Incorporating diversity into passive investments

The FTSE Women on Boards Leadership Index Series

FTSE Russell designed the FTSE Women on Boards Leadership Index Series to help investors and other market participants integrate leadership in gender diversity into a broad market benchmark. These indexes increase exposure to companies based on the strength of their gender diversity leadership at the board level and how well they manage wider impacts on society. This is achieved by the use of a tilt (or stock weight adjustment), to integrate gender diversity and social impacts.

Growing focus on gender diversity

Around the globe, new initiatives—both public and private—promoting greater representation of women on corporate boards of directors have shone a spotlight on the issue of gender diversity in corporate leadership. British governmental leaders and groups have set specific goals to increase female representation on corporate boards. Lord Mervyn Davies set the latest target in 2015: companies in the FTSE 350 Index to achieve 33% female representation on the boards of constituent companies by 2020.¹ In the US, perhaps the most notable initiative is the 2020 Women on Boards group, whose goal of women comprising 20% of corporate board membership by the year 2020 was reportedly achieved in late 2017.²


What are the economic and financial motivations for increasing women's representation on corporate boards?

- There is growing evidence on the economic benefits of increasing women's participation in the workforce.\(^3\) Key to achieving this is increasing the number and presence of women on corporate boards, with recent research suggesting that as female business leadership roles increase, so too, does overall paid female employment at all levels. For example, McKinsey & Co. has produced a number of reports over the last two years with estimates of potential growth in GDP globally, regionally and nationally, based on increasing female participation in the workforce.\(^4\)

- New academic research suggests that allocating assets to companies with diverse leadership as well as a strong social conscience may have positive corporate performance outcomes.\(^5\) For example, the Credit Suisse Gender 3000 study found increasing improvement in stock price performance as the proportion of female leadership increased.\(^6\) Work in this area is ongoing, but must be broadened over time.

The increased focus on gender diversity is part of a crucial and broader focus on diversity and inclusion. Some studies have shown that companies embracing diversity may be more likely to attract and retain talent, foster innovation and creativity, have a broader perspective in considering business challenges and opportunities.\(^7\) Diversity can be measured in many ways and gender is a starting point and proxy for a wider assessment of diversity. Furthermore, through intentionally improved diversity efforts, companies may also be able to better manage social factors such as employee engagement, community relations, customer responsibility, thus having a greater positive social impact to society and potentially deliver greater shareholder value. Hence when integrating gender diversity into index design, it is also useful to consider how well a company manages social factors.

The global context – gender diversity and social impact

As shown in Exhibit 1, among companies in the FTSE All-World\(^8\) Developed Index:

- Telecommunications and Utilities Industries demonstrate top leadership in gender diversity and social impact. The average Women on Boards Ratio\(^9\) and Social Pillar Score\(^10\) for companies in the Telecommunications Industry is 22% and 3.14 out of 5 respectively. The average Women on Boards Ratio and Social Pillar Score for companies in the Utilities Industry is 22% and 2.52 respectively.

- Exhibit 1 also shows that companies in the Industrial Industry have the lowest average Women on Boards Ratio (14%) and companies in the Financials Industry have the lowest Social Pillar Score (2.04).

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\(^4\) According to these projections, for example, if Britain achieved sharp gains in female employment, it could add £150 billion by 2025 to UK GDP over current standard forecasts. For the United States, McKinsey estimates that $4.3 trillion could be added to national GDP by 2025 if full gender parity is achieved.

\(^5\) See, for example, Carlile, L. R., L. Choi, P. Farrar-Rivas, and A. Pyott, “Women, wealth and impact: Investing with a gender lens,” 2015, Verus Wealth Partners, March. Corporate performance in this study is based on key accounting measures.


\(^8\) The FTSE All-World Developed Index is a market-capitalization weighted index representing the performance of large and mid cap companies in Developed markets.

\(^9\) Women on Boards Ratio = ratio of female board members to total number of board members.

\(^10\) The Social Pillar Score measures how well a company is managing social impacts and risks in 5 Themes: Labour Standards, Human Rights, Supply Chains, Customer Responsibility and Health and Safety. Over 100 Indicators used to calculate a Score from 0 to 5 (highest) for each company.
Exhibit 1. Global average Women on Boards Ratio and Social Pillar Score, by ICB® Industry

As shown in Exhibit 2, among companies in the FTSE Developed Index:

- Norway and France demonstrate top leadership in gender diversity, both having average Women on Boards Ratios of 39%.

- There is broad correlation between the Social Pillar Score and Women on Boards Ratio, but this does not hold for all countries. For example, Portugal has the highest Social Pillar Score of 3.52 but has a Women on Boards Ratio in the bottom 3 within Developed markets.

- Japan and South Korea have the lowest average Women on Boards Ratio of 5% and 2% respectively.

- Israel and South Korea have the lowest average Social Pillar Score of 1.43 and 1.65 respectively.

- Note that in the FTSE Developed Index, the number of large and mid size companies will vary by country. Thus, some countries have a smaller sample size, such as Portugal.

• The US has a Women on Boards Ratio (20%) and Social Pillar Score (2.19) in the bottom half among its Developed market peers. The UK’s Women on Boards Ratio (25%) lags behind its European peers. More work can be done in these two markets to promote better integration of gender diversity at leadership levels.

Integrating diversity into investment portfolios

The FTSE Women on Boards Leadership Index Series can be used to assist in the integration of gender diversity and social impact into a diversified investment strategy. These indexes also provide a strong basis for corporate engagement by highlighting how well companies demonstrate leadership in these two areas. Thus, the FTSE Women on Boards Leadership Index Series contributes to the gender diversity movement to promote awareness and improve inclusive environments at all levels.

Index methodology

Each index in the FTSE Women on Boards Leadership Index Series takes as its starting universe a market-capitalization weighted benchmark of a specific equity market. Exhibit 3 identifies the underlying cap-weighted indexes for the FTSE All-Share Women on Boards Leadership Index and the Russell 1000® Women on Boards Leadership Index.


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11 See the Ground Rules for the FTSE Women on Boards Leadership Index Series: http://www.ftse.com/products/downloads/FTSE_Women_on_Boards_Leadership_Index_Series.pdf
Exhibit 3. Parent indexes of the FTSE Women on Boards Leadership Indexes

<table>
<thead>
<tr>
<th>Index</th>
<th>Underlying Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-Share Women on Boards Leadership Index</td>
<td>FTSE All-Share ex Investment Trust Index(^\text{12})</td>
</tr>
<tr>
<td>Russell 1000 Women on Boards Leadership Index</td>
<td>Russell 1000 Index(^\text{13})</td>
</tr>
</tbody>
</table>

Constituent weightings in the underlying index are adjusted based on two measures: leadership in gender diversity and the management of social impacts. The index is created using the tilt-tilt multi-factor methodology\(^\text{14}\) of the FTSE Global Factor Index Series in order to enhance exposure to the designated gender and social considerations.\(^\text{15}\) An Industry Neutrality adjustment is applied after the first tilt to the Women on Boards Ratio to correct for industry bias, as certain industries have higher proportion of women on boards. Next, the index methodology applies the second tilt, towards the Social impact adjustment. Capacity, minimum stock weight and industry exposure constraints are then imposed for diversification and investability.

The Gender Diversity Adjustment to constituent weights is based upon the ratio of female board members to total number of board members in excess of the ICB Industry average. Board membership data is the most recently available data as of the data cut-off date derived from annual company reports. The Women on Boards Ratio is converted to a Z-score and subsequently to an S-score. This details of this conversion is explained in the FTSE Global Factor Index Series Ground Rules.

An Industry Neutrality adjustment is applied to the Gender Diversity Adjustment. This adjusts stock weights to limit industry effects. The industry neutral weighting is designed for the industry weights in each FTSE Women on Boards Leadership Index to match the industry weights in the parent market cap-weighted index.

The Social Impact Adjustment is based on the Social Pillar Score as calculated in the FTSE Russell’s ESG Ratings. The FTSE Russell ESG methodology incorporates over 15 years of ESG expertise. The criteria used to assign scores to a company are based on publicly available data, and this model has been designed with the oversight of the independent FTSE Russell ESG Advisory Committee. The committee is comprised of experts from the investment community, NGOs, unions, and academia. These ratings are reviewed annually. Exhibit A1 in the appendix details the scope and complexity of FTSE Russell’s ESG methodology. The Social Pillar Score is converted to Z-score and the S-score, in the same way as the Women on Boards Ratio.

\(^{12}\) The FTSE All-Share ex Investment Trust Index covers the FTSE All-Share universe excluding ICB subsector 8985 (Equity Investment Instruments). The FTSE All-Share Index represents the performance of all eligible companies listed on the London Stock Exchange's (LSE) SETS and SETSmm trading systems, which pass screening for size and liquidity. The index captures 98% of the UK’s market capitalization.

\(^{13}\) The Russell1000\(^\text{®}\) Index tracks the performance of the largest 1000 companies in the Russell 3000E Index, which represents the US equity market.


When looking at social impact, the holistic Social Pillar Score is included in this index series because through robust diversity practices, companies may also be able to better manage social factors such as employee engagement, community relations, customer and supplier responsibility, thus having a greater positive social impact to society. Furthermore, diversity is an important topic across many of these Themes and enables the index to incorporate a wider set of measures rather than narrowly focusing on gender diversity in isolation. The Social Pillar Score measures how well a company is managing social impacts and risks in 5 Themes: Labour Standards, Human Rights & Community, Social Supply Chains, Customer Responsibility and Health & Safety. Over 100 Indicators used to calculate this Social Score from 0 to 5 (highest) for each company. Constituent weights in FTSE Women on Boards Leadership Indexes are adjusted based on these scores.

Exhibit 4. Social Pillar Themes and example indicators

Capacity, minimum stock weights and industry constraints: when building single- or multi-factor indexes, FTSE Russell seeks to capture and maintain controlled factor exposure while retaining the benefits of the market cap-weighted benchmarks. Maximum stock level capacity ratio and minimum stock weight are applied to each index as detailed in the FTSE Global Factor Index Series Ground Rules. A minimum security level weight of 2 basis points is applied to each index. Company level capping of 10 percent is applied to the review weights using prices as at the close of business five days prior to each review date. Capping is implemented using the constituents, shares in issue and free float on the review effective date. At this final stage, a band of minimum and maximum industry weights are introduced to avoid extreme deviations from the industry profile of the underlying market cap-weighted benchmark.

Analysis of the FTSE All-Share Women on Boards Leadership Index Series

Capture of gender diversity and social impact characteristics

An important design aim was to use a “tilt” rather than in/out methodology in order to increase exposure to companies displaying leadership on board gender diversity and social performance while replicating similar returns to that of the underlying index. In order to test the effectiveness of the FTSE Women on Boards Leadership Index Series methodology in increasing gender diversity and social impact exposures, the FTSE All-Share Women on Boards Leadership Index is analyzed, comparing the exposures to these factors to the exposures of its parent index, the FTSE All-Share ex Investment Trusts Index. As of

16 Please see the Appendix for statistics and analysis of the Russell 1000 and Russell 1000 Women on Boards Leadership Indexes.
November 20, 2017, the FTSE All-Share Women on Boards Leadership Index exhibited a higher Women on Boards Ratio (19% compared to 25%) and a higher Social Pillar Score (3.59 compared to 3.26)\(^{17}\) than the underlying parent index.

Industry leaders in the FTSE All-Share Women on Boards Leadership Index

This index provides a strong basis for corporate engagement by highlighting companies that demonstrate leadership in gender diversity and social impact. Exhibit 5 shows the company in each ICB Industry with the highest combined score: Women on Boards Ratio and Social Pillar Score.

Exhibit 5. Industry leaders in the FTSE All-Share Women on Boards Leadership Index

<table>
<thead>
<tr>
<th>Industry</th>
<th>Company</th>
<th>Women on Boards Ratio</th>
<th>Social Pillar Score (0-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil &amp; Gas</td>
<td>Royal Dutch Shell</td>
<td>27.3%</td>
<td>3.3</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>BHP Billiton</td>
<td>27.3%</td>
<td>4.3</td>
</tr>
<tr>
<td>Industrials</td>
<td>Royal Mail</td>
<td>37.5%</td>
<td>4.0</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>Unilever</td>
<td>42.9%</td>
<td>4.4</td>
</tr>
<tr>
<td>Health Care</td>
<td>GlaxoSmithKline</td>
<td>33.3%</td>
<td>4.8</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>Kingfisher</td>
<td>44.4%</td>
<td>4.1</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>BT Group</td>
<td>27.3%</td>
<td>4.0</td>
</tr>
<tr>
<td>Utilities</td>
<td>SSE</td>
<td>33.3%</td>
<td>3.3</td>
</tr>
<tr>
<td>Financials</td>
<td>Jupiter Fund Management</td>
<td>40.0%</td>
<td>4.0</td>
</tr>
<tr>
<td>Technology</td>
<td>Micro Focus International</td>
<td>22.2%</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Source: FTSE Russell. Data as of November 20, 2017. Past performance is no guarantee of future results. Please see the end for important legal disclosures.

Performance

There is a relatively short history for the FTSE All-Share Women on Boards Leadership Index, which started in mid-2016 due to limitations on underlying data. The performance of the FTSE All-Share Women on Boards Leadership Index, as designed, closely matches the broad market FTSE All-Share ex Investment Trusts Index. As depicted in Exhibit 6, since June 20, 2016, the FTSE All-Share Women on Boards Leadership Index has recorded returns in excess of those recorded by the FTSE All-Share ex Investment Trusts Index. Importantly, that outperformance has come with a slight decrease in overall volatility, leading to an improved Sharpe Ratio as shown in Exhibit 7.\(^{18}\)

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\(^{17}\) Source: FTSE Russell. Data as of November 20, 2017. Past performance is no guarantee of future results. Returns shown may reflect hypothetical historical performance. Please see the end for important legal disclosures.

\(^{18}\) Volatility is defined as the annualized standard deviation of monthly returns.
Exhibit 6. Total return (GBP): FTSE All-Share Women on Boards Leadership and FTSE All-Share ex Investment Trusts Indexes, June 20, 2016 - November 20, 2017

Exhibit 7. Performance statistics (GBP): FTSE All-Share Women on Boards Leadership and FTSE All-Share ex Investment Trusts Indexes, June 20, 2016 - November 20, 2017

<table>
<thead>
<tr>
<th>FTSE All-Share ex Investment Trusts</th>
<th>16.6</th>
<th>1.5</th>
<th>-7.1</th>
<th>n/a</th>
<th>10.8</th>
<th>n/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTSE All-Share Women on Boards Leadership</td>
<td>17.9</td>
<td>1.7</td>
<td>-5.7</td>
<td>0.6</td>
<td>10.7</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Source: FTSE Russell. Data from June 20, 2016 to November 20, 2017. Past performance is no guarantee of future results. Returns shown for the FTSE All-Share Women on Boards Leadership Index reflect hypothetical historical performance. Please see the end for important legal disclosures.

The maximum drawdown of the FTSE All-Share Women on Boards Leadership Index over this period was less than that for the cap-weighted benchmark. The tracking error of the FTSE All-Share Women on Boards Leadership Index to FTSE All-Share ex Investment Trusts Index was 1.9% over the period from June 2016 to November 2017.
Conclusion

The FTSE Russell Women on Boards Leadership Index Series methodology utilizes tilts to integrate gender diversity and social impacts. This results in broad market exposure with increased weight in the index being given to companies that demonstrate gender diversity leadership and show strong performance on social impact factors. As investors increasingly take steps to integrate diversity considerations and social impact into their investment beliefs and strategies, including into core passive equity allocations and performance benchmarks for active strategies, there is a growing need for indexes which reflect broad market coverage while incorporating the desired social and diversity characteristics. As this paper has shown, the FTSE Women on Boards Leadership Index Series can be used as a tool to help enhance these factor exposures while maintaining index characteristics similar to the broad market benchmark.

In addition, the FTSE Women on Boards Leadership Index Series can also help align stewardship and investment activities. The indexes help identify companies that are leaders in gender diversity and social impact, as well as laggards, providing a clear basis for corporate engagement and can support improved understanding and dialogue.
Appendix

FTSE Russell’s ESG Ratings model

Exhibit A1. FTSE Russell’s ESG Ratings model

>300 Indicators
Individually researched aspects which focus on key operational issues

14 Themes
A Score and Exposure for the issues in each ESG Pillar, such as Climate Change / Anti-Corruption

3 Pillars
A cumulative Score and Exposure for each of Environment / Social / Governance

1 ESG Rating
A cumulative calculation of total ESG performance

Source: FTSE Russell.
Exhibits for the Russell 1000 Women on Boards Leadership and Russell 1000 Indexes

In order to test the effectiveness of the FTSE Women on Boards Leadership Index Series methodology in increasing gender diversity and social impact exposures, the Russell 1000 Women on Boards Leadership Index is analyzed comparing the exposures to these factors to the exposures of its parent index, the Russell 1000 Index. As of November 20, 2017, the Russell 1000 Women on Boards Leadership Index had a higher Women on Boards Ratio (22% compared to 18%) and a higher Social Pillar Score (2.99 compared to 2.45) than the underlying parent index.

Exhibit A2. Industry leaders in the Russell 1000 Women on Boards Leadership Index

<table>
<thead>
<tr>
<th>Industry</th>
<th>Company</th>
<th>Women on Boards Ratio</th>
<th>Social Pillar Score (0-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil &amp; Gas</td>
<td>Schlumberger</td>
<td>30.0%</td>
<td>2.9</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>Newmont Mining</td>
<td>30.0%</td>
<td>4.3</td>
</tr>
<tr>
<td>Industrials</td>
<td>ManpowerGroup</td>
<td>38.5%</td>
<td>3.7</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>Dr Pepper Snapple Group</td>
<td>40.0%</td>
<td>3.9</td>
</tr>
<tr>
<td>Health Care</td>
<td>Celgene Corp</td>
<td>33.3%</td>
<td>4.0</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>Macys</td>
<td>46.2%</td>
<td>3.6</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>AT&amp;T</td>
<td>30.8%</td>
<td>3.7</td>
</tr>
<tr>
<td>Utilities</td>
<td>American Water Works Company</td>
<td>62.5%</td>
<td>3.2</td>
</tr>
<tr>
<td>Financials</td>
<td>S&amp;P Global</td>
<td>33.3%</td>
<td>3.7</td>
</tr>
<tr>
<td>Technology</td>
<td>Texas Instruments</td>
<td>41.7%</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Source: FTSE Russell. Data as of November 20, 2017. Past performance is no guarantee of future results. Please see the end for important legal disclosures.


Source: FTSE Russell. Data from June 27, 2016 to November 20, 2017. Past performance is no guarantee of future results. Returns shown for the Russell 1000 Women on Boards Leadership Index reflect hypothetical historical performance. Please see the end for important legal disclosures.

<table>
<thead>
<tr>
<th></th>
<th>Annualized Return</th>
<th>Sharpe Ratio</th>
<th>Maximum Drawdown</th>
<th>Information Ratio</th>
<th>Volatility %</th>
<th>Tracking Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell 1000 Index</td>
<td>22.5</td>
<td>2.78</td>
<td>-4.5</td>
<td>n/a</td>
<td>8.1</td>
<td>n/a</td>
</tr>
<tr>
<td>Russell 1000 Women</td>
<td>22.1</td>
<td>2.82</td>
<td>-4.2</td>
<td>-0.4</td>
<td>7.8</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Leadership Index

Source: FTSE Russell. Data from June 27, 2016 to November 20, 2017. Past performance is no guarantee of future results. Returns shown for the Russell 1000 Women on Boards Leadership Index reflect hypothetical historical performance. Please see the end for important legal disclosures.
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