starting with corporate governance. Boards are obviously responsible for monitoring the performance of the company and agreeing with strategic direction that management is setting. What are, for instance, the organizational objectives? Whether sustainability or ESG factors are a part of that is an issue. The obvious related question is how different objectives matter for senior management compensation. If senior management is compensated only on financial results, you would have to ask to what extent they are really taking ESG issues and sustainability seriously.

Our first prediction is that a high sustainability firm is more likely to have boards that review the sustainability of the corporation. Related to that, they are also more likely to link executive compensation to sustainability metrics. We got some pretty strong differences from a statistical point of view. The high sustainability firms are much more likely to have formal board responsibility for sustainability or corporate citizenship. (The language in this whole domain is vague, which is problematic. People talk about corporate citizenship, sustainability, corporate social responsibility and

corporate responsibility, and sometimes they mean different things and sometimes they use different terms to mean the same thing.) Generally speaking in this broad domain, you see that the high sustainability firms are much more likely to have some mechanism of the board that is focused on these issues, like a sustainability committee. They are also more likely to have compensation at least partially—obviously only partially, because they are not ignoring financial performance—tied to other metrics, such as social and environmental metrics, and external perception metrics that really have to do with customers. So in terms of the hypothesis around corporate governance and around compensation, we see some fairly strong effects.

	Sustainability		Difference
Governance	Low	High	p-value
Board			
Formal Board Responsibility / Corporate Citizenship	21.6%	52.7%	<0.001
Sustainability committee	14.7%	40.9%	<0.001
Compensation			
Variable Compensation Metrics / Social Metrics	21.6%	35.1%	0.022
Variable Compensation Metrics / Environmental Metrics	8.1%	17.6%	0.011
Variable Compensation Metrics / External Perception Metrics	10.8%	32.4%	0.004

Source: SAM and ASSET4

With governance one of the key things for being able to do this study was access to a proprietary database belonging to Sustainability Asset Management (SAM), which is part of the Robeco Group. In the early 1990s, they were chosen to conduct research to put together the Dow Jones Sustainability Index. Every year, they have questionnaires filled out by around 2,250 of the world's largest corporations that are very detailed. They get data on their internal management practices and they have ways to verify that what is actually going on. The SAM database gives us a unique opportunity to look inside at the practices of these firms, particularly of these high sustainability firms. We also can try to get some sense of their behavior from their publically available financial performance.

I gave a talk at SAM's stakeholder forum and wrote a little blog piece with George Serafeim and Michael Baldinger, who is the CEO of SAM, that came out a couple days ago on Bloomberg[1]. The point is that it's ironic that corporations are increasingly paying attention to sustainability, when the corporate pension funds are still pretty short-term oriented, so they are a little bit in conflict with themselves. Basically this blog was kind of a slap across the face in saying, well look, if you think it's important as a corporation maybe you should think about it in terms of your own pension fund. The theme of this conference around short-term markets and how to incentivize long-term investing is important actually, because when you talk to

[1] http://www.bloomberg.com/news/2012-11-30/vast-pools-of-money-still-ignore-sustainable-investing.html

companies that "get it," they say, you know one of the biggest challenges for us is that we have these quarterly calls and nobody asks about this stuff. Investors just ask how are the earnings going, are you going to meet your kind of quarterly earnings target and that sort of thing.

So in our research, we are simultaneously looking inside companies and big institutional investors and at the relationship between the asset owners and the asset managers, which often compounds the problem, to understand what needs to be done on the capital market side to create a more sustainable society. Because of the long-term nature and amount of money that the sovereign wealth funds have, they are clearly a target that is of particular interest to us.

Stakeholder Engagement

The issue of engagement with stakeholders is really interesting. I think of shareholders as a particular stakeholder, but there are also employees, customers, the community and so forth. We were looking to see if these high sustainability firms think differently about how they engage with these other groups, as opposed to simply focusing upon who their investors are. The hypothesis was that high sustainability firms have better stakeholder engagement practices. The degree and sophistication of stakeholder engagement in high sustainability firms is really remarkable in our in-depth case studies. You see examples from very traditional firms that might surprise you, like Dow Chemical Company, to firms that are much more out there in some ways, like a company called Natura in Brazil, which is a cosmetics and fragrances company, and Nova Nordisk, which is a pharmaceutical company in Denmark.

This is from the SAM data. What you see here is that before, during, and after stakeholder engagement there are dramatic differences between the high sustainability firms and the low sustainability firms.

	Sustainability		Difference
Stakeholder Engagement	Low	High	p-value
Prior			
Opportunities Risks Examination	2.7%	31.1%	<0.001
Stakeholder Identification	10.8%	45.9%	<0.001
Training	0.0%	14.9%	<0.001
During			
Concerns	2.7%	32.4%	<0.001
Grievance Mechanism	2.7%	18.9%	<0.001
Common Understanding	13.5%	36.5%	<0.001
Scope Agreement	8.1%	36.5%	<0.001
Targets	0.0%	16.2%	<0.001
After			
Board Feedback	5.4%	32.4%	<0.001
Result Reporting	0.0%	31.1%	<0.001
Public Reports	0.0%	20.3%	<0.001

Source: SAM

The high sustainability firms get their act together better before the engagement starts. They are much more disciplined and programmatic in terms of how they go about it, and they are much more proactive about reporting on what happened. They report it to the board and to the stakeholder, and in some cases, they report it publically.

Natura would be a great example of that. Natura engages with their stakeholders when they put together their integrated report. A part of it is called the Wiki Report, which is basically over the internet, and it includes both positive and negative comments from stakeholders. For them, reporting is actually an engagement exercise with their stakeholders.

Time horizon, obviously a big theme of this conference, requires a long-term perspective. It is no surprise that often the things you do to improve your performance around ESG require some kind of an investment. You are incurring some short-term cost to create positive externalities and to internalize some of these negative externalities, if you are doing things that are not required by regulation. The stakeholder engagement process that we just talked about takes time and resources. It costs money. Natura has relationship managers, just like companies will have customer relationship managers for the big clients. Natura has people that engage by stakeholder group and by community in Brazil, so there is an effort involved in doing this. It requires some costs. The questions are whether there is a return on it; what that means in terms of timeframe; and what the implications for the investor base are. As I said, we are equally interested in companies as well as investors.

There is some data that was put together by Brian Bushee, a professor at Wharton, who talks about transient versus sustained long-term investors. What you see is that the high sustainability firms have a slightly higher proportion of long-term investors, so the argument is that you can proactively shape your investor base. You see companies that are saying that they are not going to report quarterly earnings anymore, and if you don't like it, sell the stock. Through some interesting methodology that George and a couple other colleagues created, you can look at long-term/short-term, less than a year/more than a year, and at the analysts' calls from the high sustainability firms. When you code them all up, you see they talk more about long-term things.

Measurement and Disclosure of Nonfinancial Information

You all know about the importance of information and measurement in terms of influencing behavior, and what the role of non-financial information is. High sustainability firms, not surprisingly, are more likely to collect non-financial data. Here you see that in the data on employees, there are dramatic differences.

	Sustainability		Difference
Employees	Low	High	p-value
HR Performance Indicators / Nonfinancial	16.2%	54.1%	<0.001
KPI Labor / EHS Fatalities Tracking	26.3%	77.4%	<0.001
KPI Labor / EHS Near Miss Tracking	26.3%	64.5%	<0.001
KPI Labor / EHS Performance Tracking	89.5%	95.2%	0.871

Source: SAM

One exception is performance tracking for environment health and safety. (It is largely driven by regulations and OSHA [Occupation Safety Health Administration] requirements, so everybody has to do it.)

	Sustainability		Difference
Customers	Low	High	p-value
Customer Lifestyle	2.7%	5.4%	0.461
Geographical Segmentation	10.8%	18.9%	0.101
Potential Lifetime Value	2.7%	8.1%	0.164
Customer Generated Revenues	8.1%	18.9%	0.041
Historical Sales Trends	8.1%	16.2%	0.100
Products Bought	8.1%	14.9%	0.194
Cost Of Service	2.7%	6.8%	0.279

Source: SAM

With customers, you have really no significant differences. It's puzzling, I must admit; we really did not expect this. Some of these things you think would be pretty easy to measure, some of them a little bit more difficult, but the numbers are still fairly low. I think part of that has to do with the relatively primitive state of systems for measuring performance at the customer level.

	Sustainability		Difference
Suppliers	Low	High	p-value
Environmental			
EMS	18.2%	50.0%	<0.001
Environmental Production Standards	25.7%	45.6%	<0.001
Environmental Data Availability	0.0%	12.3%	0.018
Environmental Policy	0.0%	17.4%	<0.001
Product LCA	0.0%	6.6%	0.052
Social			
Human Right Standards	5.7%	17.4%	<0.001
OHS Standards	25.7%	62.9%	<0.001
Grievance Process	0.0%	8.1%	0.039
Labor Standards	8.1%	18.6%	0.020
Standards			
International Standards Compliance	0.0%	12.3%	<0.001
National Standards Compliance	8.1%	14.9%	0.057

Source: SAM

Suppliers showed big differences. The high sustainability firms pay a lot more attention to ESG issues in selecting and managing the relationships that they have with their suppliers.

Then, there is this question of assurance. A public company is required to report according to a set of standards, it has to be audited, and there's the Public Company Accounting Oversight Board (PCOB) to oversee the accounting firms. For the most part, reporting of non-financial information is voluntary, as well as getting any kind of assurance on it. The question is whether those firms that think this is important give some type of assurance on the information, in order to make it more credible to the people who use it—shareholders and other stakeholders. The answer is not really.

	Sustainability		Difference
Assurance/ audit	Low	High	p-value
Sustainability report external audit	1.4%	11.1%	0.017
Assurance Provision Process			
Information Collection Review	5.4%	14.9%	0.058
Data Aggregation Review	5.4%	14.9%	0.058
Document Review	5.4%	14.9%	0.058
Relevant Management Interviews	5.4%	12.2%	0.089
Mapping against Standards	2.7%	16.2%	0.031
Auditor Competency Disclosure	2.7%	5.4%	0.589
Relevant Management Discussions	5.4%	14.9%	0.058
Sample Site Visits	2.7%	12.2%	0.058
Stakeholder Consultation	0.0%	5.4%	0.131
Distribution Network Quality			
External Audits	8.1%	12.2%	0.221
Standardized External Audits	5.4%	12.2%	0.058
Internal Audits	5.4%	13.5%	0.046

Source: SAM

I think the explanation that makes the most sense to me is the lack of standards. That is why these organizations like the Sustainability Accounting Standards Board are getting started. Without standards, it is hard to do an audit. The audit firms are getting sued all the time anyway for financial audits, so I think they are nervous about providing real assurance, as opposed to negative assurance, until there is a set of standards. So that finding makes sense.

In terms of disclosure of non-financial information, you see a big difference.

	Sustainability		Difference
Nonfinancial disclosure	Low	High	p-value
Quantity			
ESG Disclosure - Bloomberg	17.86	29.90	<0.001
ESG Disclosure - Thomson Reuters	36.91	46.38	<0.001
Coverage			
Sustainability report covers global activities	8.3%	41.4%	<0.001
Integration			
Nonfinancial vs. Financial Discussion	0.68	0.96	<0.001
Social Data Integrated in Financial Reports	5.4%	25.7%	0.008
Environmental Data Integrated in Financial Reports	10.8%	32.4%	0.011

Source: SAM , Bloomberg and ASSET4

We have indices from Bloomberg and Thomson Reuters. (Bloomberg has a more detailed data set and that is why the percentage is lower.) The integration data is from SAM, and again they have questions both from a narrative point of view and from a key performance indicators (KPI), or quantitative, point of view on the incorporation of the discussion of non-financial performance around environmental and social issues with financial performance. These questions ask if you are really talking about how those are related to each other. You see some interesting differences between the high and low sustainability firms.

As an aside, we have data from Bloomberg that shows us market interest in non-financial information, and you can see how investors vary by country. We have a 2 x 2 of companies that are reporting a lot or not so much, and investors that are interested and not so interested. In South Africa, where integrated reporting is mandated, there is a lot of integrated reporting by companies, but curiously enough, investors do not care very much. United States is the flipside. The United States ranks dead last when it comes to integrated reporting, below Korea and China, but investors are actually pretty interested, so you have to think about that a little bit.

Implications for Financial Performance

Firms in the *High Sustainability* group might underperform because they

- ✓ experience high labor costs by providing excessive benefits to their employees,
- ✓ pass valuable business opportunities that do not fit their values and norms, such as selling products with adverse environmental consequences, and
- ✓ deny paying bribes to gain business in corrupt countries where bribe payments are the norm

Firms in the *High Sustainability* group might outperform because they

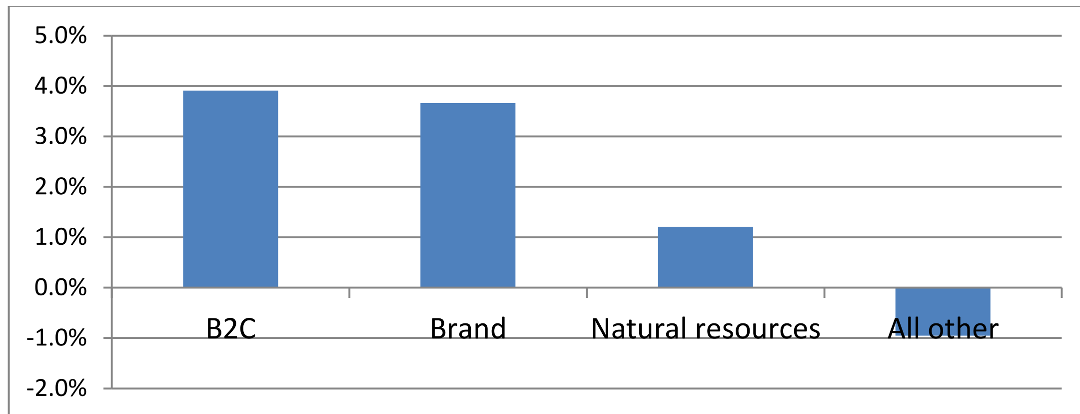
- ✓ are able to attract better human capital,
- ✓ establish more reliable supply chains,
- ✓ avoid conflicts and costly controversies with nearby communities, and
- ✓ engage in more product and process innovations

These are basically the arguments pro and con, about whether paying attention to ESG issues either essentially creates a social good at cost to shareholders, with some actual tangible benefits in terms of financial performance or creates a luxury good that is consumed by management, because it makes them feel good about themselves. They are both quite feasible.

We looked at it both in terms of market returns and accounting returns. We took these portfolios, and looked at the value weighted between the low and the high sustainability firms in the long-term view over 18 years. We looked at how it plays out in terms of stock market returns, and on equity for both valuated and equal weighted portfolios.

Lastly, there is always the question if there is some other variable, a hidden variable like management equality for example, that explains this as opposed to these

policies around ESG. One way we tried to get our arms around that was to look at industries where face validity would suggest business to consumer (B2C) businesses where consumers care about natural sources, brand and reputation, compared to business to business (B2B) businesses. In those sectors, for businesses where ESG topics would be more important, abnormal returns are higher compared to the others which is at least one indication that it is ESG issues or sustainability that are driving it.



We also looked at unexpected returns, and saw that higher returns for high sustainability firms would suggest that the markets are missing the trick a little bit, in terms of paying attention to the things that are important and that are going to determine their future earnings.

Discussant

DANYELLE GUYATT: I would like to commend Robert and his colleagues on this paper. If you have not had a chance to read it, it's quite substantial. You have heard from Robert what a fantastic range of data and issues were covered. It is probably one of the most extensive compilations on sustainability in any one paper that I've ever read, and I've been researching this field for about 10 years now, so I'd like to commend you on that. Robert has already talked us through the structure, so I am not going to repeat any of that.

On the compilation of the variables, an incredible range of data sources were used. I think that was partly a necessity, because when you look at the sources of data in this field, it is actually quite hard to do long time-series analysis and also to compare the data from ASSET4, Thomson Reuters, and company reports. I also noted that you conducted over 200 interviews as part of this research. On the corporate governance inputs, you used not only the SAM questionnaire, but also a media stakeholder analysis rep risk that does social environmental flags. This huge data splicing effort from all of these different variables is a big challenge that you handled very well.

I would like to focus in particular on the time horizon, since that is the topic of today's conference. I felt that there were two really unique, quite interesting approaches

you used. One was the Thomson Reuters street events. What Robert and his colleagues did was to actually look at how companies communicate with investors, and they did a content analysis of the words used, comparing words that were longer-term words versus shorter-term words. They aggregated and constructed a ratio using that. I thought that was quite a unique way of delving a little bit deeper into this time horizon issue and going beyond looking at everyday data in the stock market, etc. That's one quite interesting piece of analysis, along with the fact that there was a positive correlation between high sustainability firms and those firms that tend to use longer-term words when communicating with investors. That is a really key finding.

The other point on the time horizon issue was looking at the investor base. It was not completely clear to me whether this was a point-in-time analysis or a time-series analysis. It was using methodology that was set up by an academic, Brian Bushee, in a 2001 paper. It effectively looked at the base of investors that are more dedicated versus those that are more transient. Again there was a correlation found that the investor base of high sustainability companies tended to have a higher concentration of dedicated investors and the low sustainability companies in this sample were more transient. I think that is something that we can build on in further research as well, which I'll return to.

Because we do have obviously some very large important investors in the room here today, one of the key points for investors was the very interesting finding that you made on the business-to-consumer brand reputation natural resource sensitivity. The fact that the high sustainability companies and performance link tends to be stronger in companies with those characteristics, will help us as investors to think about the sort of companies that we might focus on in engagement. Let's face it, there are thousands of companies that we need to engage with on these issues. We have finite resources in time, so we have to use that sensibly and to target the companies particularly with that profile.

That's the good news, but there are a couple of challenges or questions that I would like to pose at this stage. I did notice that 100 financial companies were excluded from the analysis and I was wondering if that was appropriate. I would argue that financial companies certainly should behave more sustainably, and I'm curious to know the impact that that had on the overall results.

If we are really trying to understand the culture of organizations that can promote sustainability and long-term thinking, perhaps we need to go to the next layer down, which is more disaggregated analysis. After all, organizations represent the sum of their parts, and they're made up people. Can we look at the cultural and behavioral characteristics of the people that are actually working inside the high sustainability companies versus the low sustainability companies, and get a sense of their values and beliefs and how that impacts their behavior? It is not just top-down policies and the corporate managers, but really how that culture infiltrates through an organizational chain and the actual behavior of the employees at different levels of an organization.

There is some really interesting research to be done to build on this discovery that you're made.

Another question which I think is relevant for investors, in particular, is what are the sorts of people that work in high sustainability firms? Are they very different from people in lower sustainability companies? Do they have different attitudes and interests, and should we integrate this into how we hire people? This includes finance. What sort of people should we be looking for? Is there a certain person who thinks with a longer horizon? And if so, is there a bias there that we can build into our selection criteria of looking for new joiners? Or can you train people to be longer-term in their thinking? There is a lot said around incentives, but I think there are softer, cultural ways of infiltrating how people think and behave, and very subtle signals in terms of how people interact within organizations. That would be quite an interesting area of further research.

Finally, the finding that that long horizon firms tend to be high sustainability firms and also have a more dedicated investor base is really interesting and relevant for us as investors. Do companies proactively manage their investor types? Do companies get mixed messages from investors? There are many agents in the chain in this investment management process. Are they thinking of brokers when they are engaging with the investment community? That is obviously quite a different time horizon to the end asset owner. To the extent that asset owners rely on asset managers and delegate the investment decisions, what signal are they getting from asset managers in that process? It might actually be very different from the signal that the asset owner would hope they are getting. Most of you are probably very familiar with the engagement overlay providers and engagement efforts that organizations, such as the Principals for Responsible Investment, are trying to move forward with. I wonder, from a company's perspective, how it feels when you have one investor group that seems to determine the share price telling you one thing; and another investor group who has actually sustained capital in a different voice saying they are actually not that interested in the short-term, but they are interested in long-term value and therefore you should look at these issues. Perhaps we need some research on how we can unravel those signals and how we can strengthen the signal that comes from the long-term investors. I wonder actually if the 200 interviews that you conducted might have some data on this? It wasn't clear from the paper what was explored in those interviews, but I wonder if there might be some gems of information to go further on that.

Finally, on the alignment of interest, we are going to hear about L-Shares in a later panel and how we can create more alignment between encouraging institutions to be more patient and capital to foster that alignment, so I think that's also a nice link with the research that you undertook. Thank you, very much.

ECCLES: Thank you, very much. Those are actually very helpful comments. Let me try to address what I think are some of the key points that you brought up, and which I think were really excellent.

First of all on this question of financial services firms, you are right that we left them out. Financial services firms are really different. Getting your arms around them is problematic. I don't know what would happen if you included financial services firms. When you talk about sustainability and you say ESG, people kind of go, ok, environmental, social, and oh, by the way, there's some governance stuff. Then they talk about carbon emissions. Let's be honest: to banks, carbon emissions are not that important. Maybe they fly a little bit less, and the CEO doesn't have a private limo. How they manage and report on risk, which I would put under governance, is really important. The premise of the Sustainability Accounting Standards Board is to make this a sector by sector approach, across 10 sectors, 89 industries, to identify material issues by sector. We have launched healthcare, and we are starting financial institutions. To directly respond, I would like to go through the SASB process and see which issues get identified through the fairly rigorous process we are using, and then see if it would possible to replicate this study for financial institutions. As you pointed out, there is a huge data problem. When we know what the issues are for financial institutions from a sustainability point of view, then the question would be if we can get the data–and this is a huge challenge in this domain. There is a whole infrastructure of information on financial performance and stock market performance, so you are cobbling these together the best you can.

In terms of what these firms are like, you brought up two issues: what are their organizational characteristics, and then types of people—do they recruit different types of people, and can they train people in this regard? I have got more insight that I can provide on the characteristics at the organizational level than at the people level at this point, but let me speak to both. On another study that George and I did with Kathy Miller Perkins, we looked through all the methodologies published in the Sloan Management Review, and then we basically kind of took a different cut at high and low sustainability firms. Through a survey instrument called SCLAQ (Sustainability, Cultural and Leadership Assessment Questionnaire) we developed a model of what defines how companies become high sustainability firms. It is a pretty simple two stage model, and the stages are not exactly linear. Stage one is reframing the corporate identity, which is basically rethinking, as I said in the beginning, the role of the corporation in society. There are two key interrelated elements in this; one is external engagement, and the other is leadership commitment. Sometimes it starts with leadership commitment; the CEO just says, we're going to do this. It can be born in the DNA at the beginning, like it was in Natura. It can happen later, often through being prodded by civil society.

Dow would be a good example of this. In the 1960s, they had people all over them for a whole series of issues—Agent Orange, dioxins in rivers and so on. There are two basic ways companies can respond: they can try to spin it away through a PR machine, or they can say it's a wakeup call and we need to find out what's going on. If

they engage through these processes that I talked about and leadership is committed, they start this process of reframing the corporate identity. Then the second stage is codifying the new identity, and that is done through employee engagement, which engages processes internally and in mechanisms of execution. It structures process and incentives, and so forth. Over time, you get a culture where innovation and risk-taking is valued, because people do have a longer-term view. There is trust that they will be rewarded for taking risk around innovation, and the organizations have a high capacity for both incremental and more substantive change. This process can take years. Dow has been on this journey for 20 years, over two ten-year plans, and they are still thinking about it.

In terms of the particular types of employees, that's a good question. All I have is anecdotal evidence and case studies, which I can get away with at the Harvard Business School, but probably not at Columbia. I won't try to con you. The answer is I don't have any empirical data, so I'm sorry. It is certainly a plausible hypothesis. I think you'll see self-selection in some of the data that I showed you earlier on, in terms of decisions that people, particularly younger people, are making about where they work. Maybe the retention will be higher. But this is really a good and legitimate question, and I just don't have a good answer for it.

Can companies be proactive in shaping their investor base? It's a hypothesis. I think they can. You see companies that are trying to do it, like Unilever, where they decided not to give earnings guidance. I would not say that this is a ground-swell trend at this point, but you are seeing more companies doing this and voluntarily starting to adopt integrated reporting. The first company in the United States to adopt integrated reporting**,** long before it was fashionable, was United Technologies Corporation, founded in 1927; they make things like air conditioners, jet airplanes and elevators. It's a military contractor, not Ben and Jerry's or anything like that. A few years ago they said, we're proud to say we are the first Dow Jones 30 company that issued an integrated report. Companies that are going down this path of external reporting are hoping to start to shape their investor base. It is really hard. The first benefit that companies get from integrated reporting is around employee engagement and commitment. Customers are interested in it. Southwest Airlines did an integrated report. I took a Southwest Airlines flight and there was a card in the seat pocket talking about their integrated report.

Investors are tough, because CFOs do not like to talk about this stuff. They are not comfortable with it, and they know how to dance on the quarterly calls around the earnings and stuff like that. Investors do not really have the methodologies yet to be able to incorporate this; they're working on it, but they are to some extent limited by data. I heard this morning that Bloomberg is looking to hire an ESG analyst to help them improve on a model that they got from UniCredit. There are probably some interesting experiences in the room where investors are trying to start to incorporate ESG into their decision-making. At a talk in September, Michael Baldinger, the CEO of

SAM, said that investors are behind the curve relative to where the corporations are. I say private equity is ahead of the curve, but that's a longer story than I can get into.

I think they can do it, but you are right that there are mixed messages. There are different types of investors. Some of them they just ignore. A lot of money moves based on technical trading strategies, which I'll never understand. There are mixed signals that they get from asset owners and asset managers, and there is the question of alignment between the asset owners and the asset managers. I have talked to some sovereign wealth funds and said if there is anybody who can be long-term, it's you guys. They say we wish we could, but the government reviews our performance every year; the governments are banging on us, so we bang on our asset managers and the asset managers bang on the company. There are some system-level issues around how to get this longer-term perspective. I think mechanisms like L-Shares are a really interesting idea. It's another tool; integrated reporting is a tool and L-Shares are a tool. We are looking into the recommendations that consultants give to the asset owners, how they select their asset managers, how they compensate them, and the timeframes over which they do it. These are all important issues.

There are other mechanisms for systemic change at the capital market-level, like an initiative called the Sustainable Stock Exchange. UN PRI and the Global Compact are doing the so-called New Analyst Call, where they have calls with companies and investors to focus on ESG issues in the context of non-financial performance.

FURTHER DISCUSSION

AUDIENCE QUESTION: Through much of the conversation and the materials, long-term and short-term have been used in two different ways. One is the issue of internalizing externalities in the financial world. There is systemic risk. We want to take climate change into account globally, but corporations don’t; they externalize. The other is that, as Patrick Bolton described earlier in his talk about the 1990s, companies are long-term in their own investment pattern. Those are two very different phenomena, unless you can link them. You started to link them a little bit, suggesting that there might be mechanisms in which being concerned about internalizing externalities turned out to improve the company's performance in its own business. But it would be really helpful if we kept the two concepts separate enough that we will be able to tell when there is linkage between the two.

ECCLES: I would agree with that distinction. Where the rubber seems to meet the road in terms of the issues of externalities and timeframes for investments inside a company is in the capital budgeting process. It lends itself to financial data and looking at projected cash flows, discounts, and things like that. What you begin to see are

companies like Natura trying to incorporate externalities by coming up with proxies for valuations—putting prices on things that don't have prices, which is hard to do. They are trying to consider what they think the benefits would be of incorporating these externalities internally. To some extent, today, it is kind of a leap of faith to say that this is going to have this long-term benefit to us as a corporation, in terms of a brand, customer loyalty, employees, and so on. Even inside companies, this behavior is a hypothesis, because you do not really have good data to look at these decisions and see how they play out. It's a challenge.

AUDIENCE QUESTION: One of the things I would like to go back to is the plot about the financial returns of ESG strategy. From a pure finance perspective, you do not expect to see any effect on returns. If the market understands what the benefits are, it will immediately capitalize those benefits into the price, so you expect to see a price-level effect, but not a return effect. Your return effect is pretty strong over long periods of time. This suggests what you emphasized to explain the return: that the market doesn't get it and is slow at learning what is happening, so that there's a continuous positive surprise effect. If this is the correct analysis, my question is why you are looking at a set of firms starting in the 1990s. At that time, when you looked at the Google trend, this was not such a big deal. Now, it is becoming a big deal, more companies are doing it, and markets are becoming more familiar. Should we see those financial returns disappear in the near future?

ECCLES: My guess on the answer to that is no. Remember, I'm not a finance or accounting professor; I'm a management professor, so I like talk to people and try to figure out what they're up to. From what I know about what goes on inside big institutional investors, they are still not paying much attention to this, for all kinds of reasons that I talked about, including processes and a lack of data. We have done a couple of webinars with the UN PRI, and one of the most interesting questions we got was from someone who asked, how you would know when a company is starting down this path, before they have got the benefits and it has been recognized in prices? What are the signals to look for? From an asset manager point of view, you could identify those things that are credible external commitments that companies are making when they start down the path that we have been talking about here today. If you can do that before the rest of the market sees it, there are opportunities.

I can't tell you the number of emails that we have gotten from people in hedge funds. It cracks me up. They say hey Bob, I read your paper, can you just send me that list of the 90 high sustainability firms, because I want to build a portfolio. I'm thinking, you know I'm at the Harvard Business School, not the Harvard Divinity School. This is for research purposes and the data is proprietary. Maybe I can be bought, but I am not going to send this out for free. There is a set of people who are starting to think about trading strategies around this.

AUDIENCE QUESTION: Is there a risk of a bias in the observation, in that companies that are in good financial shape have a wider budget to actually communicate or even invest on the socially responsible investing, and that your observation could be an inverse causality that as they are in good financial shape they have a good profile?

ECCLES: Let me respond in two ways. In terms of the second point, when you look at the performance of the matched sets of 90 high and 90 low sustainability, their financial performance at the beginning of the period and for the three years before was the same, so they all had the same resources. 90 of them they chose to make these commitments and 90 of them did not, for a variety of reasons.

In terms of sustainability being a luxury good that you can pursue when times are good, what happened in our data set suggests that is not the case. When you had the financial crisis in 2008, everybody got hammered, both the high and low sustainability firms. Given that the hypothesis would be that the high sustainability firms would back off, we counted the number of ESG policies that they had in place. They didn't back off; in fact, the percentage actually went up a little bit. In that group of high sustainability firms, even when they were in financial distress, rather than backing off they just kept going. I think some of that is just because they had this longer-term view.