Global Market Strategy
Regional and Sector Strategy: September Update
Michael Geraghty ... p. 13

Global Sector Research
Women in an Automated World
Sebastian Vanderzeil, Fiona Ewing ... p. 14

Cornerstone Contributes to FAIRR’s Investor Case Studies
Michael Shavel ... p. 23

Corporate Governance
To “B” or Not to “B”: The Power of Corporate Form
Suz Mac Cormac, Morrison & Foerster ... p. 25

Accelerating Impact
Changing Business and Sustainability of How Products Are Made, Purchased and Shipped
Jacob Park, Green Mountain College / Rutgers University ... p. 34

Featured Editorial
Hillel’s Voice
Erika Karp ... p. 37

Sustainable Editorial
Think Locally, Act Globally
Brendan O’Donnell, Max Gruenig, Ecologic Institute ... p. 39

Virtual Attendance
Solving for Nonfinancial Data as Part of the Investor’s Mosaic
David Dusenbury ... p. 41
CEO’s Letter on Sustainable Finance & Banking

In this month’s edition of the Cornerstone Journal of Sustainable Finance and Banking (JSFB), we consider debates from the perspective of the “loyal opposition” — because we must look at complex issues from different perspectives while embracing the principle that respecting diverse viewpoints strengthens the quality of the debate. This is a timely theme in the context of a US election season that has witnessed unusually heated rhetoric about issues ranging from trade to national security, and sharp divisions over national identity and role of the US in the broader world. We see similar debates occurring in other countries, with the economic fallout of the Great Recession and the crisis of refugees fleeing from the horrors of the Syrian civil war fueling nationalist backlashes in Western Europe. Meanwhile, global debates over monetary policy and finance continue. With traditional monetary policy levers stretched to their limits, central banks seek innovative strategies to spur economic activity. The result for investors has been richly valued equities, low yielding fixed income, and a high correlation between stocks and bonds that makes asset allocation especially difficult in the current environment.

With globalization under question, as contributors Max Gruenig and Brendan O’Donnell write in their Sustainable Editorial, differing positions on its merits extend into the arena of environmental activism. They posit that the stance of many environmental advocates against the perceived negative forces of globalization was challenged in the period leading up to December 2014’s Paris climate talks by the breaking Volkswagen emissions scandal. They discuss the role of more stringent rules in the US relative to the EU in uncovering the deceptive practices: “It is the integrated global market that produced the transparency necessary to achieve this watershed moment for environmentalism.”

Another debate, tackled by contributor Suz Mac Cormac of the legal firm Morrison & Foerster, addresses the line between profit and purpose in the corporate world. Her Corporate Governance article, “To B or Not to B,” offers an in-depth review of the range of legal structures available to address the pursuit of mission in the corporate context. In Suz’s view, “corporate form serves as the very backbone of our society, shaping the actions of the most powerful institutions of our time (corporations) and providing the functional framework for the behavior of virtually all men and women who work around the world.” She argues that corporations can be a powerful tool in effecting social change, and believes that “requiring all corporations to change form — imposing fiduciary duties on boards and management in favor of shareholder-agreed social and environmental goals — is critical as a tool to address issues ranging from social inequality to climate change.”

Turning from the evolution of form to the evolution of substance, Professor Jacob Park looks at the emerging business models being created by the convergence of online commerce, mass customization, and 3-D printing technology, and asks “what are the important sustainability consequences of such business models? Are they positive, negative or something else?” His Accelerating Impact article concedes it is too early to come to any
conclusions, but clearly articulates the potential for disruption these emerging business models will bring.

Understanding the importance of sustainability issues on corporate strategy and performance is, of course, at the very heart of the debate in financial services — while their numbers are on the decline, there are still many who disregard such considerations altogether. Fortunately, organizations such as the New York Society of Securities Analysts (NYSSA) and the CFA Institute are actively debating how investors can measure the impact of sustainability issues on valuations, as well as which metrics are important. Cornerstone’s David Dusenbury relays the substance of their recent conference, co-sponsored by Bloomberg, in his Virtual Attendance article, “Solving for Nonfinancial Data as Part of the Investor’s Mosaic.” According to David, the bottom lines of the conference was that “integrating nonfinancial metrics into the investment process helps drive investment into higher-quality companies — it’s how these metrics are integrated into the process that participants are trying to solve for.”

The debates about balancing profit and purpose, nonfinancial and financial metrics, global economic growth and concern for the environment, are all part of the ongoing quest for a better world. And they are particularly relevant at this time of year as Cornerstone marks its 3rd anniversary and with the approach of the Jewish High Holidays. Significantly, these “Days of Awe,” inclusive of Yom Kippur, are reserved as a time for personal reflection known as “Cheshbon Hanefesh.” According to Rabbi Rachel Weiss of the Jewish Reconstructionist Congregation in Evanston, Illinois, this is “an accounting of our souls, our lives, our actions, our spending, our receiving, and our giving.” To further quote Rabbi Weiss from her invocation at the launch of Cornerstone in 2013:

But the Hebrew word “Cheshbon” has another meaning. Meaning “account,” it is also used in the business and banking world to refer to the money we exchange, we owe, and we accumulate. How does it all add up? ... We celebrate the closing of one chapter, the accounting of the works accomplished and the good perpetuated, and we dedicate ourselves to the chapter that begins here and now. We ask ourselves, how will this venture change the world of accounting? How will we change it? And how will it change us?

My sincere regards,
Erika

Erika Karp
Founder and Chief Executive Officer

With thanks to John Wilson for his contribution to this edition’s letter.
Table of Contents

CEO's Letter on Sustainable Finance & Banking 2

Market Summary
Overview 5
Market & Global Sector Performance, Monetary Policy & ESG Data 6

Global Market Strategy
Regional and Sector Strategy: September Update Michael Geraghty, Global Equity Strategist Cornerstone Capital Group 13

Global Sector Research
Women in an Automated World Sebastian Vanderzeil, Global Thematic Research Analyst Fiona Ewing, Research Associate Cornerstone Capital Group 14
Cornerstone Contributes to FAIRR's Investor Case Studies Report Michael Shavel, Global Thematic Research Analyst Cornerstone Capital Group 23

Corporate Governance
To "B" or Not to "B": The Power of Corporate Form Suz Mac Cormac, Corporate Counsel and Partner Morrison & Foerster 25

Accelerating Impact
Changing Business and Sustainability of How Products Are Made, Purchased and Shipped Professor Jacob Park Green Mountain College and Rutgers University 34

Featured Domain
Hillel's Voice Erika Karp, Founder and CEO Cornerstone Capital Group 37

Sustainable Editorial
Think Locally, Act Globally Brendan O'Donnell, Fellow, and Max Gruenig, President, Ecologic Institute 39

Virtual Attendance
Solving for Nonfinancial Data as Part of the Investor's Mosaic: Meeting with the NYSSA and CFA Institute David Dusenbury, CFA, Managing Director, Corporate Strategy, and Senior Portfolio Manager Cornerstone Capital Group 41

Upcoming Events: Global ESG Calendar 43
Recent Articles 46
JSFB Subscription Form 44
Cornerstone Capital Group Team 47
Important Disclosures 48
Market Summary

Overview

As we approach fourth quarter 2016, the environment for risk assets continues to be favorable. The S&P 500 is down slightly from an all-time high hit on August 15th. Global investment grade bond prices have resumed their upward trend and high yield is testing all-time highs. Emerging market assets – equities, bonds, and currencies – have done particularly well this year. While the bulls appear to be in control, the prospect for a more hawkish Fed and upcoming political events, namely the US presidential election and Italy’s referendum, have some investors exercising a level of caution into year-end.

Despite the Fed’s announcement to leave interest rates unchanged at its September 21st policy meeting, US equities are trading in a relatively tight band. US economic indicators perked up in June and July, but the most recent round of data has thrown some cold (or at least lukewarm) water on hopes for a sustainable uptick in growth. August’s ISM manufacturing index fell to 49.4 (a level below 50 represents contraction) versus expectations of 52.0, and the new orders component declined to 49.1 from 56.9. The services index fell 4.4 points to 51.4, its lowest level since 2010. On the jobs front, August nonfarm payrolls came in lower than consensus forecasts, showing the economy added 151k jobs. That said, July payrolls were revised up 20k, to 275k, and the overall trend remains solid. On a positive note, the US Census reported that median incomes rose from $53,718 to $56,516, the largest increase in the history of the data back to 1967. It also showed that income growth is being driven most by the bottom two deciles of the income distribution, which is good news with respect to income inequality.

In Europe, monetary and political uncertainty is contributing to a modest increase in stock market volatility. The ECB left monetary policy unchanged at its September meeting and refrained from offering guidance on future moves. While this disappointed some investors who were hoping for an extension or expansion of the ECB’s bond-purchasing program, the central bank’s decision may suggest the eurozone’s fragile recovery had not been affected by the Brexit vote in June. Indeed, UK manufacturing and service PMI rebounded in August from disappointing levels following the referendum result. On the political front, Italy’s upcoming referendum on December 4 is perhaps the most significant risk facing Europe. The polls remain closely divided and a “No” vote could trigger a chain of events resulting in Italy voting to leave the EU.

Elsewhere in developed markets, the Bank of Japan announced a further easing of monetary policy. It said it would cap the yield on ten-year government bonds at about 0% and also committed itself to buying assets until inflation exceeds its target of 2%. With the exception of Japanese banking stocks, the immediate market reaction to the new policies was muted, underlining the credibility issue faced by BOJ policymakers.

In emerging markets, Mexico’s peso rebounded from a record low following the September 26th US Presidential debate. This signaled the market’s view that Donald Trump, who has pledged to renegotiate regional trade deals, did not perform well in the first of three debates. Following Raghuram Rajan’s surprise decision nine weeks ago to step down as governor of the Reserve Bank of India, the Indian government named Urjit Patel as his successor. Patel is a deputy governor at the central bank who is credited with shaping an effective inflation-targeting framework.

On a one-month trailing basis, the MSCI Emerging Markets Index outperformed the MSCI World Index (a developed market proxy) by approximately 70 basis points and is outperforming on a year-to-date basis by about 11.2%. In a continuation of the trend this year, small cap equities led their large cap counterparts by approximately 40 basis points over the last month, bringing year-to-date outperformance to about 3.6%. From a sector perspective, performance was mixed between cyclical and defensives. In the MSCI ACWI (broad index for both developed and emerging equities), utilities and tech outperformed, while energy and consumer staples lagged. 

—Michael Shavel, Global Thematic Research Analyst
## Market Summary

### Market and Global Sector Performance

#### MARKET / INDEX PERFORMANCE

<table>
<thead>
<tr>
<th>Index</th>
<th>T1M (%)</th>
<th>T3M (%)</th>
<th>YTD (%)</th>
<th>2016 P/E</th>
<th>2016 P/B</th>
<th>Div. Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US Equity Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DJIA</td>
<td>-1.4</td>
<td>2.1</td>
<td>6.9</td>
<td>17.2</td>
<td>3.1</td>
<td>2.6</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>-0.9</td>
<td>3.0</td>
<td>7.6</td>
<td>18.5</td>
<td>2.7</td>
<td>2.1</td>
</tr>
<tr>
<td>Nasdaq</td>
<td>0.9</td>
<td>8.4</td>
<td>7.0</td>
<td>22.7</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Russell 2000</td>
<td>0.6</td>
<td>7.4</td>
<td>11.6</td>
<td>28.1</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>MSCI KLD 400 Social</td>
<td>-1.2</td>
<td>3.1</td>
<td>7.5</td>
<td>19.7</td>
<td>3.3</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Developed International Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euro STOXX 50</td>
<td>1.3</td>
<td>0.1</td>
<td>-3.9</td>
<td>14.7</td>
<td>1.4</td>
<td>3.9</td>
</tr>
<tr>
<td>in USD</td>
<td>0.6</td>
<td>-1.0</td>
<td>-0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTSE 100</td>
<td>0.7</td>
<td>10.1</td>
<td>14.4</td>
<td>17.5</td>
<td>1.8</td>
<td>4.0</td>
</tr>
<tr>
<td>in USD</td>
<td>-1.0</td>
<td>-3.6</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAC 40</td>
<td>1.5</td>
<td>0.6</td>
<td>-0.1</td>
<td>14.8</td>
<td>1.3</td>
<td>3.7</td>
</tr>
<tr>
<td>in USD</td>
<td>0.7</td>
<td>-0.5</td>
<td>3.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAX</td>
<td>0.3</td>
<td>3.6</td>
<td>-1.1</td>
<td>13.7</td>
<td>1.6</td>
<td>3.1</td>
</tr>
<tr>
<td>in USD</td>
<td>-0.4</td>
<td>2.5</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nikkei 225</td>
<td>2.5</td>
<td>12.3</td>
<td>-11.0</td>
<td>16.6</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>in USD</td>
<td>0.9</td>
<td>8.3</td>
<td>6.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASX 200</td>
<td>-0.7</td>
<td>8.2</td>
<td>7.4</td>
<td>16.9</td>
<td>1.9</td>
<td>4.4</td>
</tr>
<tr>
<td>in USD</td>
<td>-1.2</td>
<td>5.2</td>
<td>12.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emerging Market Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBOVESPA</td>
<td>1.2</td>
<td>13.8</td>
<td>35.4</td>
<td>15.1</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>in USD</td>
<td>0.9</td>
<td>18.3</td>
<td>65.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shanghai Comp</td>
<td>-1.1</td>
<td>7.6</td>
<td>-12.5</td>
<td>14.2</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>in USD</td>
<td>-2.1</td>
<td>4.8</td>
<td>-14.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KOSPI</td>
<td>0.8</td>
<td>6.8</td>
<td>4.8</td>
<td>11.6</td>
<td>1.0</td>
<td>1.7</td>
</tr>
<tr>
<td>in USD</td>
<td>1.5</td>
<td>7.2</td>
<td>11.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SENSEX</td>
<td>2.5</td>
<td>6.6</td>
<td>11.2</td>
<td>18.0</td>
<td>2.9</td>
<td>1.6</td>
</tr>
<tr>
<td>in USD</td>
<td>3.1</td>
<td>7.6</td>
<td>10.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bovespa Corp. Sustainability</td>
<td>1.4</td>
<td>13.3</td>
<td>17.8</td>
<td>15.8</td>
<td>1.9</td>
<td>2.6</td>
</tr>
<tr>
<td>in USD</td>
<td>1.2</td>
<td>17.7</td>
<td>44.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Global Market Indices

<table>
<thead>
<tr>
<th>Index</th>
<th>T1M (%)</th>
<th>T3M (%)</th>
<th>YTD (%)</th>
<th>2016 P/E</th>
<th>2016 P/B</th>
<th>Div. Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI World</td>
<td>-0.3</td>
<td>2.8</td>
<td>6.2</td>
<td>17.6</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>MSCI All-Country World</td>
<td>0.6</td>
<td>3.6</td>
<td>9.0</td>
<td>15.1</td>
<td>1.4</td>
<td>3.4</td>
</tr>
<tr>
<td>MSCI EAFE</td>
<td>0.4</td>
<td>2.3</td>
<td>2.9</td>
<td>15.8</td>
<td>1.5</td>
<td>3.3</td>
</tr>
<tr>
<td>MSCI Emerging Markets</td>
<td>1.5</td>
<td>11.0</td>
<td>18.1</td>
<td>13.9</td>
<td>1.5</td>
<td>2.5</td>
</tr>
<tr>
<td>DJ Sustainability World Comp</td>
<td>-0.2</td>
<td>3.5</td>
<td>6.3</td>
<td>15.7</td>
<td>1.8</td>
<td>3.3</td>
</tr>
<tr>
<td>FTSE4Good Global</td>
<td>-0.1</td>
<td>2.8</td>
<td>5.3</td>
<td>16.1</td>
<td>1.9</td>
<td>2.9</td>
</tr>
</tbody>
</table>

### Fixed Income

**Barclays US Aggregate**

-0.3 | 1.4 | 5.6

### Commodities

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WTI Crude</td>
<td>44.5</td>
<td>43.4</td>
<td>50.2</td>
</tr>
<tr>
<td>ICE Brent Crude</td>
<td>45.9</td>
<td>43.3</td>
<td>54.7</td>
</tr>
<tr>
<td>NYMEX Natural Gas</td>
<td>3.0</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Spot Gold</td>
<td>1338</td>
<td>1220</td>
<td>1130</td>
</tr>
<tr>
<td>LME 3mth Copper</td>
<td>4853</td>
<td>5065</td>
<td>5078</td>
</tr>
<tr>
<td>CBOT Corn</td>
<td>337</td>
<td>386</td>
<td>407</td>
</tr>
<tr>
<td>ICE ECX Emission</td>
<td>4.5</td>
<td>4.8</td>
<td>8.2</td>
</tr>
</tbody>
</table>

### Currencies

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR/USD</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>USD/JPY</td>
<td>101.0</td>
<td>112.4</td>
<td>120.3</td>
</tr>
<tr>
<td>GBP/USD</td>
<td>1.3</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>AUD/JPY</td>
<td>77.0</td>
<td>84.6</td>
<td>84.2</td>
</tr>
<tr>
<td>DXY Index</td>
<td>95.5</td>
<td>96.0</td>
<td>96.1</td>
</tr>
</tbody>
</table>

Source: Bloomberg, Barclays. Equity Returns: All returns represent total return for stated period. Dividends and coupons are not included in the DAX and BOVESPA indices. Bond Returns: All returns represent total return for the stated period. Index characteristics: P/E, P/B, and Dividend Yield are based on Bloomberg consensus estimates for the stated period.
MSCI ACWI SECTOR PERFORMANCE

As of 09/23/2016

1 Month Price Return (%)

YTD Price Return (%)

Source: Bloomberg. Sector returns are based on GICS methodology. MSCI ACWI is a free-float weighted equity index that includes both emerging and developed world markets.

US EQUITY STYLE PERFORMANCE

Style box returns are based on Russell Indices with the exception of the Large-Cap Blend box, which reflects the S&P 500 Index. All values are cumulative total return for the stated period including the reinvestment of dividends. The index used from left to right, top to bottom are: Russell 1000 Value Index, S&P 500 Index, Russell 1000 Growth Index, Russell Midcap Value Index, Russell Midcap Growth Index, Russell 2000 Value Index, Russell 2000 Index and Russell 2000 Growth Index.

1 Month

Year to Date

Source: Bloomberg
### SECTOR SNAPSHOT – TOP 5 COMPANIES BY MARKET CAP

As of 09/23/2016

<table>
<thead>
<tr>
<th>Company name</th>
<th>Ticker</th>
<th>Industry</th>
<th>Mkt Cap (US$ Bn)</th>
<th>Price (Local)</th>
<th>Total Return YTD % (local)</th>
<th>P/E 2015E</th>
<th>EV/EBITDA 2015E</th>
<th>Div Yield % 2015E</th>
<th>ESG Disclosur e Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer Disc.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amazon.com</td>
<td>AMZN</td>
<td>Internet &amp; Direct Marketing Re Automobiles</td>
<td>382.0</td>
<td>805.8</td>
<td>19.2</td>
<td>74.3</td>
<td>24.8</td>
<td>N/A</td>
<td>21.9</td>
</tr>
<tr>
<td>Toyota Motor Corp</td>
<td>7203.JP</td>
<td>Automobiles</td>
<td>196.7</td>
<td>5950.0</td>
<td>-19.1</td>
<td>10.9</td>
<td>11.0</td>
<td>N/A</td>
<td>33.5</td>
</tr>
<tr>
<td>Comcast Corp</td>
<td>CMCSA</td>
<td>Media</td>
<td>162.0</td>
<td>67.2</td>
<td>20.6</td>
<td>19.2</td>
<td>8.2</td>
<td>1.6</td>
<td>30.2</td>
</tr>
<tr>
<td>Home Depot Inc</td>
<td>HD</td>
<td>Specialty Retail</td>
<td>157.9</td>
<td>127.8</td>
<td>-1.8</td>
<td>20.2</td>
<td>11.5</td>
<td>2.2</td>
<td>23.0</td>
</tr>
<tr>
<td>The Walt Disney Co</td>
<td>DIS</td>
<td>Media</td>
<td>149.9</td>
<td>93.3</td>
<td>-10.6</td>
<td>16.1</td>
<td>9.7</td>
<td>1.5</td>
<td>33.5</td>
</tr>
<tr>
<td><strong>Consumer Staples</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nestle</td>
<td>NESN.VX</td>
<td>Food Products</td>
<td>246.4</td>
<td>76.8</td>
<td>6.3</td>
<td>22.6</td>
<td>15.1</td>
<td>2.9</td>
<td>57.0</td>
</tr>
<tr>
<td>The Procter &amp; Gamble Co</td>
<td>PG</td>
<td>Household Products</td>
<td>234.3</td>
<td>87.8</td>
<td>13.3</td>
<td>22.6</td>
<td>14.6</td>
<td>3.1</td>
<td>N/A</td>
</tr>
<tr>
<td>Wal-Mart Stores</td>
<td>WMT</td>
<td>Food &amp; Staples Retailing</td>
<td>223.8</td>
<td>72.4</td>
<td>20.6</td>
<td>16.7</td>
<td>8.0</td>
<td>2.8</td>
<td>32.5</td>
</tr>
<tr>
<td>Anheuser-Busch Inbev</td>
<td>ABI.BB</td>
<td>Beverages</td>
<td>209.9</td>
<td>116.2</td>
<td>3.5</td>
<td>32.8</td>
<td>15.7</td>
<td>3.1</td>
<td>52.9</td>
</tr>
<tr>
<td>The Coca-Cola Co</td>
<td>KO</td>
<td>Beverages</td>
<td>184.5</td>
<td>42.7</td>
<td>1.9</td>
<td>22.4</td>
<td>17.4</td>
<td>3.3</td>
<td>21.1</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exxon Mobil</td>
<td>XOM</td>
<td>Oil, Gas &amp; Consumable Fuels</td>
<td>346.0</td>
<td>83.5</td>
<td>9.9</td>
<td>35.7</td>
<td>11.1</td>
<td>3.6</td>
<td>55.6</td>
</tr>
<tr>
<td>Royal Dutch Shell</td>
<td>RDSA.LN</td>
<td>Oil, Gas &amp; Consumable Fuels</td>
<td>200.6</td>
<td>1865.0</td>
<td>29.6</td>
<td>24.4</td>
<td>8.6</td>
<td>7.0</td>
<td>57.3</td>
</tr>
<tr>
<td>Petrochina Co</td>
<td>857.HK</td>
<td>Oil, Gas &amp; Consumable Fuels</td>
<td>190.4</td>
<td>5.1</td>
<td>0.6</td>
<td>83.7</td>
<td>7.5</td>
<td>1.1</td>
<td>34.4</td>
</tr>
<tr>
<td>Chevron</td>
<td>CVX</td>
<td>Oil, Gas &amp; Consumable Fuels</td>
<td>187.2</td>
<td>99.2</td>
<td>14.1</td>
<td>79.6</td>
<td>9.9</td>
<td>4.3</td>
<td>47.3</td>
</tr>
<tr>
<td>Total Sa</td>
<td>FP.FP</td>
<td>Oil, Gas &amp; Consumable Fuels</td>
<td>119.6</td>
<td>42.5</td>
<td>6.1</td>
<td>15.0</td>
<td>6.6</td>
<td>5.7</td>
<td>58.5</td>
</tr>
<tr>
<td><strong>Financials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berkshire Hathaway</td>
<td>BRK/B</td>
<td>Diversified Financial Services</td>
<td>357.7</td>
<td>145.0</td>
<td>9.8</td>
<td>20.0</td>
<td>N/A</td>
<td>N/A</td>
<td>13.6</td>
</tr>
<tr>
<td>JPMorgan Chase</td>
<td>JPM</td>
<td>Banks</td>
<td>242.9</td>
<td>67.3</td>
<td>4.1</td>
<td>11.9</td>
<td>N/A</td>
<td>2.9</td>
<td>43.0</td>
</tr>
<tr>
<td>Ind &amp; Comm Bank of China</td>
<td>1398.HK</td>
<td>Banks</td>
<td>234.2</td>
<td>4.9</td>
<td>11.0</td>
<td>5.5</td>
<td>N/A</td>
<td>5.6</td>
<td>29.4</td>
</tr>
<tr>
<td>Wells Fargo &amp; Co</td>
<td>WFC</td>
<td>Banks</td>
<td>230.8</td>
<td>45.7</td>
<td>-13.9</td>
<td>11.4</td>
<td>N/A</td>
<td>3.3</td>
<td>51.3</td>
</tr>
<tr>
<td>China Construction Bank</td>
<td>939.HK</td>
<td>Banks</td>
<td>191.3</td>
<td>5.9</td>
<td>18.9</td>
<td>5.7</td>
<td>N/A</td>
<td>5.4</td>
<td>31.1</td>
</tr>
</tbody>
</table>
### SECTOR SNAPSHOT – TOP 5 COMPANIES BY MARKET CAP (CONTINUED)

As of 09/23/2016

<table>
<thead>
<tr>
<th>Company name</th>
<th>Ticker</th>
<th>Industry</th>
<th>Mkt Cap (US$ Bn)</th>
<th>Price (Local)</th>
<th>Total Return YTD % (local)</th>
<th>P/E 2016E</th>
<th>EV/EBITDA 2016E</th>
<th>Div Yield % 2016E</th>
<th>ESG Disclosure Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>JNJ</td>
<td>Pharmaceuticals</td>
<td>325.0</td>
<td>118.8</td>
<td>18.1</td>
<td>17.8</td>
<td>12.3</td>
<td>2.7</td>
<td>59.5</td>
</tr>
<tr>
<td>Roche Holdings</td>
<td>ROG.VX</td>
<td>Pharmaceuticals</td>
<td>218.3</td>
<td>245.5</td>
<td>-8.3</td>
<td>16.7</td>
<td>11.3</td>
<td>3.3</td>
<td>48.8</td>
</tr>
<tr>
<td>Novartis AG</td>
<td>NOVN.VX</td>
<td>Pharmaceuticals</td>
<td>214.4</td>
<td>79.2</td>
<td>-5.4</td>
<td>17.3</td>
<td>16.7</td>
<td>3.4</td>
<td>63.2</td>
</tr>
<tr>
<td>Pfizer</td>
<td>PFE</td>
<td>Pharmaceuticals</td>
<td>207.8</td>
<td>34.3</td>
<td>9.1</td>
<td>14.0</td>
<td>10.7</td>
<td>3.5</td>
<td>35.1</td>
</tr>
<tr>
<td>Merck &amp; Co</td>
<td>MRK.US</td>
<td>Pharmaceuticals</td>
<td>174.1</td>
<td>63.0</td>
<td>22.1</td>
<td>16.8</td>
<td>9.4</td>
<td>2.9</td>
<td>56.6</td>
</tr>
<tr>
<td><strong>Industrials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Electric Co</td>
<td>GE</td>
<td>Industrial Conglomerates</td>
<td>267.9</td>
<td>29.9</td>
<td>-1.8</td>
<td>19.8</td>
<td>16.6</td>
<td>3.1</td>
<td>57.4</td>
</tr>
<tr>
<td>3M</td>
<td>MMM</td>
<td>Industrial Conglomerates</td>
<td>107.2</td>
<td>177.4</td>
<td>20.1</td>
<td>21.6</td>
<td>13.3</td>
<td>2.5</td>
<td>56.6</td>
</tr>
<tr>
<td>Siemens</td>
<td>SIE.GR</td>
<td>Industrial Conglomerates</td>
<td>101.1</td>
<td>105.9</td>
<td>22.5</td>
<td>15.0</td>
<td>10.7</td>
<td>3.3</td>
<td>56.2</td>
</tr>
<tr>
<td>United Parcel Service</td>
<td>ups.us</td>
<td>Air Freight &amp; Logistics</td>
<td>95.9</td>
<td>109.2</td>
<td>16.1</td>
<td>18.8</td>
<td>10.0</td>
<td>2.9</td>
<td>57.0</td>
</tr>
<tr>
<td>Honeywell International Inc</td>
<td>HON.US</td>
<td>Industrial Conglomerates</td>
<td>88.2</td>
<td>116.0</td>
<td>13.8</td>
<td>17.4</td>
<td>11.2</td>
<td>2.1</td>
<td>26.4</td>
</tr>
<tr>
<td><strong>Info Tech</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td>AAPL</td>
<td>Technology Hardware, Storage &amp; Internet Software &amp; Services</td>
<td>607.3</td>
<td>112.7</td>
<td>8.9</td>
<td>13.7</td>
<td>6.5</td>
<td>2.0</td>
<td>50.2</td>
</tr>
<tr>
<td>Google</td>
<td>GOOGL</td>
<td>Internet Software &amp; Services</td>
<td>549.8</td>
<td>815.0</td>
<td>4.7</td>
<td>23.9</td>
<td>13.1</td>
<td>N/A</td>
<td>24.0</td>
</tr>
<tr>
<td>Microsoft Corp</td>
<td>MSFT</td>
<td>Software</td>
<td>447.5</td>
<td>57.4</td>
<td>5.6</td>
<td>19.9</td>
<td>11.0</td>
<td>2.7</td>
<td>35.5</td>
</tr>
<tr>
<td>Facebook</td>
<td>FB</td>
<td>Internet Software &amp; Services</td>
<td>367.4</td>
<td>128.0</td>
<td>22.3</td>
<td>32.4</td>
<td>20.3</td>
<td>N/A</td>
<td>26.4</td>
</tr>
<tr>
<td>Alibaba</td>
<td>BABA</td>
<td>Internet Software &amp; Services</td>
<td>268.8</td>
<td>107.7</td>
<td>32.5</td>
<td>32.9</td>
<td>26.0</td>
<td>N/A</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Materials</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHP Billiton Ltd</td>
<td>BHP.AU</td>
<td>Metals &amp; Mining</td>
<td>82.8</td>
<td>21.5</td>
<td>23.2</td>
<td>29.7</td>
<td>8.1</td>
<td>2.7</td>
<td>57.0</td>
</tr>
<tr>
<td>BASF</td>
<td>BAS.GY</td>
<td>Chemicals</td>
<td>75.6</td>
<td>73.3</td>
<td>8.0</td>
<td>16.1</td>
<td>8.3</td>
<td>4.0</td>
<td>61.6</td>
</tr>
<tr>
<td>Saudi Basic Ind.</td>
<td>SABIC.AB</td>
<td>Chemicals</td>
<td>66.8</td>
<td>83.5</td>
<td>16.3</td>
<td>15.9</td>
<td>7.6</td>
<td>4.8</td>
<td>32.2</td>
</tr>
<tr>
<td>Rio Tinto</td>
<td>RIO.AU</td>
<td>Metals &amp; Mining</td>
<td>61.1</td>
<td>50.1</td>
<td>17.4</td>
<td>18.7</td>
<td>7.3</td>
<td>6.0</td>
<td>44.6</td>
</tr>
<tr>
<td>Dow Chemical</td>
<td>DOW.US</td>
<td>Chemicals</td>
<td>58.9</td>
<td>52.2</td>
<td>3.4</td>
<td>14.9</td>
<td>8.3</td>
<td>3.5</td>
<td>55.4</td>
</tr>
</tbody>
</table>
SECTOR SNAPSHOT – TOP 5 COMPANIES BY MARKET CAP (CONTINUED)

As of 09/23/2016

<table>
<thead>
<tr>
<th>Company name</th>
<th>Ticker</th>
<th>Industry</th>
<th>Mkt Cap (US$ Bn)</th>
<th>Price (Local)</th>
<th>P/E 2016E</th>
<th>EV/EBITDA 2016E</th>
<th>Div Yield % 2016E</th>
<th>ESG Disclosure Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China Mobile</td>
<td>941.HK</td>
<td>Wireless Telecommunication Ser</td>
<td>254.3</td>
<td>96.4</td>
<td>13.3</td>
<td>15.6</td>
<td>2.8</td>
<td>45.7</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>T</td>
<td>Diversified Telecommunication</td>
<td>254.0</td>
<td>41.3</td>
<td>24.5</td>
<td>14.4</td>
<td>7.0</td>
<td>51.4</td>
</tr>
<tr>
<td>Verizon</td>
<td>VZ</td>
<td>Diversified Telecommunication</td>
<td>214.3</td>
<td>52.6</td>
<td>17.5</td>
<td>13.5</td>
<td>7.0</td>
<td>32.1</td>
</tr>
<tr>
<td>Ntt Docomo Inc</td>
<td>9437.jp</td>
<td>Wireless Telecommunication Ser</td>
<td>102.6</td>
<td>2617.0</td>
<td>6.7</td>
<td>14.8</td>
<td>3.1</td>
<td>51.7</td>
</tr>
<tr>
<td>Nippon Telegraph</td>
<td>9432.jp</td>
<td>Diversified Telecommunication</td>
<td>98.1</td>
<td>4727.0</td>
<td>-1.1</td>
<td>12.3</td>
<td>2.5</td>
<td>44.6</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nextera Energy</td>
<td>NEE.US</td>
<td>Electric Utilities</td>
<td>58.6</td>
<td>126.8</td>
<td>24.7</td>
<td>20.5</td>
<td>11.4</td>
<td>23.8</td>
</tr>
<tr>
<td>Duke Energy</td>
<td>DUK</td>
<td>Electric Utilities</td>
<td>56.9</td>
<td>82.5</td>
<td>19.3</td>
<td>18.0</td>
<td>10.8</td>
<td>63.0</td>
</tr>
<tr>
<td>National Grid</td>
<td>NG/ LN</td>
<td>Multi-utilities</td>
<td>52.5</td>
<td>1074.5</td>
<td>18.0</td>
<td>17.0</td>
<td>11.3</td>
<td>34.3</td>
</tr>
<tr>
<td>Southern Co</td>
<td>SO.US</td>
<td>Electric Utilities</td>
<td>52.4</td>
<td>53.5</td>
<td>18.2</td>
<td>18.7</td>
<td>11.4</td>
<td>31.7</td>
</tr>
<tr>
<td>Dominion Resources</td>
<td>D.US</td>
<td>Multi-utilities</td>
<td>48.2</td>
<td>77.0</td>
<td>17.2</td>
<td>20.4</td>
<td>13.5</td>
<td>17.7</td>
</tr>
</tbody>
</table>

Source: Bloomberg. The securities in each sector represent the largest companies by market cap in the MSCI ACWI in their respective sectors. Sector classification is based on GICS methodology. Equity characteristics: P/E, EV/EBITDA and Dividend Yield are based on Bloomberg consensus estimates for stated period.

GDP / CONSUMER PRICE INFLATION / RATES

<table>
<thead>
<tr>
<th>Region/Countries</th>
<th>Real GDP (% YoY)</th>
<th>CPI (% YoY)</th>
<th>Official Rates</th>
<th>Long Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>2.4</td>
<td>1.5</td>
<td>2.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Euro Area</td>
<td>1.5</td>
<td>1.5</td>
<td>1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Japan</td>
<td>0.6</td>
<td>0.6</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>UK</td>
<td>2.2</td>
<td>1.7</td>
<td>0.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Australia</td>
<td>2.3</td>
<td>2.9</td>
<td>2.8</td>
<td>1.5</td>
</tr>
<tr>
<td>China</td>
<td>6.9</td>
<td>6.5</td>
<td>6.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Brazil</td>
<td>-3.7</td>
<td>-3.3</td>
<td>1.0</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>7.4</td>
<td>7.5</td>
<td>7.7</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Source: Bloomberg. Estimates are composite of Bloomberg contributor estimates.
*Italicized text represents actual data.
** India fiscal year runs to March 31.

MONETARY POLICY

<table>
<thead>
<tr>
<th></th>
<th>Sep-16</th>
<th>Mar-15</th>
<th>Sep-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary Base growth  (YoY)</td>
<td>-6.3%</td>
<td>-3.8%</td>
<td>0.4%</td>
</tr>
<tr>
<td>M-2 growth (YoY)</td>
<td>7.6%</td>
<td>6.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Money multiplier (M-2/mon base)</td>
<td>3.3</td>
<td>3.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Velocity of money (GDP/M-2)</td>
<td>2Q16</td>
<td>2Q15</td>
<td>2Q14</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>1.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Bank of St. Louis
KEY ECONOMIC CHARTS

C&I Loan Growth (%)

Source: Federal Reserve Bank of St. Louis

NFIM Small Business Optimism Index

Source: Bloomberg

US Treasury Yield Curve

Source: Bloomberg

Production Employees Average Hourly Earnings

Source: Federal Reserve Bank of St. Louis

University of Michigan Survey of Consumer Sentiment

Source: Bloomberg

ISM Manufacturing Purchasing Managers Index

Source: Bloomberg

US Initial Jobless Claims

Source: Bloomberg
Global Market Strategy
Regional and Sector Strategy: September Update

By Michael Geraghty, Global Equity Strategist, Cornerstone Capital Group

Maintain a Cautious Sector Strategy. The majority of sectors continued to experience downward revisions to estimates, so that expectations are for just lackluster earnings growth. Most valuations remain unattractive. Telecom is still our sole Overweight sector. We upgraded Utilities to Neutral from Underweight reflecting the lagging stock price performance of the sector, but we stick with our Underweight of two other defensive sectors — Consumer Staples, Health —as they underperformed the MSCI ACWI by a lesser margin last month.

Regional Strategy Still Selective. Russia and Australia, our only two Overweights, continue to enjoy the favorable combination of rising earnings estimates and attractive valuations.

Summary of report originally published September 6, 2016.
Global Sector Research
Women in an Automated World

By Sebastian Vanderzeil, Global Thematic Research Analyst, and Fiona Ewing, Associate Analyst

Increasing automation will change the composition of the US workforce. 49% of workers are in professions that face a high risk (greater than 70% probability) of computerization, defined as automation by computer-controlled equipment. 32% of US workers are in professions that face a very high risk (greater than 90%).

Women face greater risk of job loss due to computerization, and “lower risk” jobs typically dominated by women pay less than low risk male-dominated jobs. Our analysis revealed that women hold nearly 60% of jobs facing very high risk of computerization. Women also hold a greater percentage of jobs in very low risk professions (less than 10% chance of automation); the median annual income of those jobs is $27,000 less than that for low risk men’s jobs.

Developing “non-computerizable” skills minimizes exposure to automation risk over the long term and enables migration towards emerging sectors. Programs aiming to develop social and critical thinking skills offer a way for women to transition to lower risk jobs and access low risk male-dominated STEM fields.

There are a range of options available to investors who wish to influence this trend. Education technology (EdTech) funds and gender lens investing offer opportunities to investors concerned with the potential impact of automation on women. We offer a brief overview of the relevant investment approaches.

Figure 1: Computerization risk categories by gender in the US

Source: Frey and Osborne, Bureau of Labor Statistics, Cornerstone Capital Group

What Is Driving the Conversation?

The World Economic Forum (WEF) forecasts that two-thirds of jobs lost globally to disruptive changes in technology from 2015 to 2020 will be concentrated in the Office and Administrative job family. Women occupy 72.2% of office and administrative support positions in the United States. We sought to understand whether current trends in automation can be expected to impact men and women differently across the US economy.

Oxford University’s Carl Benedikt Frey and Michael A. Osborne published a study in 2013 that assigned 702 US occupations a probability of computerization (stated as between 0 and 1), with computerization defined as job automation by computer-controlled equipment. Thresholds of 0.3 and 0.7 were used to differentiate between low, middle and high risk occupations. Occupations from each risk category are shown in Figure 2 below.

Figure 2: Oxford study – risk of computerization

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Probability of computerization (0-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Risk Jobs (&lt;0.3)</strong></td>
<td></td>
</tr>
<tr>
<td>Registered nurse</td>
<td>0.009</td>
</tr>
<tr>
<td>Mechanical engineer</td>
<td>0.011</td>
</tr>
<tr>
<td>Kindergarten teacher</td>
<td>0.15</td>
</tr>
<tr>
<td>Financial analyst</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Middle Risk Jobs (0.3-0.7)</strong></td>
<td></td>
</tr>
<tr>
<td>Actor</td>
<td>0.37</td>
</tr>
<tr>
<td>Customer service representative</td>
<td>0.55</td>
</tr>
<tr>
<td>Maintenance and repair worker</td>
<td>0.64</td>
</tr>
<tr>
<td>Janitor and cleaner</td>
<td>0.66</td>
</tr>
<tr>
<td><strong>High Risk Jobs (&gt;0.7)</strong></td>
<td></td>
</tr>
<tr>
<td>Bartender</td>
<td>0.77</td>
</tr>
<tr>
<td>Security guard</td>
<td>0.84</td>
</tr>
<tr>
<td>Waiter and waitress</td>
<td>0.94</td>
</tr>
<tr>
<td>Cashier</td>
<td>0.97</td>
</tr>
</tbody>
</table>


The Automation Risk Landscape

We collected data on total employment and gender distribution for the 702 US jobs examined in the Oxford study to determine the number of working men and women in each occupation. We then summed these results across the low, middle and high risk categories. Figure 3 below captures the distribution of US employment across these three categories by gender.
Figure 3: Risk of computerization by gender in the US – three categories

We found that high risk jobs are evenly distributed between men and women overall. Men and women hold 49.5% and 50.5%, respectively, of the 65.2 million jobs across 319 high risk occupations. Significantly, these 65.2 million high risk jobs account for 49% of total US employment.

We then disaggregated the 702 occupations into five categories to see how greater granularity would affect the profile of automation risk:

- Very low risk (<0.1)
- Low risk (0.1 – 0.3)
- Medium risk (0.3 – 0.7)
- High risk (0.7 – 0.9)
- Very high risk (>0.9)

The results are shown in Figure 4.

Our analysis yielded several noteworthy results. At a broader level, 42.5 million, or nearly a third of the 132.7 million jobs included in our study, fall in the very high risk category. We also found that jobs dominated by women are relatively more concentrated at either end of the risk spectrum. Critically, women hold almost 60% of the jobs facing very high risk of computerization in the US. This equates to 7.8 million more women than men who face a very high risk of job displacement through computerization.
In addition, women have a labor force participation rate of 56.8%, which is lower than the 69.2% rate for men.\footnote{FRED Research - https://fred.stlouisfed.org/series/LNS113000002} The fact that women hold 60% of the very high risk jobs despite there being fewer women than men in the labor force suggests that the risk of automation to employed women is substantial.

\textbf{Figure 4: Risk of computerization by gender in the US – five categories}

![Chart showing the risk of computerization by gender in the US with five categories: Very Low Risk (<0.1), Low Risk (0.1-0.3), Medium Risk (0.3-0.7), High Risk (0.7-0.9), and Very High Risk (>0.9). The chart shows that women have a higher percentage in the Very Low Risk category and a lower percentage in the Very High Risk category compared to men.]

Source: Frey and Osborne, Bureau of Labor Statistics, Cornerstone Capital Group

Women’s high risk jobs are concentrated in the office and administrative support sector, while transportation and logistics and production occupations comprise the bulk of high risk jobs held by men. It is reasonable to expect that occupations with the highest probability of computerization will be automated first. We see this playing out as a nascent office and administration automation sector followed by a growing transportation automation movement.

A potential counterbalance to the higher percentage of women in the very high risk category is the higher percentage of women in the very low risk category. However, our analysis shows that female-dominated jobs\footnote{We define female- and male-dominated occupations as those in which women account for more or less than 50% of employment, respectively.} with a low risk of computerization do not pay as well as those mainly held by men. The average income levels of these very low risk jobs are plotted in Figure 5.
The $55,700 median annual wage of the lowest risk female-dominated occupations is $27,000 less than that of the lowest risk male-dominated jobs, and the $59,600 mean annual wage is $37,000 less. These discrepancies in earnings potential of 32.7% and 38.4%, respectively, suggest that female workers are not seeing the same benefit as men of holding a low risk job.

Enhancement vs. Displacement

A common assertion is that automation will enhance labor rather than displace it. In the context of gender, however, this argument is less convincing. The WEF’s 2016 “The Future of Jobs” report assesses the impact of disruptive technologies on global employment, and notes that “while men will see approximately one job gained for every three lost over the next five years, women face more than five jobs lost for every one gained.” Future employment is unknown, of course, and the WEF’s view of net job losses for men and women may not transpire, particularly if new needs and industries arise as technology develops.

Nonetheless, this analysis suggests not only that overall employment gains due to technological advancement are not expected to outpace losses, but that women will be disproportionately affected. Our analysis indicates that the enhancement trend holds for occupations in the low risk category. We note, however, that these occupations are often dominated by men. Following Watson’s appearance on Jeopardy in 2011, IBM partnered with Cleveland Clinic to develop WatsonPaths and Watson EMR Assistant, technologies that enhance physician interaction with data and electronic medical records. Our study shows that 62.1% of physicians and surgeons are men, and the Oxford study assigns this occupation a very low risk of computerization. Conversely, medical transcriptionists, 87.6% of whom are women, face high risk.
Similarly, lawyers face a very low risk of computerization and are seeing their profession enhanced by technologies that streamline document collation. Kira Systems is operating in this “e-discovery” space and has developed contract analysis software now being used by firms such as Deloitte and Chapman and Cutler. Currently, 65.5% of lawyers are men while 85.3% of paralegals and legal assistants are women. Paralegals and legal assistants were assessed as facing very high risk of computerization.

Figure 6 features complementary occupational pairings exhibiting this trend.

<table>
<thead>
<tr>
<th>Low risk job</th>
<th>Percent women</th>
<th>Probability of computerization</th>
<th>Complementary high risk job</th>
<th>Percent women</th>
<th>Probability of computerization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician and surgeon</td>
<td>37.9%</td>
<td>0.005</td>
<td>Medical transcriptionist</td>
<td>87.6%</td>
<td>0.89</td>
</tr>
<tr>
<td>Lawyer</td>
<td>34.5%</td>
<td>0.035</td>
<td>Paralegal and legal assistant</td>
<td>85.3%</td>
<td>0.86</td>
</tr>
<tr>
<td>Chief executive</td>
<td>27.9%</td>
<td>0.015</td>
<td>Executive secretary and administrative assistant</td>
<td>94.5%</td>
<td>0.86</td>
</tr>
<tr>
<td>Chef and head cook</td>
<td>19.6%</td>
<td>0.10</td>
<td>Waiter and waitress</td>
<td>70.1%</td>
<td>0.94</td>
</tr>
<tr>
<td>Financial analyst</td>
<td>43.0%</td>
<td>0.23</td>
<td>Bookkeeping, accounting and auditing clerk</td>
<td>89.8%</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Source: Frey and Osborne, BLS, Cornerstone Capital Group

Alternative solutions must be identified if workforce migration toward low and medium risk occupations is to keep pace with ongoing technological advancement. Otherwise, the already significant number of US workers facing high risk of automation may continue to grow.

Are “Non-Computerizable” Skills the Answer?

The Oxford study uses a task model to analyze the skills and tasks required of each occupation with respect to “computerization bottlenecks.” These are technological limitations not yet surpassed but that could greatly increase the scope of automation once overcome. The three bottlenecks identified are:

- perception and manipulation;
- creative intelligence; and
- social intelligence.
The WEF has assessed the top ten skills needed to succeed in 2015 and 2020, as shown in Figure 7.

**Figure 7: Top ten skills – 2015 and 2020**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Complex problem solving</td>
<td>Complex problem solving (-)</td>
</tr>
<tr>
<td>2</td>
<td>Coordinating with others</td>
<td>Critical thinking (+2)</td>
</tr>
<tr>
<td>3</td>
<td>People management</td>
<td>Creativity (+7)</td>
</tr>
<tr>
<td>4</td>
<td>Critical thinking</td>
<td>People management (-1)</td>
</tr>
<tr>
<td>5</td>
<td>Negotiation</td>
<td>Coordinating with others (-3)</td>
</tr>
<tr>
<td>6</td>
<td>Quality control</td>
<td>Emotional intelligence (new)</td>
</tr>
<tr>
<td>7</td>
<td>Service orientation</td>
<td>Judgment and decision making (+1)</td>
</tr>
<tr>
<td>8</td>
<td>Judgment and decision making</td>
<td>Service orientation (-1)</td>
</tr>
<tr>
<td>9</td>
<td>Active listening</td>
<td>Negotiation (-4)</td>
</tr>
<tr>
<td>10</td>
<td>Creativity</td>
<td>Cognitive flexibility (new)</td>
</tr>
</tbody>
</table>


*Numbers indicate move in ranking compared to 2015 and signs/color indicate up or down.

We relate these skills to our assessment by noting that female-dominated low risk occupations tend to require a greater degree of empathy and social intelligence. For instance, speech-language pathologist, preschool and kindergarten teacher, registered nurse and occupational therapist are among the ten low risk jobs with the highest percentage of female employment.

By contrast, male-dominated professions with a low risk of computerization are mainly in the Science, Technology, Engineering and Mathematics (STEM) field and call upon creative intelligence to a greater extent. The domination of STEM by men is a concern, with the WEF reporting: “Given women’s low participation in STEM professions, one of the fastest-growing areas of job creation, women stand to gain only one new STEM job for every 20 lost across other job families, whereas the ratio for men is one new job for every four lost elsewhere.”

Consequently, many efforts are currently aimed at reversing this trend and increasing women’s participation in STEM. We note, however, that STEM education should ideally begin at an early age, and that not everyone can dedicate the time and resources needed to pursue a career in this field. Additionally, not everyone can be expected to take an interest in STEM.

We therefore see value in teaching skills that facilitate entry into a broader range of low risk professions. Educational programs that teach non-computerizable skills offer an alternative to programs that teach coding. We believe workers can prepare for technology’s increased presence in the workplace by developing this increasingly important skillset.

**Next Steps for Investors**

*We thank Craig Metrick, CAIA, and Jennifer Leonard, CFA, for their contributions to this section.*

Investors seeking to mitigate the impact of automation on women have a number of options available to them.
Investing in EdTech funds

Some education technology (EdTech) investment opportunities focus on STEM and/or women’s education, while others promote the development of ‘non-computerizable’ skills that ease the transition to lower risk jobs outside of STEM. Even those EdTech funds not focused solely on women’s education or STEM subjects could offer investors the opportunity to generate returns while actively preparing women for careers in STEM and other low risk jobs.

Because the EdTech sector is in an early stage of its life cycle, funds tend to concentrate on the venture stage of investing. As such, EdTech funds tend to be riskier than those focused on more established sectors. There are venture capital funds focused exclusively on EdTech, as well as those that look at technology or social impact areas (education, health/wellness) more broadly.

Gender Lens Investing

Another option is the use of a gender lens for investments. Gender lens investing evaluates opportunities according to objectives that may include:

- increasing access to capital for female entrepreneurs and businesses that have women in leadership positions;
- promoting gender equity in the workplace by investing in private sector companies with leading gender policies that also extend across their supply chains;
- supporting proxy votes and shareholder campaigns related to diversity and human capital issues that may benefit women in the workplace; and
- increasing the number of products and services that benefit women and girls by directing capital to socially responsible businesses developing these products and services.

Philanthropic Investment Opportunities

Another category of investments that could be of interest to those looking to mitigate the effect of automation is philanthropic investing, which tends to produce concessionary returns but generate significant impact. One example would be investments that fund organizations providing skills retraining to displaced workers. Though returns on these investments may be below market rate, investors have the potential to create significant impact for workers, especially women, displaced by automation. In addition, philanthropic organizations can receive tax benefits for so-called program-related investments (PRIs).

Investors should seek out investment advisors to help them identify specific investments in their focus areas of interest that align with their financial objectives.
Thematic Research

Continued tracking of these issues through thematic research is important given ongoing trends in automation and their potential impact on women. For instance, our report on the factors and technologies driving automation in the Quick-Service Restaurant sector offers insight into our finding that food preparation and service workers, 63.4% of whom are women, face very high risk of computerization.

Sebastian Vanderzeil is a global thematic research analyst with Cornerstone Capital Group. He holds an MBA from New York University’s Stern School of Business. Previously, Sebastian was an economic consultant with global technical services group AECOM, where he advised on the development and finance of major infrastructure across Asia and Australia. Sebastian also worked with the Queensland State Government on water and climate issues prior to establishing Australia’s first government-owned carbon broker, Ecofund Queensland.

Fiona Ewing recently completed an internship in the Research department of Cornerstone Capital Group, where she produced this original report while contributing to another major project. She is a rising senior at Dartmouth College, where she is pursuing a bachelor’s degree in Economics with a minor in Chinese. Previously she interned with Clarion Partners, focusing on strategy and research.
Global Sector Research
Cornerstone Contributes to FAIRR’s Investor Case Studies Report

By Michael Shavel, Global Thematic Research Analyst, Cornerstone Capital Group

The Farm Animal Investment Risk & Return (FAIRR) Initiative has issued a second booklet of case studies that showcases how leading investors and investment service providers from around the world are integrating issues relating to factory farming into their investment processes. Cornerstone’s Michael Shavel was asked to contribute to the booklet regarding his work on antibiotics and animal farming. Other featured investors include ACTIAM, Australian Ethical investment, Coller Capital, IFC, New Crop Capital and Robeco Institutional Asset Management. Below we offer an excerpt from the FAIRR report, which can be accessed in full here. A summary of Cornerstone Capital Group’s October 2015 report can be accessed here.

Michael Shavel, Cornerstone’s Global Thematic Analyst, explained to FAIRR that clients and prospects are increasingly asking about sustainability issues related to intensive farming. He said, “It is an important issue that is moving from the niche to the mainstream. Some clients are concerned that there are serious health issues potentially connected to the factory farming model and they want to know how they can align their portfolios with their concerns, or make sure they don’t own companies that are ignoring these issues”.

Assessing Managers

On behalf of its investment management clients, Cornerstone Capital Group performs due diligence on managers, evaluating both their financial performance and the degree to which they incorporate ESG factors into investment strategies.

For clients with a focus on animal welfare and factory farming, the firm leverages its research to include questions related to these topics into the manager due diligence process. Shavel explains, “Where relevant, we ask portfolio managers questions on areas such as the food safety supply chain to get a sense of whether they take these issues seriously. It becomes clear pretty quickly whether they have considered intensive farming issues without any depth”. For example, if the manager owns a poultry producer, Cornerstone will ask how that manager thinks about the development of the antibiotic-free chicken market and what impact it might have on margins and future market share.

Antibiotics and Animal Health

One of Cornerstone’s flagship reports and work streams has been their thesis on antibiotics and animal health. In brief this argues:

- That antibiotic resistance is a growing concern and that the misuse and overuse of the drugs in animal agriculture is one of the drivers;
- That a confluence of regulatory action (see table) and heightened consumer awareness is exerting pressure on livestock producers to reassess their usage of antibiotics; and
• That there is both investment risk for those companies ignoring this trend and investment opportunity – for example in a number of other specialty and nutritional feed additives that are utilized for similar purposes.

Shavel elaborates on this theory, pointing to growing consumer demand for meat and poultry raised without the routine use of antibiotics. Market research firm IRI, he notes, found that in the year up to 25 Jan 2015 sales of antibiotic-free chicken increased 25% in dollar terms to 11% of overall chicken sales in the US.

This changing consumer demand, and changing regulation presents significant near-term and long-term risk to earnings for some animal-health companies. And Shavel points to US poultry producers Sanderson Farms as an example of a company that has so far resisted the industry’s moves to curb antibiotic use.

Turning Risk into Opportunity

Cornerstone’s research argues that as nutritional feed additives are generally produced by major chemical companies and sit as only a small portion of overall revenues, investors should look to companies with more concentrated exposure to prebiotic and probiotic feed additives for a chance of good returns. Shavel points to companies like Danish biotech firm Novozymes, who recently partnered with Adisseo to develop a new probiotic product for poultry that could act as an alternative to using antibiotics as a growth promoter. “It’s important to watch these companies,” says Shavel, “because if the data around some of their products is compelling it could be scaled up and really move the needle for a business of their size.” Cornerstone has also highlighted other areas of potential opportunity such as vaccines and biosecurity – i.e. alternative processes, systems or products that can help replace antibiotics and reduce the chances of an infectious disease being carried on farms.

Beyond Antibiotics

Shavel acknowledges that the overuse of antibiotics is not the only ESG issue associated with factory farming, but says that Cornerstone has yet to do in-depth research on other factors such as environmental damage. “On a personal level,” he adds, “it’s clear to me that advances like antibiotics have enabled factory farming to be one of the primary methods for feeding the world but that some rethinking of intensive farming is going to need to come into play”.

Antibiotics and Animal Welfare

Shavel also points to the complex, ongoing discussion on the relationship between antibiotics and animal welfare. He says, “We’ve observed consumers campaigning for ‘no antibiotics for animals ever.’ But when engaging with companies on this we also hear the argument that antibiotics are necessary to treat certain types of disease (even on less intensive/non-factory farms), and refusing to treat sick animals wouldn’t be consistent with animal welfare obligations. Thus there is an important nuance, says Shavel, between slogans such as ‘no antibiotics ever’ and investors’ calls for an end to the routine use of antibiotics important to human health in their global meat and poultry supply chains.

The FAIRR Initiative is a collaborative investor network. It aims to raise awareness of the material impacts that factory farming can have on investment portfolios and works to help investors share knowledge and form collaborative engagements on issues related to factory farming.

Michael Shavel is a Global Thematic Analyst at Cornerstone Capital Group. He is responsible for researching industries, companies and trends in the field of sustainable finance. Prior to joining the firm, Michael was a Research Analyst on the Global Growth and Thematic team at AllianceBernstein where he covered the energy, industrials, and materials sectors. He holds a B.S. in Finance from Rutgers University and is a CFA Charterholder.
Corporate Governance
To “B” or Not to “B”: The Power of Corporate Form

By Suz Mac Cormac, Corporate Counsel and Partner, Morrison & Foerster

Corporate form has the power to effect significant and desperately needed change. The magnitude of the crises impacting our world, and particularly our country, is certainly not disputed — by liberals or conservatives, men or women, African Americans or White Anglo-Saxon Protestants, members of the 1% or the working poor. The nature of such crises is also not in doubt — the fact that the climate is changing and negatively impacting the environment, the fact that there is a wider gap between rich and poor in this country than at any time since 1929, the fact that there is a sweeping tide of gun violence and the fact that recurring overt and covert discrimination necessitates the “Black Lives Matter” movement and catalyzed the bathroom laws of my home state of North Carolina.

But I believe the contrived or real debate over the causes (e.g., is climate change man made? Does current tax policy exacerbate income disparity? Does increased violence argue for more or less access to fire arms? Is safety for children greater with birth-gender-imposed restroom legislation?) and potential solutions has stymied action. Our government is currently too divided and therefore ineffective at addressing the problems. And even if our government was more functional, the private sector can arguably be much more successful in effecting needed change.

Because I have been a corporate lawyer for 23 years, I turn to the corporate form. Sure, the term does not sound sexy or even remotely interesting to anyone outside of the world of lawyers, bankers and a few enlightened business people. But corporate form serves as the very backbone of our society, shaping the actions of the most powerful institutions of our time (corporations) and providing the functional framework for the behavior of virtually all men and women who work around the world. Therefore, I believe that corporate form can be a very effective extra-governmental tool for solving the crises.

In describing the power of corporate form, let me start by debunking three myths from the world of corporate form perpetuated in the popular press (and even by reporters who typically check their facts at The Economist and New York Times).

- The existing primary corporate form — the corporation — is not “broken.” The corporation can serve in its current form as tool for change.
- The “B Corporation” is not a new corporate form. “B Corp” is a certification mark — and there are many others.
- The new corporate forms come in many shapes and sizes. There is no one form of “benefit corporation,” and advocates of other forms are really crap at marketing and promotion.

The Corporation Is Not “Broken”

From someone who has spent years studying and drafting new corporate forms, this smacks of sacrilege. But it is true. The current debate about form features Lynn Stout and others on one side claiming that shareholder primacy is a myth, with Adolph Berle, Merrick Dodd and others on the other side citing Milton Friedman and opining that corporations must consider shareholders’ primacy to the exclusion of almost all else. There are, of course, elements of truth
to both arguments. Most corporate lawyers agree that
drive to maximize shareholder value is as much a
reaction to legal and economic factors (e.g., quarterly
reporting and heavy utilization of stock options in
compensation for management) as it is a result of the
corporate form itself. In normal operations (outside of
sales, mergers or changes of control), boards and
management can look to the long-term best interests
of the corporation and its shareholders without
enhanced risk. In general, their decisions are protected
by the business judgment rules that provide an added
layer of defense against liability (shifting the burden of
proof in litigation) so long as they do not breach their
fiduciary duties of care and loyalty.

However, I agree that the “extra-form” forces are
powerful and entrenched. In fact, we all look to share
price as the primary, if not sole, measure of a
corporation’s worth and success. Every manager wants
to “beat the Street,” and their compensation usually, in
large part, depends on winning that battle. Further,
board members are often correctly counseled that
actions which do not yield stronger short-term profits
or which are out of step with others in their industry
can yield greater liability. While more corporations are
at least considering environmental, social and
governance (ESG) factors in decision-making, only
events like the Enron debacle or the BP oil spill prompt
significant shifts in corporate action.

Constituency Statutes
In response to the focus on short-term profitability,
prior to the advent of new corporate forms,
proponents of “impact” or “double/triple/quadruple”
bottom line approaches, including B Labs, advocated
the use of constituency statutes for social enterprises.
Many states adopted constituency statutes in the wake
of the hostile takeovers in the 1980s. Such statutes stipulate that boards and management “may” or
“shall” consider a laundry list of factors other than
shareholder value when considering an offer by a third
events like the Enron or the BP oil spill prompt
significant shifts in corporate action.

Constituency Statutes
In response to the focus on short-term profitability,
prior to the advent of new corporate forms,
proponents of “impact” or “double/triple/quadruple”
bottom line approaches, including B Labs, advocated
the use of constituency statutes for social enterprises.
Many states adopted constituency statutes in the wake
of the hostile takeovers in the 1980s. Such statutes stipulate that boards and management “may” or
“shall” consider a laundry list of factors other than
shareholder value when considering an offer by a third
party to purchase the company.

While not designed for use by social enterprises,
starting in the early 2000s, companies that wanted to
promote mission relied on these statutes to include
social and/or environmental purposes in their charters
and to craft fiduciary duties of boards and
management in favor of such purposes.

There are numerous flaws in this approach — but I
believe that the primary concern is one of
accountability. Constituency statutes provide no
means of protecting shareholders from misuse by
management of resources devoted to the articulated
purposes. For example, I could form a corporation for
the purpose of combating climate change and
improving employee relations, raise money by selling
shares to the students in my class at Berkeley Law, and
hire Erika Karp as my CEO. If I took all of the profits
and used them to pay for vacations for Erika and her
team on Tahiti on an annual basis, leaving the
company almost destitute, shareholders would have
little way of learning about my actions until after the
fact — and limited grounds to bring a claim to halt my
actions or seek a refund for their investment.

Suffice it to say that the use of constituency statutes
alone is a bad idea — they will not be effective in either
improving shareholder profits or advancing social and
environmental goals. But before examining the new
corporate forms that are available, it is important to
recognize and, for some companies, to adopt the low-
(or no-) risk tools that traditional corporations have
been employing for years to ensure a mission focus.

Tools for Impact with Traditional Forms
Both budding entrepreneurs and established
enterprises can develop and retain an emphasis on
positive social and environmental impact using the
existing corporate forms, particularly corporations,
limited liability companies and limited partnerships.
For corporations in states without constituency
statutes (e.g., Delaware and California), you would be
ill-advised to draft social and/or environmental
purposes into the charter itself given the established
fiduciary duties. However, shareholders can execute
agreements with management whereby the company
will be contractually obligated to emphasize an agreed
mission or public purpose. Classes of shareholders can
require protective provisions in the charter to ensure
that certain corporate actions, including change of
business plan, change of mission and change of
control, can’t be approved without the affirmative vote
of a mission-focused class. Further, operating and
partnership agreements for LLCs and LPs can include
such contractual provisions in addition to waterfall
rights (payouts for distributions and liquidation) that
favor identified non-profits or mission-focused
recipients. In fact, Delaware’s limited liability company statute allows for the possibility of an LLC where duties of the managers to contractually agreed social and/or environmental purposes are equal to — or trump — duties to generate economic returns.

It is also possible to draft limited partnership agreements where limited partners agree with fund managers to donate 1% of profits to a designated charity and/or to accept a lower financial ROI in favor of an “impact” ROI. I am encouraged by a growing trend in the fund world for carry or bonus payments to managers to be structured to pay out based on social/environmental as well as financial performance.

**Tools for Impact in Change of Control**

Notwithstanding these tools, there is an argument, supported by much precedent, that as enterprises scale and increase their intake of outside capital, they often, if not usually, lose their impact focus. First, this is not true for companies whose financial success is directly linked to its mission (e.g., Etsy, Revolution Foods, Sungevity or Bloom). For example, the more that Etsy provides training and support to its Etsy communities, the more members of those communities sell goods via their online platform and the greater the selection and sales to consumers. The more RevFoods educates children on the virtues of nutrition, the greater their sales of healthy, nutritious and delicious school lunches.

Second, for decades many corporations have established non-profits or “.orgs” to house their “impact first” programs and/or facilitate donations from the entity itself and its employees or partners to worthy causes. In recent years, corporations have donated or housed valuable intellectual property, not enough to impact valuation but critical for the business (e.g., a trademark, portion of software or code), in the related non-profit and then licensed the same back to the for-profit operating entity. The license agreement contains a “mission lock” such that if there is a material deviation from mission by the for-profit, the license resets with a higher royalty rate or eventually terminates. Including a mechanism to determine when there has been such a material deviation (usually involving a third-party mediator) is critical. Professor Eric Talley (formerly at Berkeley and now at Columbia Law School) refers to this as my “spurn-out” provision; however, I would argue that if there is financial value in the mission and the relationship with the “.org,” the license may not reduce valuation through sale.

The bottom line is that there are a number of mechanisms available to both public companies and private enterprises that can enable them to focus on long-term objectives as well as environmental, social and governance goals. Therefore, the need for new corporate forms arises because most of these tools are permissive for boards and management instead of mandatory. And it is not possible to underestimate the market forces which encourage, if not demand, short-term profit maximization.

**A “B Corporation” Is Not a New Corporate Form**

A “B Corporation” or “B Corp” is a certification mark — like a “Good Housekeeping” seal of approval or “LEED” certification. B Labs has done a very good job of creating a framework for companies to evaluate their business and operations on ESG factors and to then receive a score or ranking. To become a “B Corp,” such companies then enter into a license agreement with B Labs and pay a licensing fee of between $500 and more than $50,000 depending on the structure of the applicant.

B Labs does review the evaluations and often schedules calls for follow-up questions — but such reviews fall short of a full audit to ensure accuracy and completeness. This means that there have been — and will continue to be — companies that license the “B Corp” mark and are promoted as part of the B Corp community but whose operations do not live up to the standards espoused by B Labs. I believe that this is one
of the reasons for the change in licensing requirements that I describe below.

**When Should a Company Become B Certified?**

Let me offer a few recommendations for companies that are deciding whether or not to become “B Corp” certified. First, you don’t need to hire a consultant or lawyer to help you fill out the questionnaire and become certified. The fact that there is now a cottage industry of “experts” willing to charge high fees to provide such assistance is a sign that B Corps are here to stay. But the B Labs folks have done a good job at making the certification process user-friendly.

The survey can be downloaded, you can use it to determine areas of improvement before submission, and their staff is available to help if and when questions arise.

Second, I strongly advise that management take and score the survey before deciding whether to pursue certification. While years of good work have gone into developing the survey and standards, one area of weakness is that the survey does not divide respondents by industry. This can yield unhelpful results — like a recycling company whose mission is to reduce waste having a lower score (because of carbon emissions among other factors associated with heavy manufacturing) than a developer of social media applications in SoMa, San Francisco (with little output of social value).

Also, the survey was not designed for public companies — so when Etsy went public, quite a bit of work had to be done (and improvements continue to be made) so that publicly listed companies can accurately respond to the questions. Further, acquired companies are not able to retain B Corp status post sale or merger unless the target remains a stand-alone subsidiary (e.g., Plum, New Chapter Vitamins, Ben & Jerry’s) or the acquiring company itself becomes B certified (e.g., Danone/WhiteWave). The issue with the former is obviously that both the survey process and compliance are in the hands of a corporate entity (e.g., Campbell’s, Procter & Gamble, Unilever) that does not have any legal requirement to retain the mission alignment associated with B certification.

Finally, as with any marketing campaign, it is very important to test with all constituents in your market to determine whether and how the B Corp brand will benefit your company.

The vast majority of B Corps are normal C Corporations or LLCs and are not legally required to advance their social and environmental goals. However, I believe that many of these companies (e.g., Etsy, Plum, RevFoods) are at least as mission-aligned as those that employ the new corporate forms (see below). Further, B Labs has, over time, changed the provisions of its license agreement and is now requiring B Corps to change (within a reasonable period of time) their underlying corporate form to the benefit corporation. Unfortunately, there appears to be a failure to recognize that there are effective mechanisms that can require corporations and LLCs to stay true to their impact goals — with enforcement measures that are just as (or more) effective as those afforded to the new corporate forms, including the benefit corporation.

**Other Performance Metrics**

In addition to B certification, there are many other methods for rating a company’s performance based on ESG factors. According to SustainAbility, there are over 110 such rating systems and many include both a description of the ESG factors that should be measured and data to provide a benchmark for measurement. In addition to B Corps, the Global Reporting Initiative (GRI), Sustainalytics and MSCI provide evaluations across the full environmental, social and governance spectrum, while CDP¹ and CarbonTracker focus on measuring carbon emissions and risk.

Most public companies are suffering from disclosure “overload” related to ESG as they are continuously approached by new organizations asking them to complete surveys, provide data and help rate their performance on various social and environmental metrics. Fortunately, the rise of integrated reporting with public companies should, over time, bring needed standardization and rigor to the sector. Key leaders such as the Sustainable Accounting Standards Board, GRI and the International Integrated Reporting Council are identifying the ESG factors by industry that are material to operations and should therefore be disclosed in required reporting for public companies.

¹ Formerly named the Carbon Disclosure Project.
The Bloomberg-Carney Task Force on Climate-Related Financial Disclosures is working to harmonize standards related to climate risk. All of the standard-setters are engaged with the Big 4 accounting firms to provide a framework for disclosure that can be audited or verified. In the United States, the Nasdaq and NYSE have indicated a willingness to follow other stock exchanges from around the world whose listing standards already include — or soon will — certain ESG factors.

The movement toward reporting on material social and environmental factors in a way that can be audited and included with financial reporting to shareholders will certainly represent a big step toward improving accountability for companies around the major environmental and social issues that we face today. Such reporting is also necessary for there to be a shift of the fiduciary duties of boards and management to include ESG goals, as contemplated by the new corporate forms.

The New Corporate Forms Come in Many Shapes and Sizes

The branding genius of B Labs has most people, including ESG practitioners and press, believing that there is only one new corporate form — the benefit corporation. However, in fact, there are several different forms that have been conceived to chart a new path between non-profits (focused exclusively on mission) and for-profits (focused primarily on shareholder value). Further, the benefit corporation form itself varies greatly from state to state; only a few states follow the “model” initially developed by B Labs, and that model itself has been modified substantially and improved over time.

There are two primary elements that are universal to the new forms. First, they all require boards and management to consider social and/or environmental goals in addition to financial returns. Second, at least as of this writing, none of the new forms receive special tax treatment; investments and/or donations to the new corporate forms are not deductible, and revenue earned by the entities is taxed at normal rates.

The Low-Profit Limited Liability Company (L3C)

The first new form to arrive on the scene — the Low-Profit Limited Liability Company or L3C — was written into law in Vermont in 2008. Since the Tax Reform Act of 1969, foundations have been permitted to make program-related investments (PRIs), which are investments in for-profit entities, so long as those investments are for the primary purpose of advancing the foundation’s charitable purpose and not generating financial returns. However, the originators of the L3C noticed that utilization rates for PRIs had remained very low over the four decades since their introduction. The L3C was conceived to address this failure and help non-profits, particularly foundations, deploy greater capital and have greater impact through investment in for-profit entities as an alternative to donations. Specifically, the L3C is a form of limited liability company that requires managers and owners to articulate social and environmental goals and then prioritize such goals over financial returns.

Unfortunately, L3Cs have not garnered widespread support from entrepreneurs or funding from foundations. This is in part because more significant IRS rule changes (anticipated at the time of original conception) have not come to pass to afford special tax treatment for the L3Cs or obviate the need for tax opinion letters. However, new regulations and guidance from the IRS as recently as 2016 have served to further de-risk PRIs (if they were ever in fact risky) and may spur further adoption of PRI investments if not L3Cs. In addition, the L3C form does provide a viable alternative to “mission first” enterprises in the eight states (and two Native American tribes) with L3C legislation. Further, for those of us who practice in states without L3C legislation (particularly California and Delaware), the forms offer good exemplars and ideas for incorporating social and environmental purpose into traditional LLCs.

Social Purpose and Public Benefit Corporations

Whereas the L3C can be viewed as an extension of the non-profit corporation, social benefit and public benefit corporations (SPCs/PBCs) were intended to introduce social and environmental focus to the traditional for-profit corporation. The Flexible Purpose Corporation (renamed Social Purpose Corporation in 2015) was drafted over a two-and-a-half-year period by a non-partisan group of corporate lawyers (of which I was a member) and was first introduced in 2009 in California. In general, the SPC provides a safe harbor — in addition to the business judgement rule — that requires boards and management to emphasize shareholder-agreed social and/or environmental purposes in the charter. In
addition, the SPC differs from a traditional corporation because of the fiduciary duty to the mission (and additional protection to the board and management in promoting the entity’s social and environmental goals), mission protection (two-thirds class vote to change the agreed purpose), increased accountability via reporting, and detailed provisions for conversion, merger, sale and consolidation.

The Social Purpose Corporation, introduced in 2013 and adopted in Delaware in 2015, is substantially similar to the Public Benefit Corporation with only two material exceptions. The PBC requires a broad public purpose in addition to the specified social and/or environmental goals, while the SPC only requires at least one shareholder-agreed social or environmental goal. And the SPC requires greater accountability and reporting than the PBC. B Labs initially supported the SPC before deciding to introduce a second form in California in 2011. Ironically, when B Labs rejected the SPC in favor of the California benefit corporation, it provided an open letter with objections to five provisions of the SPC — and all five provisions are now incorporated into the Delaware PBC. Specifically, the Social Purpose Corporation and the Public Benefit Corporation:

- both have shareholder-agreed social and environmental goals that must be articulated in the charter of the corporation (instead of itemizing all goals in the state statute itself);
- do not require external validation or audit of the reporting to shareholders on the public benefit (the SPC requires that such reporting be in accordance with “best practices” while the PBC allows the board/management to simply describe the standards that have been used for reporting);
- do not have an identified “benefit director” (a feature of benefit corporations in other states) with fiduciary duties that arguably conflict with pre-existing fiduciary duties;
- do not have a “special proceeding” to enforce the social/environmental mission (both provide additional protection from liability for boards and management and rely on traditional corporate enforcement mechanisms, specifically the right of shareholder action for breach of duties and the right to remove directors); and
- both offer dissenters rights on conversion from an existing corporate entity to the new form (allowing shareholders the right to object to the conversion and take action to have their shares redeemed).

Ironically, given that the SPC is often referred to as the “benefit corporation light,” the SPC has more robust reporting requirements than the PBC — with annual reporting for the SPC (as opposed to biannual for the PBC), required reporting to the public as well as shareholders for the SPC (no public reporting for the PBC) and 8-K type reporting for the SPC if there are material changes in between annual reports (no reporting other than biannual for PBC).

Both the SPC and PBC have been designed for use by both small social enterprises and by larger public companies. The first PBC (Laureate Education) filed an S-1 with the SEC to go public in October 2015 (but has yet to list its shares and start trading). A second PBC will result from the closing of the $10.4 billion merger of Danone and WhiteWave Foods.

Finally, both the SPC and the PBC can garner support from liberals and conservatives as an “extra-governmental” solution to the current crises. They can be vehicles for economic growth and job creation in addition to advancing social and environmental goals that are approved by shareholders (as opposed to legislators) and can be in the best interests of the corporation’s long-term financial well-being. When introduced in California, the SPC was the only bill that year that received 100% support from both Democrats and Republicans in the Senate.

The Benefit Corporation

The first benefit corporation was written into the Maryland statute in 2010. Since that time, various versions of benefit corporation legislation have been adopted by 30 states plus the District of Columbia (according to B Labs as of August 2016). Note that many states use different names for the new form – including Benefit Corporation, Public Benefit Corporation (e.g. CO), Social Purpose Corporation (e.g. WA, FL) and Sustainable Business Corporation (e.g. HI). Further confusing the issue is that in some states, the benefit or public benefit corporation is a form of **non-profit corporation** while in others it is a form of **for-profit corporation** (and we are obviously discussing the latter in this article).
It is also important to note that benefit corporations vary greatly state by state and have evolved significantly since first introduced and advocated by B Labs in Maryland and Vermont six years ago. In fact, many are much more similar to the SPC and PBC than to either the first legislation or to the “model” statute promoted by B Labs. However, in general, unlike the PBC and SPC, these statutes bake “goodness” into the legislation — as a benefit corporation, a company’s board and management have a fiduciary duty to a long list of social, environmental and governance goals (borrowed from the “B Corp” certification survey) in addition to financial goals. The successful lobbying efforts of B Labs have made the benefit corporation approach far more prevalent when measured by state adoption (not by company incorporation) — although not in Delaware (or CO, WA, FL). However, it remains to be seen which policy approach will have greater positive impact on the world — companies that have affirmative fiduciary duties to selected social and environmental goals or those that are required to focus on a laundry list of objectives.

In most states, the benefit corporation provisions are an “add on” to the corporations code — not creating a new and distinct legal entity but fashioning a new designation for “normal” corporations. For many states, this has resulted in unintended conflicts between corporate law and benefit corporate law that apply to the same entity. For example, most state benefit corporations have a “benefit director” responsible for oversight and accountability with respect to the public purpose and a requirement of independent verification (which either by design or by default comes courtesy of B Labs for a fee). Corporate law experts often cite a recurring issue state-by-state between the conflicting duties of a benefit director whose new duties must be viewed in light of his or her pre-existing fiduciary duties of care and loyalty to the shareholders. They also point to issues with the “enforcement proceeding,” a feature of most benefit corporation laws, which can yield increased risk and liability for boards and management. It is therefore not a surprise that many benefit corporations have difficulty securing director and officer insurance.

Provided that you have waded through the detail on corporate form above — which is likely at odds with the articles and press releases written by biased advocates of one form or another (many of whom benefit financially from promotion of a certain form) — what does all of this mean for both private social enterprises and for public companies? Should boards and management consider either incorporating as — or converting into — one of the new corporate forms?

Let me stress that I believe requiring all corporations to change form — imposing fiduciary duties on boards and management in favor of shareholder-agreed social and environmental goals — is critical as a tool to address issues ranging from social inequality to climate change. However, we do not yet have an agreed form (much less an agreed name) for the new corporate form — although most experts (myself included) agree that the Delaware Public Benefit Corporation is currently the best model. Further, the weighting of fiduciary duties has not yet been tested in court. In other words, if a company is increasingly profitable in its operations and successful in emphasizing the agreed social or environmental goals, there is little risk of litigation. If, on the other hand, a company becomes unprofitable and therefore must make choices between adherence to the public purpose and financial stability, risks will increase.

So, some concrete advice on whether to adopt a new corporate form (to “B” or not to “B”):

- If the good or service that your company produces has a positive social or environmental impact in and of itself (e.g. solar, education, healthy school lunches), there is much less risk associated with the “weighting” issue above and therefore incorporation/conversion into a new form. For these companies, there is often no trade-off between high profits and high positive social/environmental impact.

- If the good or service that you produce is output-agnostic (e.g. social media application, coffee tables, baseball bats), then you must consider the interplay between the public purpose and your profitability before you convert. This does not necessarily mean there is a trade-off. Positive focus on ESG goals could increase profitability for the maker of baseball bats that emphasizes employee relations and contributes financially to the building of little league parks in underserved communities.

- If you are a start-up and introducing an innovative new product with a new management team, the
new corporate form may be one “new” too many. If you and your board really want to try one of the new forms, I suggest waiting 6-18 months after incorporation, possibly asking your investors to agree to convert to a new form (conversion is easy) after certain milestones are met.

- In all of the cases above, it is critical that you not only get your board to embrace the new form, fully understanding the risks and rewards (not just the latest PR spin), but that your investors are fully comfortable as well. In the early stages, commitment to convert ahead of investor support can significantly increase the likelihood that your venture will fail.

- Your board and investors will need to understand not only the impact of the new fiduciary duties on daily operations but also exits — IPOs and sale transactions (although there are more alternative forms of exits being utilized by social enterprises). We do not yet know how the market will price these new entities (although we are waiting for two concrete examples — Laureate Education and Danone/WhiteWave). There is some evidence that the market will view the public purpose as a net positive, specifically for companies where the product or service produced is good for the environment, community or society. However, this belief faces strong headwinds from mainstream capital markets that have long held that “impact” or focus on social/environmental purpose will necessarily generate lower returns.

- Finally, if your company — with board and shareholder support — is serious about embracing a public purpose and having a positive impact, there are many very effective tools to implement such goals for traditional corporations.

The Power of the Corporate Form

So how can corporate form be such an effective tool for change? And why do we need the new forms? If you believe the statements that I made at the start of this article, then why can’t we just rely on existing forms of corporation, limited partnership and limited liability companies to solve the world’s problems? The short answer is that we can and should. Arguing that all corporations have to convert into new corporate forms in the short-term is essentially letting Corporate America off the hook. If we continue to stress that boards and management have a fiduciary duty solely to maximize short-term shareholder profits, we will miss out on enlisting the most powerful force (multinational corporations) to address the crises that are crippling our country and world. More importantly, we will be doing them a disservice. The combination of climate change, challenges with energy, water and other natural resources and population growth is leading to a world that in 10 or 20 years will be vastly different than it is today. Corporations will have to transform their operations to remain competitive. Ignoring these ESG factors — particularly the risks associated with climate change — is just plain bad business.

I often cite Bob Litterman, formerly of Goldman Sachs and now of Kepos Capital (who does not know that I am a groupie), in describing the intersection between climate risk and business. He explains that we are all in a car headed for a cliff. Most people recognize that the (or “a”) cliff is coming, but no one can confirm with certainty exactly when we will reach it or how precipitous the drop will be. The economic models underlying the operations of all of our corporations (and government policy) are premised on the theory that, if such cliff exists, we will be able to gradually apply the brakes before we commit suicide. However, in fact, because of the unknown variables, it is probable (if not a certainty) that we will need to slam on the brakes. The companies that start modeling the risk associated with the cliff will have a much better chance of avoiding or surviving the fall and thriving through the next several decades.

Unfortunately, for many reasons — including the difficulties associated with assessing the risk, the desire to maintain the status quo, compensation and tax structures — it is taking longer for corporations to appreciate how ESG factors will impact operations. And some of the issues that we are facing today, particularly those borne of climate change and social inequality, require solutions that can generate more immediate results.

We need the new corporate forms (and particularly agreement and promotion of one preferred form) so that we can require the major multinational corporations to identify and actively pursue social and environmental goals instead of merely considering material non-financial factors. We need the new forms so that the next BP oil spill is not just around the
corner. We need the new forms so that shareholders can bring actions against large drug companies if they raise the prices of EpiPens, denying access to the general population.

We need the new forms so that “Black Lives Matter” can translate into educational opportunities for the underserved in our society. We need the new forms so that we can increase the number of women and minorities on boards and in management — and thereby improve productivity — of corporations (and law firms). We need the new forms so that we can hold the managers of privately owned prisons accountable for recidivism rates. And most of all, we need the new forms so that the managers of our corporations are required to look further into the future and take actions to plan for climate change and cybersecurity breaches and artificial intelligence and changes in the labor force — even if such actions are at the expense of short-term shareholder profitability.

Corporate form rocks. And, more importantly, it has the power to effect the change that we desperately need.

Susan Mac Cormac is a partner in the Corporate Department of Morrison & Foerster’s San Francisco office. She serves as co-chair of the Clean Technology + Alternative Energy Group and Private Equity and Venture Investment Practice. Susan has extensive experience representing start-up to late-stage private companies primarily in the clean technology or sustainable space.
If you are thinking about the relationship between technology innovation and global sustainability, what comes to mind most often are rows of solar panels in the Arizona desert or offshore wind turbines off the coast of Denmark. What you don’t typically think of are companies like Feetz (feetz.com), a Tennessee-based startup that uses 3-D printing technology to make custom-fit shoes.

The convergence of online commerce, mass customization, and 3-D printing technology (or what some people refer to as additive manufacturing) is underway, with customized shoes representing the latest model of what surely will be other customized consumer products hitting the marketplace.

While Uber and Airbnb get most of the media attention worldwide in terms of business model innovation, the importance of whether manufacturing in the US and worldwide takes a sustainable business trajectory cannot be overstated. Traditionally, manufacturing is most expensive part of the retail supply chain. Shoes, toys, and many consumer products are manufactured overseas, most notably in China, and shipped as finished products to the United States.

In the case of Feetz, the ordering is done online, where customers can download an app, take smartphone snapshots of their feet and create a 3-D model to be used as a model for their customized shoes. If companies like Feetz are “changing the ways goods are ordered, made and sold,” what are the important sustainability consequences of such business models? Are they positive, negative or something else?

3-D printing or additive manufacturing technology can in theory dramatically reduce the amount of waste created in the manufacturing processes. Like stacking bricks to build a house, additive manufacturing process creates objects in layers without the limiting constraints of molding requirements or human error in welding. The result maximizes material efficiency, ensuring that no material needlessly goes from welder’s torch to junkyard. For context, a typical car wastes about 10,000 kg of raw materials during the manufacturing process.

---

2 Ibid
Unlike traditional large-run manufacturing, the small scale of production typical of most 3-D printing efforts means that the cost of wasted material does not have to be ameliorated through economies of scale. Even in smaller 3-D printing projects, material use efficiency is an automatic consideration, not something to think about as an add-on consideration after the waste is produced or the environmental damage is baked into the product itself (think plastic bags).

Another example in terms of the potential sustainability benefits of 3-D technology can be seen in Shapeways (shapeways.com), a company that allows people to design custom products like furniture and household objects that might be hard to replace and encourages customers to save money by using less material. Companies like Patagonia already prompt their customers whether they truly need to ship their products overnight (since the mode of transportation has such a large impact on the overall sustainability of a product’s supply chain). But Shapeways takes this form of consumer engagement a step further by prompting its customers to actively think about the materials that go into the production of their products.

**Bringing Scale to Hyperlocal**

Since the business model of making as many products as cheaply as possible is still the dominant form (though this is rapidly changing), another innovative, sustainable feature of the additive manufacturing model is that it brings the possibility of scale to the emerging “hyperlocal” trend that can be seen from Northern California to Vermont. There are many emerging sustainable business enterprises that attempt to build on the growing consumer interest in all things local (e.g. food, energy, economic development, etc.) and additive manufacturing provides a market template, at least in theory, from which to scale a local business model to greater competitive advantage.

Ultimately, the argument that the future of the US economy lies in sustainable business has been made before, and additive manufacturing cannot substitute for well-designed tax and other policy incentives for a wide assortment of clean energy and manufacturing research & development, including 3-D printing technology. While the business case for sustainability is strong in the case of additive manufacturing, it remains to be seen whether companies like Feetz are going to transform the business and ultimately how consumers purchase, use, and dispose of shoes.

The potential is there but the story is still evolving and it may be too early to predict the outcome one way or the other. Case in point: Google announced in September 2016 that its Project Ara smartphone initiative, which began in 2013 with the concept of designing a phone platform that would incorporate a wide array of camera, audio and other modules as desired by users, has been suspended.

---

Product modularity, the flip side of consumer customization in many ways, is the key functionality that forces people to throw away perfectly sound electronic products because one small item is not working (for instance, one letter in a keyboard). The key lesson from the Google Project Ara might be that we need to better understand what consumers truly want in terms of product customization. Perhaps Feetz will be successful with 3-D printed shoes — but what about handbags?

Moreover, it is not yet clear the type and scope of market disruption “locavore production,” as Professor Gerald Davis, University of Michigan Business School, calls it, will have on existing firms and economic systems. While many industries will be unable to adapt to the changing 3-D technology-mediated business environment, some firms will find a way to adapt by creating and hosting the tools for locavore production, using their skills to create designs suited for locavore production, or hosting a marketplace for product recipes.6

As Cory Doctorow, author of Makers, suggested in a 2010 Wired magazine article: “The days of companies with names like ‘General Electric’ and ‘General Mills’ and ‘General Motors’ are over. The money on the table is like krill: a billion little entrepreneurial opportunities that can be discovered and exploited by smart, creative people.”7

Jacob Park is Professor of Strategy, Innovation, and Entrepreneurship and Director, Sustainable MBA Program at Green Mountain College. He is also the Kevin Ruble Fellow in Conscious Capitalism, Rutgers University School of Management and Labor Relations. Professor Park specializes in the teaching and research of global environment & business strategy, corporate social responsibility, business ethics, and community-based entrepreneurship & innovation. He is a member of the Renewable Energy and Adaptation to Climate Technologies investment committee of the Nairobi, Kenya-based Africa Enterprise Challenge Fund and serves on the Board of Directors and Chair, Program Committee, of Vermont Businesses for Social Responsibility.

As we once again approach the Jewish High Holidays — “The Days of Awe” — we return to a theme we have touched upon before: the importance of amplifying the voices of progress.

“The Days of Awe” refers to the ten days starting with Rosh Hashanah and ending with Yom Kippur. They are a time for reflection, introspection, repentance and renewal. In the context of capitalism, there can also be “Days of Awe.” Days where market-based approaches deployed to address massive global challenges can help find alternatives to fossil fuels, drive the rebuilding of crumbling infrastructure, support economic inclusion, education, healthcare, and human rights and dignity for those threatened by war, illness and food insecurity.

“The Days of Awe” could bring lessons to leverage the power of capitalism towards its best and highest purpose. Fostering global prosperity can be achieved through a more sustainable form of capitalism – a form of capitalism where leaders must be prepared to engage in a nuanced debate and exchange of ideas that will yield extraordinary resilience.

In reflecting on the future of capitalism, we draw from wisdom of the great scholar Hillel, who was said to not only advance his own thoughts, but those of his opposition. It is in that context that we revisit an article first published in Forbes a couple of years ago: “Sustainable Capitalism... If not now, then when?”

The prominent Jewish scholar Hillel is known to have said “If I am not for myself, then who will be for me? And if I am only for myself, then what am I? And if not now, then when?” These questions posed at around 50 BC are incredibly timely in the context of today’s struggling global economy and threats to our system of capitalism. Indeed, “If not now, then when?”

Today, while the worst appears to be over for the global financial crisis, we witnessed the global economy pile on trillions of dollars in additional debt through quantitative easing, the Eurozone still under siege awaiting cohesive policy and political leadership, and China’s leadership driving a dramatic transition while hoping to maintain enough growth to support the needs of 1.3 billion people. Again, “If not now, then when?”

We live in a world which consumes about 1.5 times the earth’s sustainable level of natural resources each year to support our current consumption patterns. Our population is aging such that the financial burden on the young to care for the old is growing rapidly. The extent of income inequality is dramatically increasing, the US alone has almost 50 million people living in poverty, and almost a billion people around the world don’t have access to clean drinking water. “If not now, then when?”

The time is indeed now. All the pieces are in place to move forward and leverage the extraordinary power of capitalism on behalf of the entire world. We have everything we need across the broad realms of technology, science, academia, economics, government and finance to ensure a better future. We have the opportunity to repair an economic system which remains the greatest vehicle the world has ever known for creating wealth and prosperity. The real question is whether we have the force of will to follow through. In the face of a justified crisis of confidence in capitalism, we must rebuild trust and faith in the system. We can. And now is the time.
To do this though, we need to better acknowledge the shortcomings in our abilities to deal with complex global problems. As did Hillel, we need to pose the hard questions to the right people and to ourselves. We need two things which are currently in deficit. The first is greater transparency into the mission, strategies, objectives and priorities of the world’s private sector companies combined with a regulatory infrastructure which encourages that transparency. The second is a generation of business leaders who are better at facilitating collaboration.

On the subject of transparency, I would argue that many signals now point to the need for more systematic analysis of environmental, social and governance (ESG) factors in the investment processes which drive capitalism. The time is now given that there are one thousand asset management firms representing $30 trillion in assets who need to better understand business decision-making processes associated with the inevitable trade-offs inherent in running a business for the long run. These firms, all signatories of the Principles for Responsible Investing, now have access to more ESG data than ever before. This data can now be housed in the cloud, better analyzed, better assured, and better disseminated through social media by the scores of investors, accountants, consultants, investment banks and academic institutions that are demanding it. This data, which is pivotal to decisions around financial investments as risk and return are analyzed, can now be disclosed in a more coherent and efficient manner now that standards are being established as with the GRI (Global Reporting Initiative) and the Sustainability Accounting Standards Board (SASB). The time is indeed now for better transparency.

With regard to collaboration, the time has also come. As made obvious during the global financial crisis, independent action by individual economic entities working towards their own interests will ultimately fail. “If I am only for myself, then what am I?” Complex problems cannot be solved sequentially. There must be parallel processes, initiatives and perspectives which can ultimately come together to find solutions. There must be a belief that solutions for the whole will ultimately be beneficial for the individual. Collaboration can be encouraged by leaders who are incentivized to truly steward financial, human and natural capital for the long-run. We have indeed begun to see that in the capital markets across the corporate and investment world. Collaboration can be accelerated by embracing diverse perspectives. The imperative and the infrastructure is in place, so “if not now, then when?”

In summary, I argue that the awesome power of capitalism can be unleashed through rebuilding confidence and conviction. Confidence and conviction can be restored through greater transparency and collaboration. Transparency and collaboration will allow for more creativity, innovation, productivity and growth. Obviously all these things are easy to say, but not as easy to execute. In order to actually deliver on the promise, I would suggest that we attack complexity with simplicity as did the scholar Hillel. The simple principle of asking questions is the best starting point. But, to ask them constructively and consistently, and to ask again and again until the answers are forthcoming, is the trick. To elevate consciousness around broad environmental, social and governance factors and then to ask for accountability is essential. We must ask the right questions to the right people. Then we need to insist upon robust answers, comparability and accountability. The future of capitalism can indeed be much brighter if viewed as “a question of questions.”

Erika Karp is the Founder and CEO of Cornerstone Capital Group.
A funny thing happened on the way to the Paris Agreement. On September 18, 2015, just six weeks before the most anticipated UN climate negotiations since Kyoto were slated to begin, the world’s most powerful environmental regulatory agency threw down the gauntlet to the world’s largest automaker. In a scathing Notice of Violation made immediately public, the US EPA detailed shocking allegations of blatant impropriety by Volkswagen, a company that had finally begun flourishing in the lucrative US market under the guise of being “green.” Just as 195 countries were finalizing their individualized commitments to address climate change by reducing emissions, the VW emissions scandal exploded. Environmentalists cheered as the sins of their chief nemesis, multinational corporations, were exposed. Free market proponents huddled up, ready to prove that inconsistent regulatory schemes were all that stood in the way of the innovations that would bring about global prosperity. The stage was set for an epic battle, and Paris was going to be one side’s Waterloo.

But as we mentioned, a funny thing happened. Globalization, environmentalism’s worst enemy, became the planet’s best hope.

Those of us who work at the intersection of environmental and economic policy have long tried to counter the perception that integrated capital markets and global trade are anathema to protecting Earth’s natural resources. Despite overwhelming evidence that interdependence leads to increased efficiencies, hyperbole and anecdotes have framed the debate, causing collaboration and compromise to be seen as Faustian deceptions. But Paris opened the door by linking the goals of environmentalism to international cooperation, and the VW scandal unexpectedly provided the blueprint.

For all the efforts by the EU and Germany over the years to develop strategies to combat climate change and promote sustainable development, companies, particularly large manufacturers, have benefited from inconsistent regulatory compliance mechanisms. In the name of consensus, certification by one EU Member State is certification by all, creating a loophole that critics refer to as the “Race to the Bottom.” Companies such as Volkswagen can build factories in countries that agree to relax standards without jeopardizing their ability to sell to customers in countries with rigid requirements. This form of roving protectionism makes enforcement of ambitious targets nearly impossible, especially when those targets conspicuously excepted the known contaminants emitted from “clean diesel” engines, VW’s revolutionary way of reducing the carbon and environmental footprint of their cars.
The US, however, has a different set of standards when it comes to regulating environmental impact. Yes, carbon emissions are important, but human health has always been the leading factor in turning environmental ambitions into political action. For that reason, the noxious fumes caused by diesel combustion are more tightly monitored, especially in California, where questions began to arise as to how clean VW’s diesel engines really were. When initial tests didn’t seem to match real-world experiences, the EPA contracted an independent research institute, the International Council on Clean Transport, to run a more exhaustive study. ICCT worked with a group of scientists from West Virginia University who uncovered the scandal.

It’s been one year since the scandal broke, and there has been no shortage of drama. Volkswagen agreed to a massive settlement with the US Department of Justice that could amount to $15 billion, a VW engineer has pleaded guilty to conspiracy to violate the Clean Air Act, and investigations continue both in the US and Germany to determine where the buck stops. From an environmental standpoint, VW has signaled it will drop its clean diesel program in favor of electric vehicles.

But the goal here is not to recount Volkswagen’s deceptions and determine if the punishments fit the crimes. Instead, we want to show that globalization enabled the discovery of VW’s crime. There are millions of clean diesel engines on the roads of Europe, and there likely would have been millions more, were it not for the variations in sovereign regulatory policies in the US and EU. Were it not for strong compliance and enforcement mechanisms at the EPA, the health of Americans and Europeans alike would have continued to suffer. It is the integrated global market that produced the transparency necessary to achieve this watershed moment for environmentalism.

Transparency and diversity, the hallmarks of sustainable globalization, are most easily observed as functions of corporate governance. Volkswagen’s position of privilege within Germany and the EU does not serve its investors well in the global marketplace. Questions have been raised as to whether VW will ever be able to be a leader in innovation as long as the national government’s priorities supersede the demands, and opportunities, of the global market. As investors look for companies prepared to meet those demands and take advantage of those opportunities, they will find that organizations which prioritize transparency and diversity, no matter the size, will be the innovators leading the way toward sustainable globalization.

Brendan O’Donnell is a Fellow at Ecologic Institute. His work focuses on sustainable urban development, especially the visibility and accessibility of diverse communities in the decision-making process; post-carbon finance, including the development of vehicles and policies to support sustainable investing; and the future of environmentalism, particularly how art and other cultural influences inform the concept of nature and inspire environmental policy.

Max Gruenig is the President of Ecologic Institute US and has been with the Institute since 2007. His work focuses on sustainable development in the energy and transport sector, as well as urban sustainability and resilient cities. Max Gruenig has lived and worked in Germany, the United States, Iceland, and Japan.
Virtual Attendance

Solving for Nonfinancial Data as Part of the Investor’s Mosaic: Meeting with the NYSSA and CFA Institute

By David Dusenbury, CFA, Managing Director, Corporate Strategy, and Senior Portfolio Manager, Cornerstone Capital Group

Bloomberg, NYSSA and The CFA Institute recently held a sustainable investing conference titled “Sustainability and Value — Using Data and Valuation to Drive Returns.” The day included panel discussions from a variety of participants including the Chief Investment Officer of the State of Connecticut, institutional asset managers, a partner from Jeff Skoll’s family office, Capricorn Investment Group, a professor from Yale and Stanford Universities, and sustainability professionals from Waste Management, Huntsman Corp. and Lockheed Martin.

There was widespread agreement that following good corporate behavior will lead to uncovering better-performing companies. Whether the data is quantitative or qualitative does not matter, it’s the avenue of inquiry this process stimulates that is ultimately important, and integrating fundamental and sustainable analysis is critical. Currently, there appears to be an opportunity to generate alpha through better access to data. But as data is standardized and the cost of access to this data declines, this alpha will be competed away. At the end of the day, embracing ESG isn’t a yes or no decision, it’s a “way of looking at things.” It is a holistic approach to long-term investing.

Deborah Spalding, the CIO of the State of Connecticut, offered attendees a view from the asset owner’s perspective. A former sustainable finance portfolio manager, Deborah is attempting to integrate sustainable finance into the state’s asset allocation, security selection and asset manager due diligence process. However, public pension plans face challenges to achieving this goal that foundations and family offices do not, such as:

1) It’s difficult to integrate the long-term nature of sustainable investing with the liability duration of the state’s retirees. Many foundations and family offices have intergenerational mandates that require them to think long term, whereas pension plans like the State of Connecticut need to invest with a focus on the short and medium term;

2) Fees are an issue as many ESG managers continue to charge premium pricing, especially on public equities. It’s difficult for public plans to pay these fees especially when a sizable amount of their equity exposure is invested in traditional index funds.

3) Putting investments to work at scale is a challenge. A $30 billion public pension plan like Connecticut’s needs to execute $100 million in investments at a minimum in order to be meaningful (and the CIO indicated that Connecticut’s pension plan is not considered large). Ultimately, the state would like to integrate sustainability throughout its portfolio, but in order for the approach to go mainstream, investment managers need to be able to state the way in which ESG metrics “impact assets, revenues, margins, existing businesses, future businesses”, and so forth.

Participants on a panel titled, “Sustainability Factors & Methodologies” discussed how managers incorporate ESG into their process and the usefulness and reliability of current ESG data providers. While the quality of the data is not standardized across
industries and is inconsistent across time periods, participants agreed that it is improving and that having some data is better than having none at all. As with traditional financial data, however, it’s incumbent upon the investor to dig further and not accept ESG data at face value. As one panel member pointed out, a number of larger well-capitalized companies understand how to present this nonfinancial data. These companies have established the correct committees, have filed the correct forms, etc., in order to rank well in some of the ESG databases. (Volkswagen being the poster child of this dynamic.) One participant discussed the desire to be able to get behind these numbers – not to have a static presentation where the numbers just sit there – but to be able to drill down and understand how these factors interact.

As investors, the ultimate decision of whether to invest in a security or not does not depend solely on the data; it’s the mosaic an analyst builds from the data that’s the key driver. ESG needs to be embedded into the fabric of the firm through the integration of fundamental and sustainable analysis at the security level, alignment of compensation programs and improved transparency, all to foster a focus on the long term. The CIO of Connecticut’s pension plan stated that achieving this goal may require better integration of the investment people and the programmatic people. At the investment manager level, one participant stated that the market remains bifurcated, with older firms attempting to overlay ESG analysis onto their traditional investment process and newer firms building ESG into their process from the ground up, weaving it into the core fabric of their company.

Bottom line: There was universal agreement that integrating nonfinancial metrics into the investment process helps drive investment into higher-quality companies — it’s how these metrics are integrated into the process that participants are trying to solve for. To cite a traditional and perhaps overused saying, it’s the journey that’s important, not the destination. It’s the avenue of inquiry stimulated by employing sustainable finance factors into the investment process that’s the key to investing in good companies and generating attractive returns.

David Dusenbury, CFA, serves as Managing Director and Senior Portfolio Manager at Cornerstone Capital Group, where he is responsible for strategic corporate business development. He also serves on the Executive Committee and Investment Policy Committee for Cornerstone Capital Investment Management (CCIM). David has spent 25 years on Wall Street, analyzing and investing in financial services companies.
## Upcoming Events

### Global ESG Calendar

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Event</th>
<th>Location</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.27.16 – 9.29.16</td>
<td>The 2016 SFI Annual Conference, Linking Forests to Communities</td>
<td>Hilton Hotel, Clearwater Beach, FL</td>
<td><a href="http://www.sficonference.org">http://www.sficonference.org</a></td>
</tr>
<tr>
<td>9.28.16 – 9.29.16</td>
<td>SEED Africa Symposium 2016 – From Innovation to Imitation</td>
<td>Safari Park Hotel, Nairobi, Kenya</td>
<td><a href="http://www.seed.uno/seedas16">http://www.seed.uno/seedas16</a></td>
</tr>
<tr>
<td>10.3.16 – 10.5.16</td>
<td>PRI/Apiemc / 3rd Annual Conference Cornerstone Speaking Event</td>
<td>BM&amp;F Bovespa Brazil</td>
<td></td>
</tr>
<tr>
<td>10.10.16</td>
<td>SXSW Eco</td>
<td>Convention Center, Austin, TX</td>
<td><a href="http://www.sxsweco.com">http://www.sxsweco.com</a></td>
</tr>
<tr>
<td>10.17.16 – 10.19.16</td>
<td>Esca Bona</td>
<td>Sheraton Austin Hotel at the Capitol, Austin, TX</td>
<td><a href="http://www.escabona.com">http://www.escabona.com</a></td>
</tr>
<tr>
<td>10.17.16</td>
<td>RIA Foundation and Endowment Forum Investing for Impact</td>
<td>Metro Convention Centre, Toronto, Canada</td>
<td><a href="http://www.riaforum.ca">http://www.riaforum.ca</a></td>
</tr>
<tr>
<td>11.1.16 – 11.3.16</td>
<td>BSR Conference</td>
<td>Grand Hyatt, New York, NY</td>
<td><a href="http://www.bsr.org">http://www.bsr.org</a></td>
</tr>
</tbody>
</table>
The Cornerstone Journal of Sustainable Finance & Banking™

Access Form

A regular electronic journal discussing global perspectives on progress towards sustainable finance, banking and capitalism across regions and industry sectors. The JSFB features proprietary content from our Board, our Staff, and our Global Advisory Council. Sections including the Market Summary, Global Sector Research, Open Source Excellence, Corporate Governance, Enhanced Analytics, Accelerating Impact, Featured Domain and Sustainable Product Reviews, and Events are highlighted.

Standard One-Year Access $1,800 / Special Rate for NGOs and Students $500 / Single issues $300
Along with this subscription intended for both professionals at Financial Institutions and Corporate executives from all industries, subscribers will gain global perspectives on the articulation of strategies intended to benefit both the bottom line, and the major societal and economic imperatives of our day. In particular, our expert commentary on the latest research into environmental, social, and governance metrics and business integration, will allow for optimal assessments of risk-adjusted-returns in the capital markets. The JSFB is intended to lend investment insight into both micro-and macro-economic outcomes.

Premium One-Year Access $3,600 / Special Rate for NGOs and Students $1,000
In addition to receiving the “The Cornerstone Journal of Sustainable Finance & Banking,” subscribers will also receive access to exclusive Cornerstone events, consultation with a Cornerstone Executive or Global Advisory Council member and periodic “Flagship Reports from Cornerstone.”

For more details or to subscribe immediately, visit http://cornerstonecapinc.com/journal-of-sustainable-finance-banking/.

Subscriber / Entity Information

<table>
<thead>
<tr>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscriber Name</td>
</tr>
<tr>
<td>Phone Number</td>
</tr>
<tr>
<td>Email Address</td>
</tr>
</tbody>
</table>

Subscription Type

- ☐ Standard
- ☐ Premium
- ☐ NGO/Student

Billing Address

<table>
<thead>
<tr>
<th>City, State, Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
</tbody>
</table>

Mailing Address (if different)

<table>
<thead>
<tr>
<th>City, State, Zip Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
</tbody>
</table>

Additional Subscribers

Please complete the information for each additional subscriber.

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email Address</td>
</tr>
</tbody>
</table>

Subscription Type

- ☐ Standard
- ☐ Premium
- ☐ NGO/Student

Name

| Email Address |

Subscription Type

- ☐ Standard
- ☐ Premium
- ☐ NGO/Student

Name

| Email Address |

Subscription Type

- ☐ Standard
- ☐ Premium
- ☐ NGO/Student

Name

| Email Address |

The Subscription Agreement annexed hereto is incorporated and made part of this Subscription Form and available on our website.
The Cornerstone Journal of Sustainable Finance & BankingSM
Access Form (continued)

Access Quantity

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium $3,600</td>
<td>________</td>
</tr>
<tr>
<td>NGO/Student (Premium)</td>
<td>$1,000</td>
</tr>
<tr>
<td>Standard $1,800</td>
<td>________</td>
</tr>
<tr>
<td>NGO/Student (Standard)</td>
<td>$500</td>
</tr>
<tr>
<td>Single Issue $300</td>
<td>________</td>
</tr>
</tbody>
</table>

Payment Options

- [ ] Bill me later
- [ ] Payment Enclosed
- [ ] Bill my credit card

Credit Card Details

- [ ] American Express
- [ ] MasterCard
- [ ] Visa

Name on Credit Card: __________________________

Number: ____________________________________

Expiration Date: __________ Card Security Code: __________

Billing Address (if different): __________________________

Signature: ______________________________________

Please return the subscription form to Cornerstone Capital Group or contact us to expedite your order.

Cornerstone Capital Group
1180 Avenue of the Americas, 20th Floor
New York, NY 10036
+1 212 874 7400
info@cornerstonecapinc.com
http://cornerstonecapinc.com
Recent Articles from Cornerstone Capital Group

Cornerstone Journal of Sustainable Finance & Banking – Summer 2016
Cornerstone Journal of Sustainable Finance & Banking – May 2016
Cornerstone Journal of Sustainable Finance & Banking – April 2016
Cornerstone Journal of Sustainable Finance & Banking – February/March 2016
Cornerstone Journal of Sustainable Finance & Banking – December 2015
Cornerstone Journal of Sustainable Finance & Banking – November 2015
Cornerstone Journal of Sustainable Finance & Banking – October 2015
Cornerstone Journal of Sustainable Finance & Banking – September 2015
Cornerstone Journal of Sustainable Finance & Banking – Summer 2015
Cornerstone Journal of Sustainable Finance & Banking – June 2015
Cornerstone Journal of Sustainable Finance & Banking – May 2015
Cornerstone Journal of Sustainable Finance & Banking – April 2015
Cornerstone Journal of Sustainable Finance & Banking – March 2015
Cornerstone Journal of Sustainable Finance & Banking – February 2015
Cornerstone Journal of Sustainable Finance & Banking – January 2015
Cornerstone Journal of Sustainable Finance & Banking – November 2014
Cornerstone Journal of Sustainable Finance & Banking – October 2014
Cornerstone Journal of Sustainable Finance & Banking – September 2014
Cornerstone Journal of Sustainable Finance & Banking – Summer 2014
Cornerstone Journal of Sustainable Finance & Banking – June 2014
Cornerstone Journal of Sustainable Finance & Banking – May 2014
Cornerstone Journal of Sustainable Finance & Banking – April 2014
Cornerstone Journal of Sustainable Finance & Banking – March 2014
Cornerstone Journal of Sustainable Finance & Banking – February 2014


http://www.bloomberg.com/professional/blog/sustainability-the-iro/

American Banker: “Shareholder Alignment is a Way to Add Value” – December 2015


http://www.economistinsights.com/opinion/revisiting-wealth-nations-seas

Forbes: “Corporate Sustainability Is Corporate Excellence” – November 2014

http://www.forbes.com/sites/85broads/2012/12/10/the-power-to-convene/

Forbes: “Sustainable Capitalism...If Not Now, Then When?” by Erika Karp – November 2012
