

Women are driving change

To celebrate International Women's Day, we took a closer look at the impact of women on the investment landscape. Women have been driving change in the labor market, the workplace, and the home—creating opportunities within investments and wealth management. Companies that invest in women tend to have more favorable fundamental attributes, and with the rise in impact investing, a growing investor base.

How women spend time & money...and the implications

The changing behavior of women has deep implications. [Prime-age working women](#) are spending more time working and sleeping and less time on leisure, shopping and chores vs. a decade ago. Women are outsourcing more housework, [banking](#) and shopping more online and [dining out more](#), driving change in sectors like [retail](#) and [grocery](#).

Rising female wealth creates opportunities

One activity women aren't spending time on, according to a 2013-14 Center for Talent Innovation study, is financial planning. This suggests a growing opportunity for advisors: over 40% of US women don't have an advisor, and those without advisors were found to hold a much greater proportion of their assets in cash. A lack of time spent on financial planning comes despite that fact that [women are now the sole or primary breadwinner in a record 40% of US households with children](#).

Women make up just 22% of S&P 500 boards

Board composition is an important aspect of Governance, one of the three pillars of a company's Environmental, Social & Governance (ESG) profile. The diversity of boards has steadily improved (the average S&P 500 board has 22% women vs. 14% in 2008), but still has a long runway for equalization: just 11% of companies have at least one-third of board seats held by women, trailing many European countries. Analyst Lorraine Hutchinson has highlighted the lack of board diversity in [Specialty Retail](#), where—in an industry that targets mostly young women—boards are surprisingly old and male. In her view, board diversity might have saved the industry from some of its challenges. Within the S&P 500, Telecom, Staples and Utilities currently have the most diverse boards.

Gender diversity improves ROE, lowers risk

Our work indicates that ESG has seen building interest in the US from [institutional](#) and [individual](#) investors, as well as to [corporates, index providers and regulators](#). In this report, we have analyzed ESG sub-pillar data related to gender/diversity, including board diversity, women in management, and company policies on diversity/inclusion. We found that companies with high scores on these metrics generally saw lower subsequent price and EPS volatility and higher subsequent ROEs than those with low scores. And those with higher scores have generally re-rated in recent years amid building awareness.

Wall Street is onto this theme, but more to go

Among US-domiciled actively and passively managed funds, we estimate that the assets of funds and ETFs focused on women, diversity or equality have grown at an 81% annualized rate over the past three years to over \$600mn. Similarly, research from Veris Wealth Partners indicates that global assets in “gender lens investing” have grown at a ~100% annualized rate over the same period to over \$900mn. With a [growing focus](#) on ESG and impact investing, these assets should continue to grow, in our view.

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Refer to important disclosures on page 23 to 24.

11849505

TransformingWorld Thematic Research

Equity and Quant Strategy
United States

Savita Subramanian
Equity & Quant Strategist
MLPF&S
+1 646 855 3878
savita.subramanian@baml.com

Jill Carey Hall, CFA
Equity & Quant Strategist
MLPF&S
+1 646 855 3327
jill.carey@baml.com

James Yeo
Equity & Quant Strategist
MLPF&S
+1 646 743 0187
james.h.yeo@baml.com

See Team Page for List of Analysts

The power of women

To celebrate International Women's Day, we took a closer look at the impact of women on the investment landscape. Women have been driving change in the labor market, the workplace, and the home, creating opportunities within investments and wealth management. Companies that invest in women tend to have more favorable fundamental attributes, and with the rise in impact investing, a growing investor base.

Women are driving change...

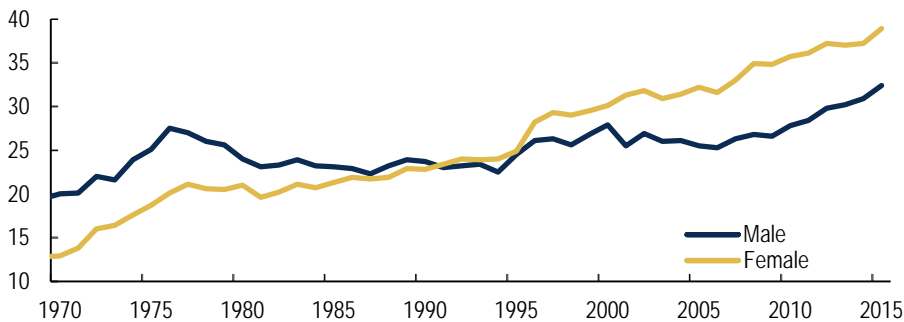
...in education, in the labor force, and at home

According to our [Thematic Investing Strategy team](#) (source: the World Bank), the number of women in the global workforce grew to 1.75bn in 2015 (vs. 1.5bn in 2006), suggesting a 50% labor force participation rate (vs. 77% for men).

Women are becoming increasingly educated. Within the US, as our economists wrote in [A day in the life of a working woman](#), since the mid-1990s, a greater share of women aged 25-29 have a Bachelor's degree or higher than men (Chart 1). And overall (as of 2015), a higher proportion of women in aggregate have a bachelor's degree than men for the first time since the US Census Bureau began collecting the data.

Additionally, our [Thematic Investing Strategy team](#) notes that, according to the Pew Research Center (as of 2013), women are the sole or primary breadwinner in a record 40% of all US households with children as of 2011.

Chart 1: Percentage of population aged 25-29 with a Bachelor's Degree or higher



Source: Census Bureau

...and creating opportunities

Managing the rising wealth of women

According to a 2013-14 global research study¹, conducted by Andrea Turner Moffitt, Sylvia Ann Hewett and the Center for Talent Innovation (published in Moffitt's book *Harness the Power of the Purse*²), most global female wealth is unmanaged. Several stats from her research highlight the untapped potential of women's wealth:

- 44% of US women (and 74% of women globally) make decisions over financial assets in their households.
- 44% of US women surveyed do not have a financial advisor, and the proportion is even higher in the UK and Asia. And these US women hold one-fifth of their assets in cash, on average, vs. just 9% in cash for those with advisors.
- Of women with >\$1mn in assets, 51% of those who have an advisor feel misunderstood.

¹ Study included an online survey of 5,924 men and women in the US, UK, China, India, Singapore and Hone Kong with at least \$100,000 in personal income or investable assets of at least \$500,000, conducted from Nov. 2013-Feb. 2014.

² Andrea Turner Moffitt and Sylvia Ann Hewlett, *Harness the Power of the Purse: Winning women Investors* (Los Angeles: Rare Bird Books, 2015).

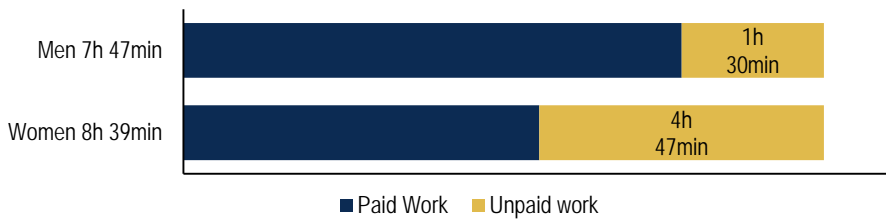
- As discussed later in this report, women globally want to invest with impact. According to Moffitt, “This is why harnessing women’s investment power is so important: invested assets will not only grow advisor portfolios and wealth management firms, they will also accelerate progress in education, health, gender and racial equality, environmental protection, and a host of other worth causes.”

Room for improvement: the gender pay gap

According to the Pew Research Center (2016)³, women earn only 83% of what men earn in the US when considering both full-time and part-time positions. A Census Bureau study (2016)⁴ similarly found that women earn 80% of men when considering only full-time year-round workers from 2014-15. And as our Thematic Investing Strategy team wrote in their [Global Education Primer](#), although the worldwide labor force participation rate is 50% women, the World Bank estimates that it will take 170 years (to 2186) to achieve equal pay for equal work.

The gender pay gap has economic implications: McKinsey estimates that global gender parity could boost world GDP by \$12-28tn — i.e. as much as the total market cap of US equities — by 2025. And [according to](#) the World Economic Forum (based on a study of 29 OECD countries), women work 50 additional minutes per day relative to men when both paid tasks and unpaid tasks (such as care giving) are taken into account, with women spending a much larger portion of their time than men on unpaid work (Chart 2).

Chart 2: Working day for men vs. women (study of 29 OECD countries)



Source: WEF

What women do — and the implications for industries

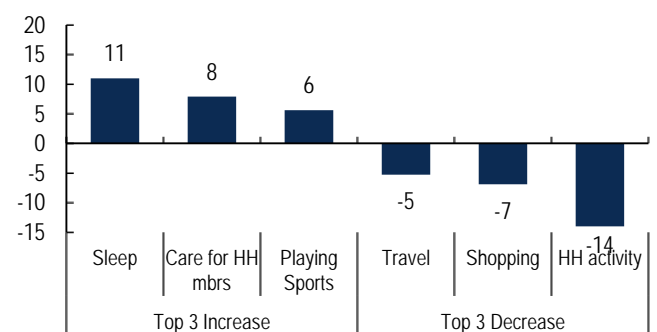
In [A day in the life of a working woman \(28 July 2017\)](#), our US economists found that relative to a decade ago, prime-age working women are spending more time during the work week working and sleeping and spending less time on shopping, leisure and chores.

Chart 3: Change in time spent by prime-age working women on weekdays (minutes)



Note: Change is calculated from the average time spent between 2014-16 and 2003-05, HH represents household activity
Source: Bureau of Labor Statistics, BofA Merrill Lynch Global Research

Chart 4: Change in time spent by prime-age working women on weekends (minutes)



Note: Change is calculated from the average time spent on 2014-16 and 2003-05, HH represents household activity
Source: Bureau of Labor Statistics, BofA Merrill Lynch Global Research

³ <http://www.pewresearch.org/fact-tank/2016/07/01/racial-gender-wage-gaps-persist-in-u-s-despite-some-progress/>

⁴ Bernadette D Proctor, Jessica L. Semega and Melissa A. Kollar: “Income and Poverty in the United States: 2015” (US Census Bureau, September 13, 2016).

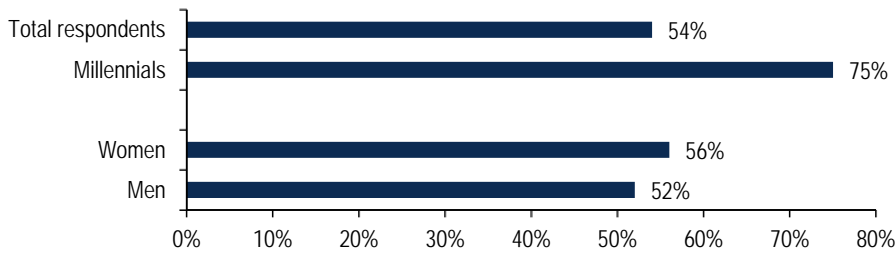
Another activity women aren't spending time on? Financial planning.

- According to Moffitt's 2013 study cited earlier, women in the US spend just 5.4 hours per month working on their finances—nearly 40% less time than men.
- And with increasing demands on women's time, the study found that financial advisors who are more efficient and focused on working around women's time constraints "are 69% more likely to develop a lasting relationship with that client."

What are women doing more of?

- **Outsourcing chores:** As Chart 1 and Chart 2 above suggest, women are spending less time on household chores both on weekdays and weekends. Data from the BLS suggests that men are also contributing less time on household activities – suggesting that outsourcing has likely been occurring.
- **Shopping online** – Our economists note that much of the decline in hours spent by women shopping is due to efficiency gains from e-commerce. This can benefit companies with strong online presence, and is driving change in industries such as [retail](#), who are closing stores and shifting more to online/omnichannel. [Online grocery shopping](#) has also been growing rapidly in recent years.
- **Banking online:** according to our Thematic Investing team's 2016 [Millennials & Centennials Primer](#), the proportion of consumers who use mobile banking apps is skewed more toward women (56%) than men (52%), based on the 2016 Bank of America Consumer Mobility Report (Chart 4).

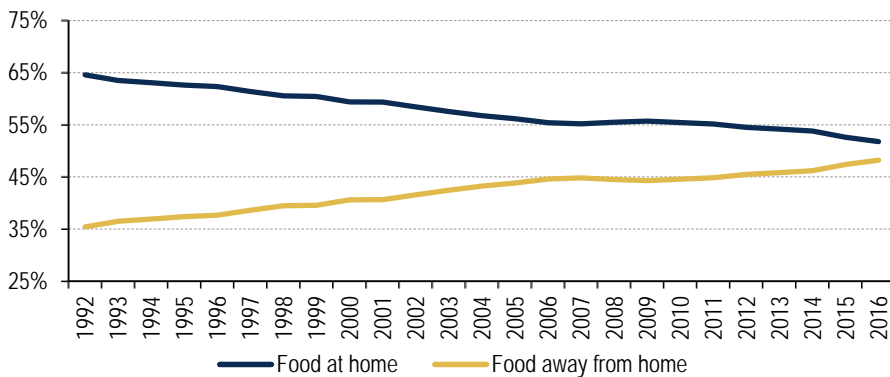
Chart 5: Percentage who use mobile banking apps



Source: BAC Consumer Mobility Report (2016)

- **Dining out:** according to analyst Robby Ohmes, the [growing share of food spending on restaurants](#) likely reflects the increase in women's workforce participation and the rise in dual-income households in recent decades (Chart 5).

Chart 6: Share of total food expenditures (%)

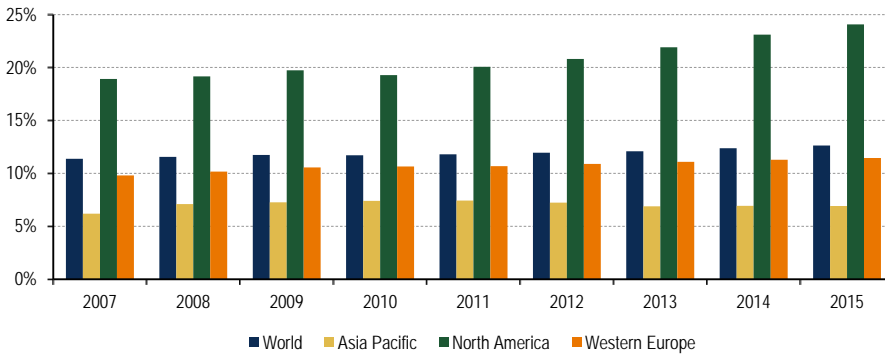


Source: US Census Bureau

- **Buying sportswear:** [according to UK analyst Sophie Park](#), the global athleisure market is estimated to be worth \$100bn and growing, with women in their 20s and 30s driving the trend. Sportswear has become a rising share of apparel purchases.

Chart 7: % of sportswear apparel as a % of the total apparel market has increased over time

Sports apparel as a % of total apparel market



Source: BofA Merrill Lynch Global Research

Gender/Diversity & ESG

ESG matters- and is particularly important to women

Our work suggests that Environment, Social & Governance (ESG) factors are of growing importance to [institutional](#) and [individual](#) investors alike, as well as to [corporates, index providers and regulators](#). And Moffitt’s 2013-14 global study referenced earlier found that impact investing may be of particular importance to women: 90% of females surveyed (and 84% within the US) indicated that “making a positive impact on society is important” and 88% (79% in the US) said they “want to invest in organizations that promote social well-being.” The potential is large: for example, 31% of US women in the study noted they want to invest in gender equality, but only 8% currently do so.

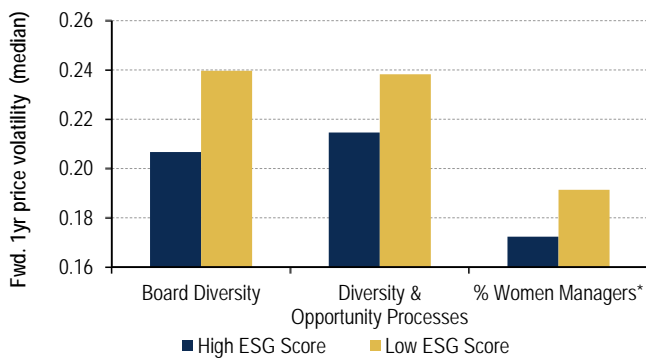
Investing in companies that invest in women/diversity: an ESG deep dive

We took a granular look at several ESG factors specifically related to gender/diversity below, based on data from Thomson Reuters and select data from Bloomberg (see Appendix for full details). While we did not find better price performance trends for companies with high ESG scores on these metrics (i.e. they do not effectively signal future alpha), we did find these metrics to be effective signals of future price and earnings risk, as well as a signal of future ROE—[consistent with our broader findings on ESG](#).

Key finding: gender-diverse co’s have seen lower price/EPS risk & higher ROE

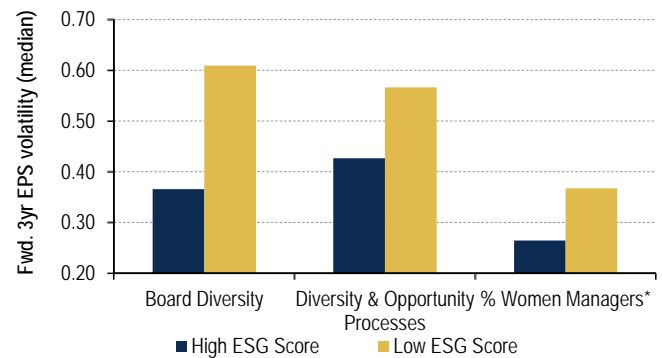
On all three sub-pillar scores we analyzed from Thomson Reuters (board diversity, company policies on diversity/inclusion, and women in management), companies with high ESG scores had lower subsequent price and earnings volatility than companies with low ESG scores on these metrics (Chart 8-Chart 9). Additionally, companies with high scores have seen higher ROEs than companies with low scores (Chart 10), and a greater improvement in ROEs on several of these metrics (Chart 11). Additionally, as we show in the subsequent sections, companies with high scores on these metrics have generally been re-rating in recent years.

Chart 8: Median forward 1yr price volatility based on ESG scores (annually, 2005-2016) for Board Diversity (Governance), Diversity & Opportunity Processes (Social), and % Women Managers (Social)



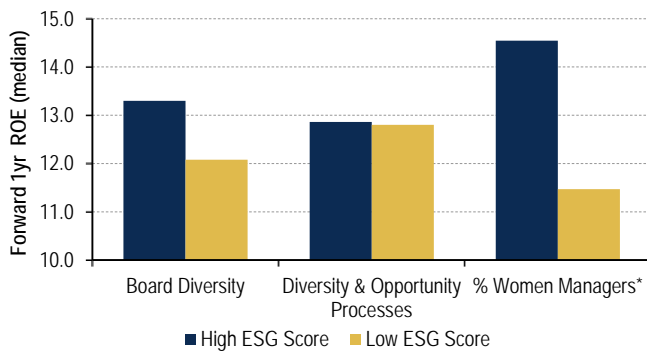
*Data from 2010 on for % Women Managers
 Note: High ESG Score based on >50 score on Board Diversity, Yes on Diversity and Opportunity Processes, and >30% women in management. Low ESG Score based on <50 score on Board Diversity, No on Diversity and Opportunity Processes and <30% women in management. Based on daily price volatility over the subsequent year.
 Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 9: Median forward 3yr EPS volatility based on ESG scores (annually, 2005-2014) for Board Diversity (Governance), Diversity & Opportunity Processes (Social), and % Women Managers (Social)



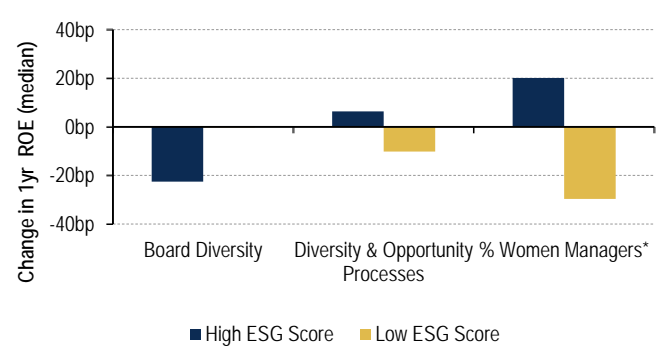
*Data from 2010 on for % Women Managers
 Note: High ESG Score based on >50 score on Board Diversity, Yes on Diversity and Opportunity Processes, and >30% women in management. Low ESG Score based on <50 score on Board Diversity, No on Diversity and Opportunity Processes and <30% women in management. Based on volatility in quarterly EPS over the subsequent three years.
 Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 10: Median forward 1yr ROE based on ESG scores (annually, 2005-2016) for Board Diversity (Governance), Diversity & Opportunity Processes (Social), and % Women Managers (Social)



*Data from 2010 on for % Women Managers
 Note: High ESG Score based on >50 score on Board Diversity, Yes on Diversity and Opportunity Processes, and >30% women in management. Low ESG Score based on <50 score on Board Diversity, No on Diversity and Opportunity Processes and <30% women in management.
 Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 11: Median change in 1yr median ROE based on ESG scores (annually, 2005-2016) for Board Diversity (Governance), Diversity & Opportunity Processes (Social), and % Women Managers (Social)



*Data from 2010 on for % Women Managers
 Note: High ESG Score based on >50 score on Board Diversity, Yes on Diversity and Opportunity Processes, and >30% women in management. Low ESG Score based on <50 score on Board Diversity, No on Diversity and Opportunity Processes and <30% women in management.
 Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Below, we discuss diversity on corporate boards, within the C-suite, for company management, and for employees, along with other related aspects, in more detail.

Diversity on corporate boards matters

Board composition is an important aspect of corporate governance, one pillar of a company's ESG profile. A more gender-diverse board may better represent the company and/or identify with its customers, bring a diverse range of opinions/ideas, and better help the company compete and adapt to changes in its industry.

For example, BofAML analyst Lorraine Hutchinson wrote about the lack of board diversity in [Specialty Retail and Department Stores: Who runs the Boards? Boys... 01 June 2017](#), where—in an industry that targets mostly young women—boards are surprisingly old and male. She found that only 30% of board members across Retail were female (with some boards having zero women), and an average age on boards of 62 years old. According to Hutchinson, greater board diversity could have saved the industry from some of its challenges, had new views of shifting retail preferences forced boards to prioritize online spending over store expansion. (And interestingly, as

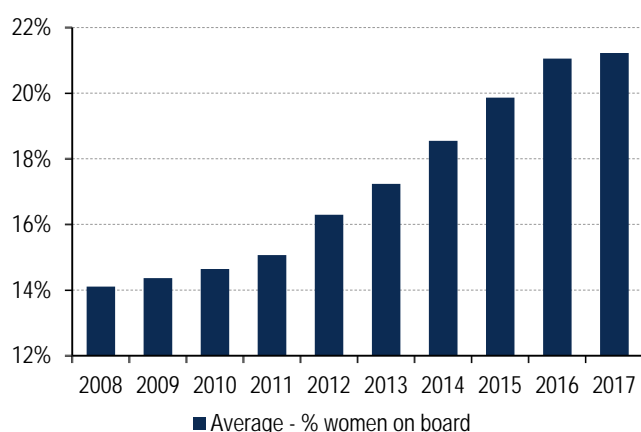
we find in Chart 15 later in this section, the spread in subsequent ROE between BofAML-covered US companies that ranked well vs. poorly on board diversity was highest within the Consumer Discretionary sector.)

Relatedly, our colleague Sameer Chopra [found](#) that in Asia, companies with strong corporate governance characteristics in relation to their boards (such as greater gender diversity of board members and more independent chairs) have seen higher ROE, paid out more of their earnings as dividends, and have traded at premium valuations .

S&P 500 corporates making strides, but still have a long runway

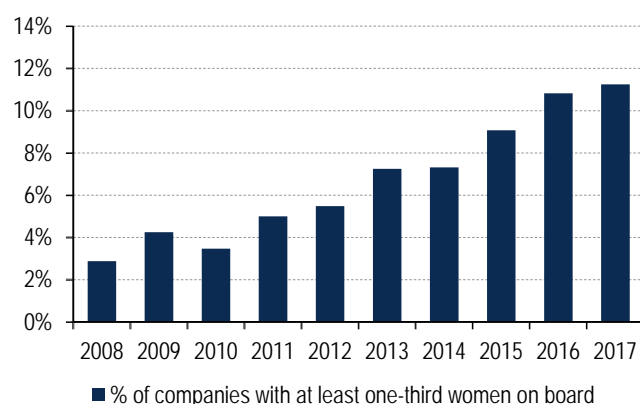
The diversity of S&P500 boards has been steadily improving over the last decade, with the average board currently 22% women, up from 14% in 2008 (Chart 4). But board diversity still has a long way to go: while having quadrupled since 2008, just 11% of companies have at least one-third of their board seats held by women (Chart 5), and just 1% (five companies) have half (or more) of their board seats held by women. 1% of boards remain all-male, down from 15% in 2008.

Chart 12: Women on board (%) – average for S&P 500 companies



Note: Based on current constituents of the S&P 500. 2017 is latest year if available or else prior year if not yet available
Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 13: Percent of S&P 500 companies with at least one-third of board seats held by women



Note: Based on current constituents of the S&P 500. 2017 is latest year if available or else prior year if not yet available
Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Telecom, Staples and Utilities lead the pack

Within the S&P 500, Telecom, Staples and Utilities have the most gender-diverse boards, where notably, within Staples, nearly one-fourth of companies have at least one-third of their board seats filled by women. Meanwhile, Energy, Industrials and Real Estate have the least gender-diverse boards (Table 1).

Table 1: S&P 500 sectors: women on boards (WOB), 2017 or latest disclosed year

Sector	Average: % WOB	% of co's with at least one-third WOB
Telecommunication Services	30%	0%
Consumer Staples	25%	24%
Utilities	24%	14%
Financials	23%	10%
Consumer Discretionary	22%	19%
Health Care	21%	15%
Materials	20%	0%
Information Technology	20%	7%
Real Estate	19%	0%
Industrials	19%	6%
Energy	18%	6%

Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

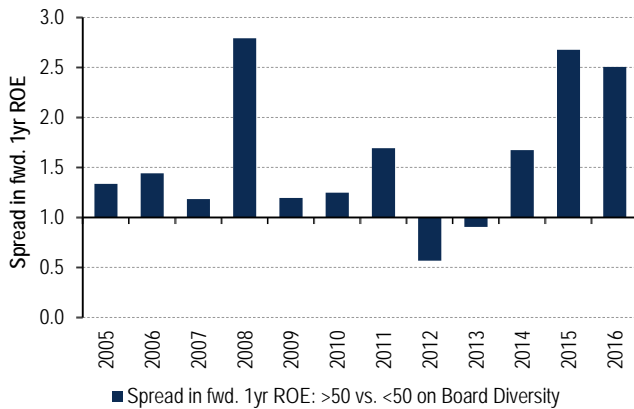
US is behind the curve; European countries lead

According to a recent report from MSCI (Women on Boards: Progress Report 2017⁵), women hold just 17% of board seats globally (based on MSCI ACWI companies) and 22% of board seats within the US. Progress has been slow: they project it will take a decade (until 2028) at the current rate for at least 30% of seats to be filled by women. Their data suggests that just 32% of global companies had at least three board seats filled by women, with European companies (particularly in France, Italy and Norway) leading. According to their report, Utilities and Financials rank best globally (where over 40% of companies globally have 3+ women on boards), while Tech is the most behind the curve (where nearly 30% of companies globally have no women on boards).

Board diversity signals better ROE...

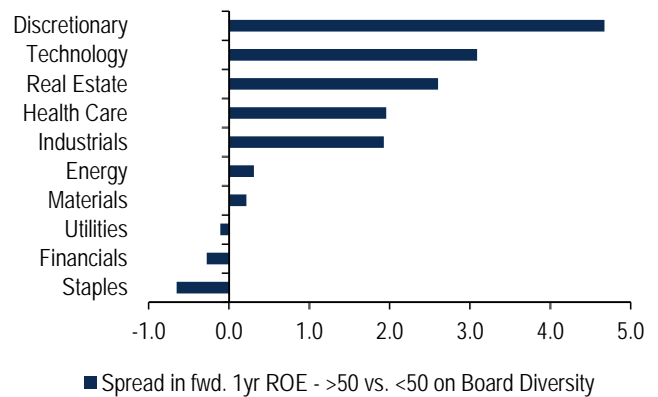
Consistent with our [prior analyses of Thomson Reuters' ESG data](#), we looked at Thomson Reuter's scores on board diversity for the BofAML US coverage universe from 2005-2016. We found that companies with more diverse boards (score >50) had higher subsequent 1-year ROEs than companies with less diverse boards (score <50) nearly every year over the past decade (Chart 14). And the spread in ROE was positive across seven of the 10 GICS sectors (Telecom was excluded due to the small number of companies), with Discretionary and Tech companies rewarded the most (Chart 15),

Chart 14: Companies with more diverse boards have seen higher subsequent ROE almost every year since 2005



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 15: Median spread in 1yr forward ROE based on companies with >50 vs. <50 ranks on Board Structure/Diversity (2005-2016)



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

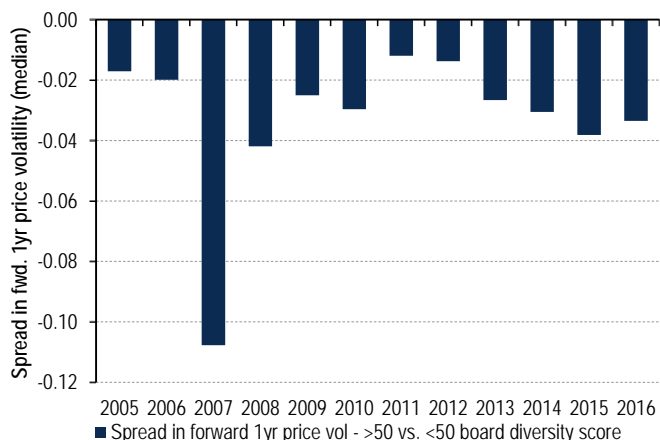
...lower price and earnings risk...

As noted earlier in this report, board diversity appears to be a consistent signal of future risk: BofAML US-covered companies with >50 scores on board diversity have seen lower price and EPS volatility than companies with <50 scores over our data history since '05.

⁵ Meggin Thwing Eastman, "Women on Boards: Progress Report 2017", MSCI ESG Corporate Gender Diversity Series; December 2017.

Chart 16: Companies with diverse boards have seen consistently lower price volatility...

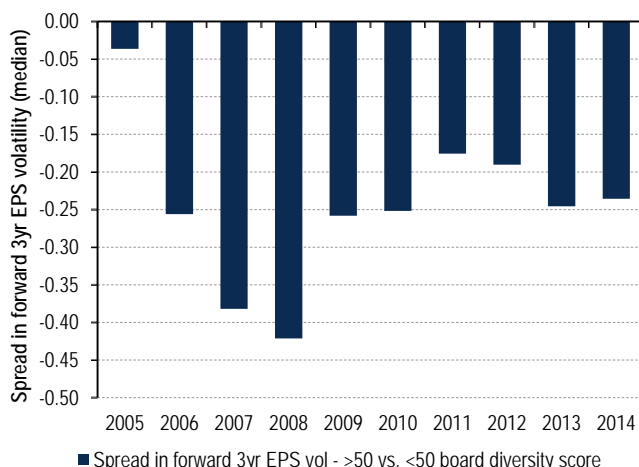
Spread in forward 1-year price volatility for companies in BofAML US coverage universe scoring >50 vs. <50 on Thomson Reuters Board Diversity metric (2005-2016)



Based on daily price volatility over the subsequent year.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 17: ...along with consistently lower EPS volatility

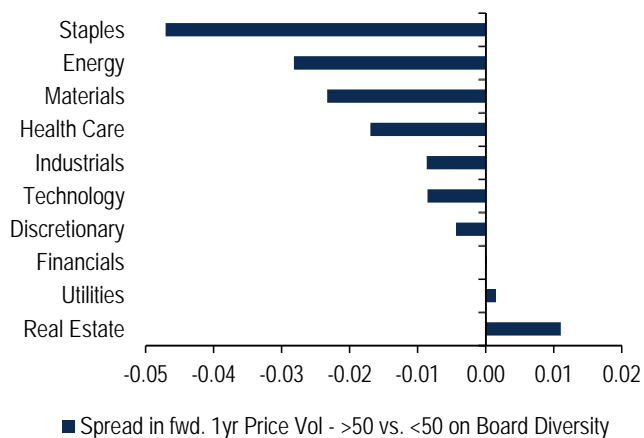
Spread in forward 3-year EPS volatility for companies in BofAML US coverage universe scoring >50 vs. <50 on Thomson Reuters Board Diversity metric (2005-2014)



Based on volatility in quarterly EPS over the subsequent 3 years
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

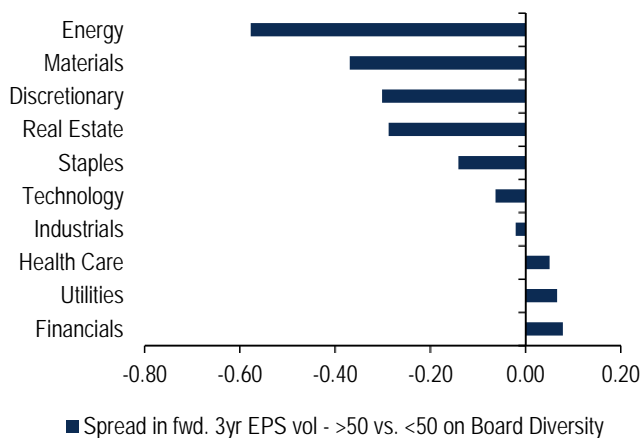
Board Diversity scores have been an effective signal of both lower price and earnings risks in seven out of ten sectors (Telecom excluded due to small number of companies) and particularly in Energy and Materials: companies with scores above 50 in Board Diversity exhibited both lower future price and earnings volatility relative to their peers.

Chart 18: Spread in forward 1yr price volatility between companies with above-50 vs. below-50 scores on Board Diversity



Based on daily price volatility over the subsequent year
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 19: Spread in forward 3yr EPS volatility between companies with above-50 vs. below-50 scores on Board Diversity



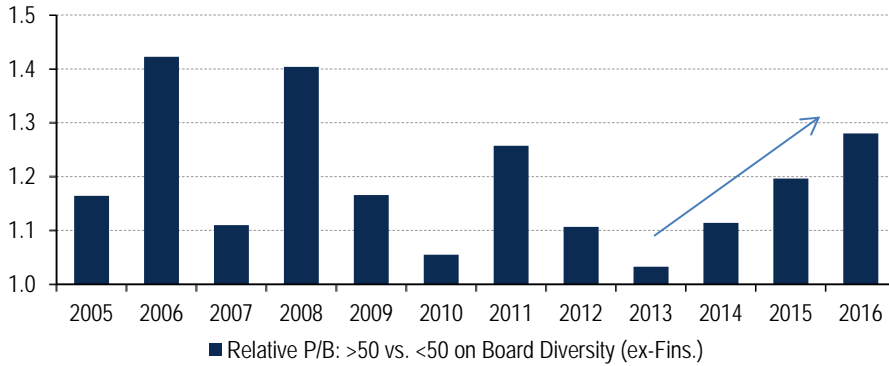
Based on volatility in quarterly EPS over the subsequent 3 years
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

...and higher multiples

When examining companies with strong (>50) vs. weak (<50) scores on board diversity, we found that non-Financials in BofAML's US coverage universe with more diverse boards have traded at a consistent premium on Price to Book relative to other non-Financials in this universe (Chart 11). While the relative premium has varied over time, it has consistently risen since 2013 (Chart 17).

Chart 20: Non-Financials with more diverse boards have traded at a consistent premium

Relative Price/Book for BofAML US covered companies based on Thomson Reuters' Board Diversity score (2005-2016)

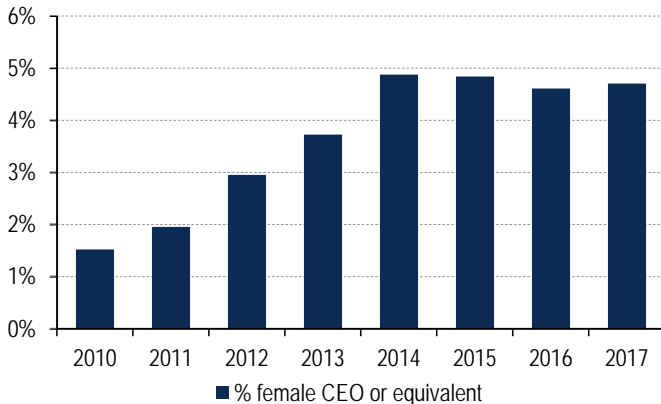


Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Female executives are also scarce (but growing)

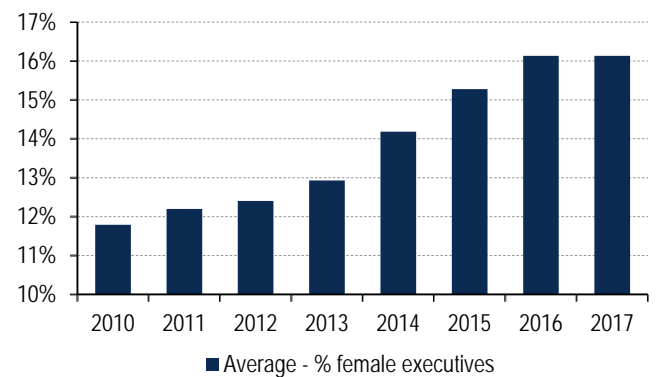
According to the MSCI report above, women comprise fewer than 4% of CEO jobs globally and less than 10% of CFO jobs globally. Within the S&P 500, we find that just 5% of companies have a female CEO or equivalent, up from <2% in 2010, but little-changed over the past four years (Chart 6). And for the average S&P 500 company, just 17% of total executives are female, up from 12% in 2010 (Chart 7). One-fifth of companies have all-male executive committees.

Chart 21: % of S&P 500 companies with female CEO or equivalent



Note: based on current constituents of the S&P 500. 2017 is latest year if available or else prior year if not yet available.
Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 22: Proportion of executives who are female – average for S&P 500 companies

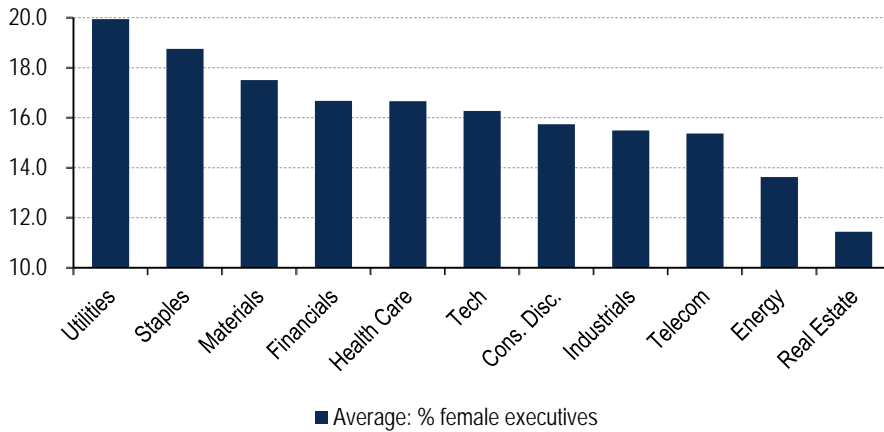


Note: based on current constituents of the S&P 500. 2017 is latest year if available or else prior year if not yet available.
Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Utilities and Staples once again at the head of the pack

Utilities and Staples lead the pack with 20% and 19% female executives, respectively. Real Estate and Energy lag, with 11% and 14% female executives, respectively.

Chart 23: Average percentage of female executives by S&P 500 sector (2017 or latest year)



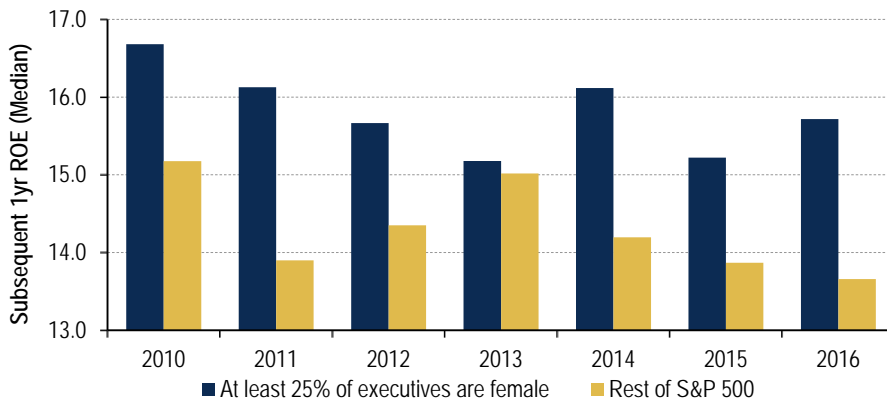
Note: based on current constituents of the S&P 500. 2017 is latest year if available or else prior year if not yet available.
Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

More gender diversity among executives suggests higher ROE

Based on data from Bloomberg, we analyzed the proportion of female executives within the S&P 500 by year from 2010-2016, based on the current constituents of the index. We found that in all of the last seven years, the subsequent one-year median ROE was higher for companies where at least 25% of their executives were female, suggesting gender diversity may drive better returns (Chart 14).

Additionally, a 2015 “Diversity Matters” study by McKinsey⁶ found a statistically significant relationship between diversity of leadership teams and financial performance, where top quartile companies by gender diversity were 15% more likely to see their EBIT above the industry median.

Chart 24: Subsequent 1yr median ROE for S&P 500 companies based on the proportion of female executives (2010-2016)



Note: based on current constituents of the S&P 500
Source: Bloomberg, FactSet, BofA Merrill Lynch US Equity & US Quant Strategy

Women in management

According to Moffitt’s global study cited earlier, management diversity is of particular importance to female investors: 77% of women surveyed cited a desire to invest in companies whose management is diverse. In some regions such as Asia, this was of equal importance to both the women and men surveyed.

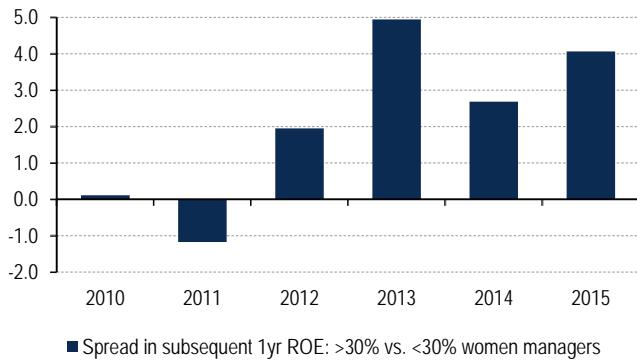
⁶ Vivian Hunt, Dennis Layton, Sarah Prince: “Diversity Matters”, McKinsey & Co., February 2, 2015.

Companies with more gender-diverse management have seen higher ROEs...

While disclosed data on women in management roles is more scant, we analyzed available data from Thomson Reuters for BofAML US-covered companies. Due to the scarcity of data prior to 2010, and with 2016 data not fully available, we analyzed data from 2010-2015. We found that companies with at least 30% women in management have enjoyed higher subsequent one-year ROEs since 2012, and have also seen a higher median improvement in annual ROEs over this period.

Chart 25: Companies with more women managers have enjoyed higher ROEs in recent years...

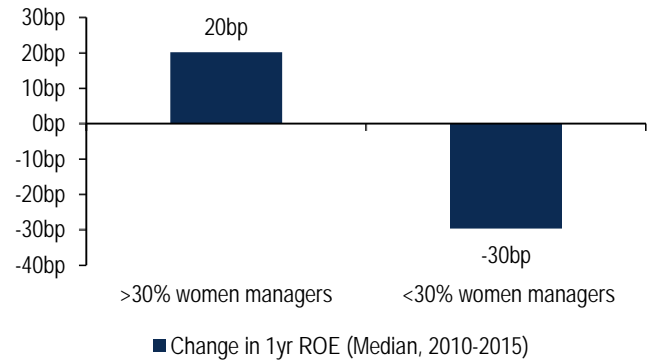
Spread in subsequent 1-year ROE for BofAML US covered companies with >30% vs. <30% women managers, based on available Thomson Reuters data (2010-2015)



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 26: ...and have also seen their ROEs improve more

Median % change in 1yr ROE over the subsequent year for BofAML US covered companies with >30% vs. <30% women managers, based on available Thomson Reuters data (2010-2015)



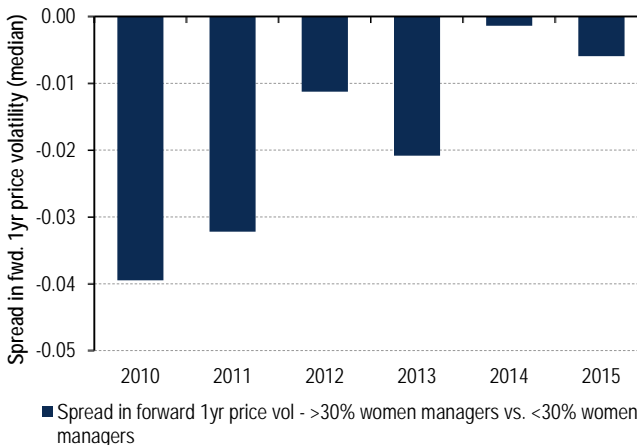
Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

...lower price and earnings risk...

As noted earlier, companies with more gender diversity among managers have consistently seen lower subsequent price volatility and lower subsequent earnings volatility than their counterparts over the period studied (Chart 24 and Chart 25).

Chart 27: Companies with more women managers: Lower price vol...

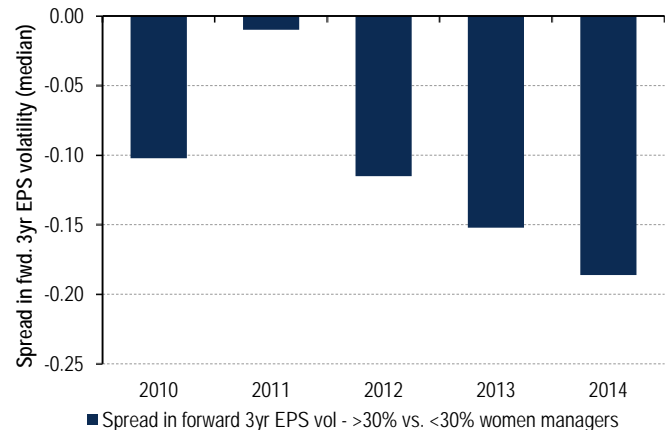
Spread in median forward 1-year price volatility (based on daily prices) for BofAML US-covered companies with >30% vs. <30% women managers, 2010-2015



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 28: ...and lower earnings volatility

Spread in median forward 3-year quarterly EPS volatility for BofAML US-covered companies with >30% vs. <30% women managers, 2010-2015

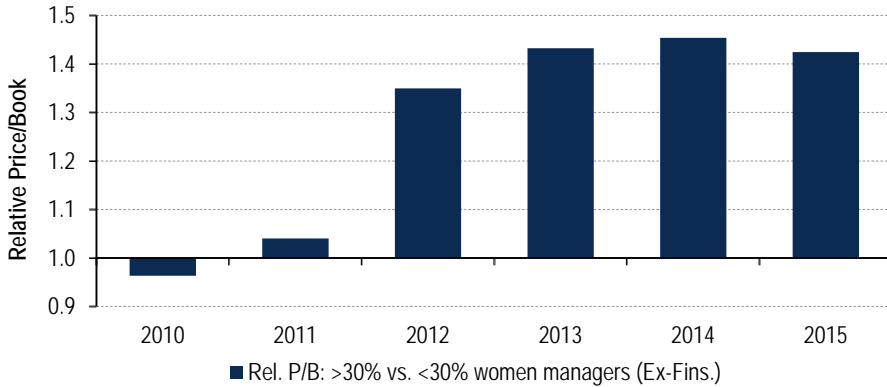


Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

...and higher multiples

We found that non-Financials within the BofAML US coverage universe with >30% women managers have re-rated relative to those with <30% women managers, and have traded at a premium to these peers since 2011 (Chart 24).

Chart 29: Relative Price/Book for BofAML US-covered non-Financials based on the % of women managers, 2010-2015



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Company policies around diversity & equal opportunity

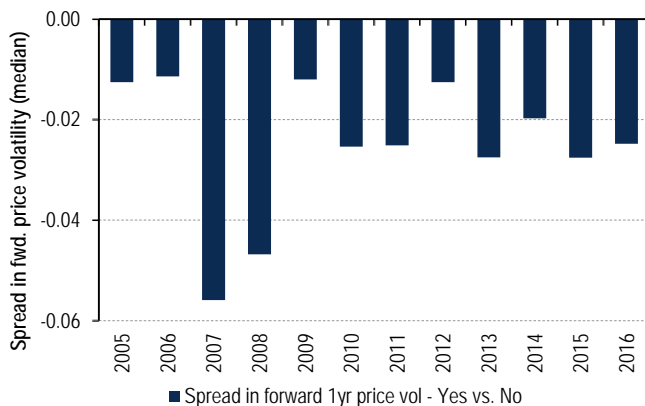
We analyzed ESG data from Thomson Reuters with respect to corporates' diversity programs, based on their "Diversity and Opportunity Processes/Policy Diversity & Opportunity" sub-pillar (part of the company's Social score). The yes or no value to this score is based on whether the company "describes, claims to have, or mentions the processes in general by which it strives to promote diversity or equal opportunities or exclude discrimination, harassment or unfair treatment of its workforce regardless of gender, age, ethnicity, disabilities, religion or sexual orientation." Consistent with our [prior analyses of Thomson Reuters' ESG data](#), we used the BofAML US coverage universe from 2005-2016 as our universe of companies.

Companies with policies saw lower price and earnings risk...

As was true with the other gender-related ESG metrics, companies with diversity/opportunity policies saw consistently lower subsequent price volatility (Chart 27) and lower subsequent EPS volatility most years since 2005 (Chart 28).

Chart 30: Companies with diversity policies have seen consistently lower subsequent price volatility...

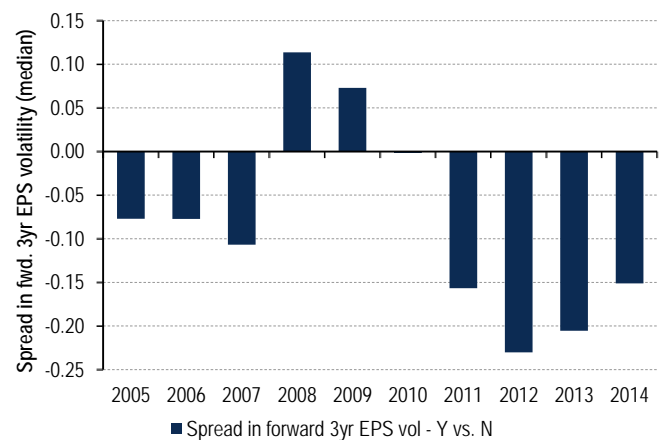
Spread in forward 1-year price volatility for companies in BofAML US coverage universe based on "Yes:" vs. "No" scores for diversity/opportunity policies (2005-2016)



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 31: ...and lower subsequent EPS volatility in most years since 2005

Spread in forward 1-year EPS volatility for companies in BofAML US coverage universe based on "Yes:" vs. "No" scores for diversity/opportunity policies (2005-2016)

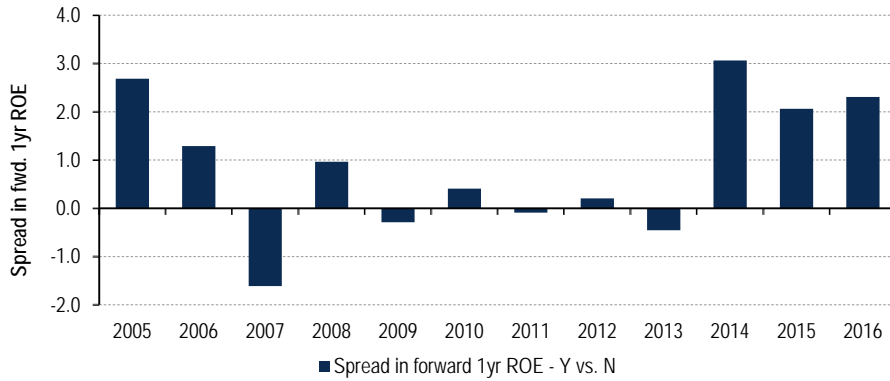


Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

...and higher subsequent ROE

Companies with policies saw higher future ROEs in eight of the last 12 years, particularly in recent years (Chart 29).

Chart 32: Spread in forward 1yr ROE for BofAML covered US companies with “Yes” vs. “No” scores for diversity/opportunity policies (2005-2016)

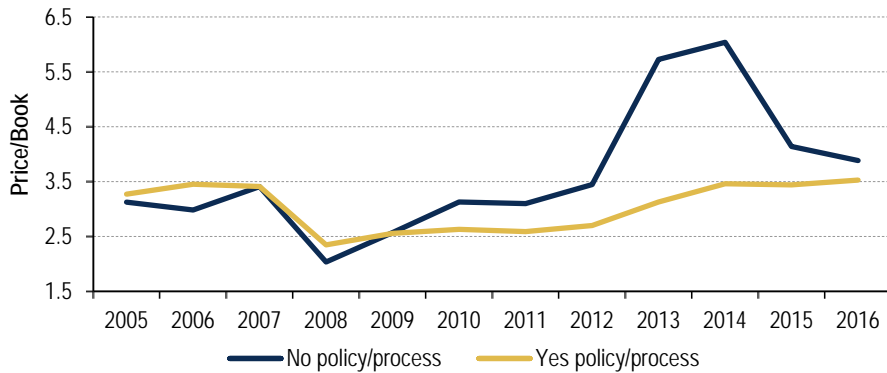


Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Companies focused on diversity and inclusion are re-rating

We found that while non-Financial companies which have policies on diversity and inclusion have continued to trade at a discount to companies without policies over the last decade, those with policies have generally been re-rating since 2011, while those without policies have de-rated over the last several years (Chart 15).

Chart 33: Price/Book: BofAML US-covered non-Financial companies with policies vs. no policies on diversity/opportunity



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Diversity & inclusion policies are particularly impactful within Tech

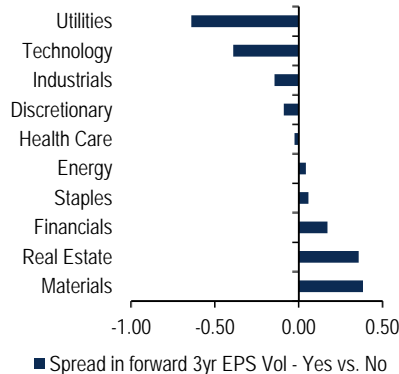
Diversity and opportunity policies have signaled lower future price volatility for most sectors and lower future earnings volatility for five out of the ten sectors (ex-Telecom). In particular, Tech companies with diversity policies exhibit lower price volatility, lower earnings volatility, and higher 1yr ROE relative to their peers.

Chart 34: Median spread in forward 1yr price volatility: companies with “Yes” vs. “No” scores for Diversity/Opportunity Processes (2005-2016)



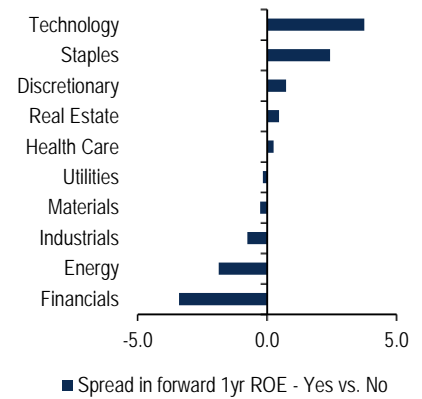
Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 35: Median spread in forward 3yr EPS volatility: companies with “Yes” vs. “No” scores for Diversity/Opportunity Processes (2005-2014)



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Chart 36: Median spread in forward 1yr ROE: companies with “Yes” vs. “No” scores for Diversity/Opportunity Processes (2005-2016)



Based on BofAML-covered US companies. See Appendix for full methodology.
Source: Thomson Reuters, BofA Merrill Lynch US Equity & US Quant Strategy

Investing in women– a growing AUM

Asset managers are starting to care about gender diversity

A 2017 report by think tank New Financial⁷ that studied asset owners such as pension funds, sovereign wealth funds, insurers, etc. noted that large US public pensions are “leading the charge on diversity” – for example, the New York City Retirement System allocates approximately 7% of its assets to firms/businesses owned by women or ethnic minorities (up 25% vs. 2013), and the Chicago Teachers’ Pension Fund allocates 35% of assets to businesses owned by women/minorities. The studied noted that diversity is also increasingly popping up in requests for proposal (RFPs): for example, the New York City Pension Funds announced in 2015 that it was formally including diversity of leadership and investment teams as one of its manager selection criteria.

Assets in “gender lens investing” funds/ETFs growing at an 80-100% CAGR

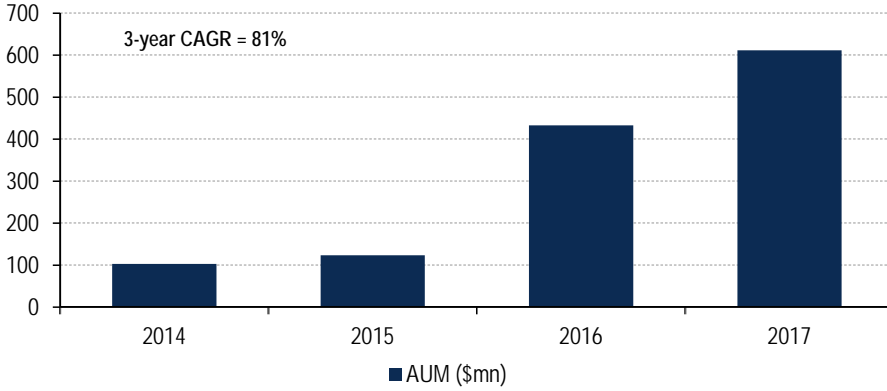
According to a Fall 2017 report from Veris Wealth Partners⁸ total global assets in “gender lens investing” have grown to over \$900mn from just \$100mn in 2014 (Chart 4), an ~100% CAGR. A growing number of firms/index providers have launched indices, ETFs or funds focusing on gender equality, women on boards, or related metrics.

In a similar vein, we found that based on our dataset of US-domiciled assets under management (AUM), the AUM of funds/ETFs focused on gender, diversity or equality has grown at an 81% CAGR over the past three years (Chart 25).

⁷Olivia Seddon-Daines and Yasmine Chinwala, “Diversity from an investor’s perspective: Why and how the most forward-looking asset owners are addressing diversity and inclusion”, New Financial, November 2017.

⁸ “Gender Lens Investing: Investment Options in the Public Markets”, Veris Wealth Partners, Fall 2017

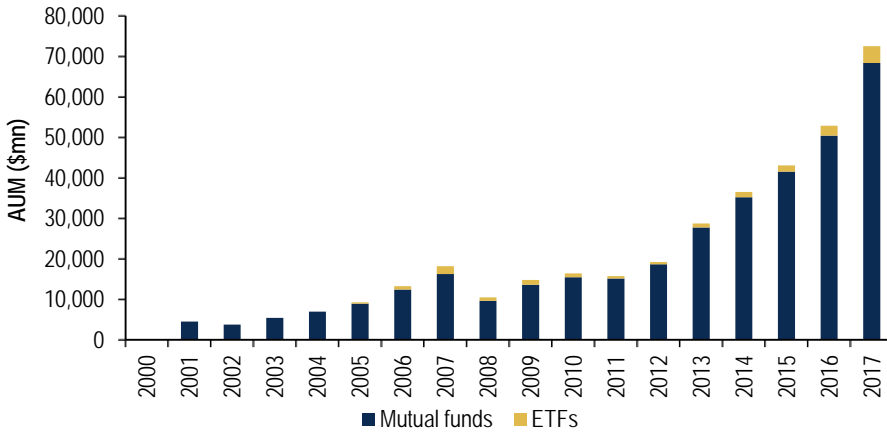
Chart 37: Assets in US-domiciled active and passive funds/ETFs related to gender, diversity or equality (\$mn), 2014-2017



Source: Strategic Insight SimFund, BofA Merrill Lynch US Equity & US Quant Strategy

The growing focus on ESG/impact investing suggests that assets focused on investing in gender diversity/equality should continue to grow: total US-domiciled assets with an ESG focus are over \$70bn and growing based on our analysis of fund and ETF data from Strategic Insight Simfund, and both [institutional](#) and [individual](#) investors are starting to focus more on ESG.

Chart 38: Total assets in US-domiciled equity funds with ESG strategies (\$mn), 2000-2017



Source: Strategic Insight SimFund, BofA Merrill Lynch US Equity & US Quant Strategy

Screens

Women on boards

We provide a list below for reference of S&P 500 companies where at least one-third of total board members are women, as of the latest available annual data from Bloomberg.

Table 3: S&P 500 companies with at least one-third women on board

Ticker	Company	Sector	% Women on Board
AWK	American Water Works Co Inc	Utilities	63%
NAVI	Navient Corp	Financials	55%
HOLX	Hologic Inc	Health Care	50%
LNT	Alliant Energy Corp	Utilities	50%
M	Macy's Inc	Consumer Discretionary	50%
ALK	Alaska Air Group Inc	Industrials	45%
GM	General Motors Co	Consumer Discretionary	45%
ULTA	Ulta Beauty Inc	Consumer Discretionary	45%
KORS	Michael Kors Holdings Ltd	Consumer Discretionary	44%
VIAB	Viacom Inc	Consumer Discretionary	43%
TXN	Texas Instruments Inc	Information Technology	42%
DPS	Dr Pepper Snapple Group Inc	Consumer Staples	40%
EL	Estee Lauder Cos Inc/The	Consumer Staples	40%
IPG	Interpublic Group of Cos Inc/The	Consumer Discretionary	40%
WFC	Wells Fargo & Co	Financials	40%
CPB	Campbell Soup Co	Consumer Staples	38%
HPE	Hewlett Packard Enterprise Co	Information Technology	38%
K	Kellogg Co	Consumer Staples	38%
TGT	Target Corp	Consumer Discretionary	38%
DG	Dollar General Corp	Consumer Discretionary	38%
PDCO	Patterson Cos Inc	Health Care	38%
WYN	Wyndham Worldwide Corp	Consumer Discretionary	38%
ABT	Abbott Laboratories	Health Care	36%
BSX	Boston Scientific Corp	Health Care	36%
CAH	Cardinal Health Inc	Health Care	36%
CVX	Chevron Corp	Energy	36%
ETR	Entergy Corp	Utilities	36%
HIG	Hartford Financial Services Group Inc/Th	Financials	36%
PFG	Principal Financial Group Inc	Financials	36%
PG	Procter & Gamble Co/The	Consumer Staples	36%
SIG	Signet Jewelers Ltd	Consumer Discretionary	36%
SJM	JM Smucker Co/The	Consumer Staples	36%
TJX	TJX Cos Inc/The	Consumer Discretionary	36%
VLO	Valero Energy Corp	Energy	36%
HAS	Hasbro Inc	Consumer Discretionary	36%
ACN	Accenture PLC	Information Technology	33%
AET	Aetna Inc	Health Care	33%
AME	AMETEK Inc	Industrials	33%
AMP	Ameriprise Financial Inc	Financials	33%
CELG	Celgene Corp	Health Care	33%
CLX	Clorox Co/The	Consumer Staples	33%
CMS	CMS Energy Corp	Utilities	33%
CSCO	Cisco Systems Inc	Information Technology	33%
DIS	Walt Disney Co/The	Consumer Discretionary	33%
FL	Foot Locker Inc	Consumer Discretionary	33%
IR	Ingersoll-Rand PLC	Industrials	33%
KR	Kroger Co/The	Consumer Staples	33%
LMT	Lockheed Martin Corp	Industrials	33%
MCK	McKesson Corp	Health Care	33%
NFLX	Netflix Inc	Consumer Discretionary	33%
SPGI	S&P Global Inc	Financials	33%
SYF	Synchrony Financial	Financials	33%
TPR	Tapestry Inc	Consumer Discretionary	33%
VRTX	Vertex Pharmaceuticals Inc	Health Care	33%
XRX	Xerox Corp	Information Technology	33%

Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

Female Executives

We provide a list for reference below of S&P 500 companies where at least one-third of total executives are women, as of the latest available annual data from Bloomberg.

Table 4: S&P 500 companies with at least one-third female executives

Ticker	Company	Sector	% Female Executives
AWK	American Water Works Co Inc	Utilities	60%
CSX	CSX Corp	Industrials	56%
HPQ	HP Inc	Information Technology	50%
MLM	Martin Marietta Materials Inc	Materials	50%
TIF	Tiffany & Co	Consumer Discretionary	50%
AVY	Avery Dennison Corp	Materials	44%
BBY	Best Buy Co Inc	Consumer Discretionary	44%
CAT	Caterpillar Inc	Industrials	44%
GPS	Gap Inc/The	Consumer Discretionary	44%
KORS	Michael Kors Holdings Ltd	Consumer Discretionary	43%
MSFT	Microsoft Corp	Information Technology	43%
NOC	Northrop Grumman Corp	Industrials	43%
OXY	Occidental Petroleum Corp	Energy	43%
TGT	Target Corp	Consumer Discretionary	42%
DIS	Walt Disney Co/The	Consumer Discretionary	40%
KSS	Kohl's Corp	Consumer Discretionary	40%
NVDA	NVIDIA Corp	Information Technology	40%
ULTA	Ulta Beauty Inc	Consumer Discretionary	40%
CLX	Clorox Co/The	Consumer Staples	38%
CAH	Cardinal Health Inc	Health Care	38%
CSCO	Cisco Systems Inc	Information Technology	38%
GE	General Electric Co	Industrials	38%
PAYX	Paychex Inc	Information Technology	38%
V	Visa Inc	Information Technology	38%
M	Macy's Inc	Consumer Discretionary	36%
MRK	Merck & Co Inc	Health Care	36%
CME	CME Group Inc	Financials	36%
BF.B	Brown-Forman Corp	Consumer Staples	33%
CL	Colgate-Palmolive Co	Consumer Staples	33%
COP	ConocoPhillips	Energy	33%
DUK	Duke Energy Corp	Utilities	33%
FRT	Federal Realty Investment Trust	Real Estate	33%
HD	Home Depot Inc/The	Consumer Discretionary	33%
HSY	Hershey Co/The	Consumer Staples	33%
IBM	International Business Machines Corp	Information Technology	33%
KR	Kroger Co/The	Consumer Staples	33%
MRO	Marathon Oil Corp	Energy	33%
NTRS	Northern Trust Corp	Financials	33%
PDCO	Patterson Cos Inc	Health Care	33%
PNR	Pentair PLC	Industrials	33%
PSA	Public Storage	Real Estate	33%
RL	Ralph Lauren Corp	Consumer Discretionary	33%
SRE	Sempra Energy	Utilities	33%
TSS	Total System Services Inc	Information Technology	33%
UNP	Union Pacific Corp	Industrials	33%
VIAB	Viacom Inc	Consumer Discretionary	33%
WBA	Walgreens Boots Alliance Inc	Consumer Staples	33%
WY	Weyerhaeuser Co	Real Estate	33%
ZTS	Zoetis Inc	Health Care	33%

Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

Women in Management

While disclosure is more scant, of the 60 S&P 500 companies that disclose the percentage of women in management based on data from Bloomberg, we include a list for reference below of those where women comprise at least one-third of management positions as of the latest available annual data.

Table 5: S&P 500 companies with at least one-third women in management

Ticker	Company	Sector	% Women in Management
HCN	Welltower Inc	Real Estate	63%
PVH	PVH Corp	Consumer Discretionary	63%
GPS	Gap Inc/The	Consumer Discretionary	51%
TIF	Tiffany & Co	Consumer Discretionary	48%
ESRX	Express Scripts Holding Co	Health Care	45%
ALL	Allstate Corp/The	Financials	44%
WYN	Wyndham Worldwide Corp	Consumer Discretionary	39%
BAC	Bank of America Corp	Financials	38%
LLY	Eli Lilly & Co	Health Care	37%
BK	Bank of New York Mellon Corp/The	Financials	36%
MRK	Merck & Co Inc	Health Care	36%
NTRS	Northern Trust Corp	Financials	36%
ADS	Alliance Data Systems Corp	Information Technology	35%

Source: Bloomberg, BofA Merrill Lynch US Equity & US Quant Strategy

Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions

Appendix

Methodology

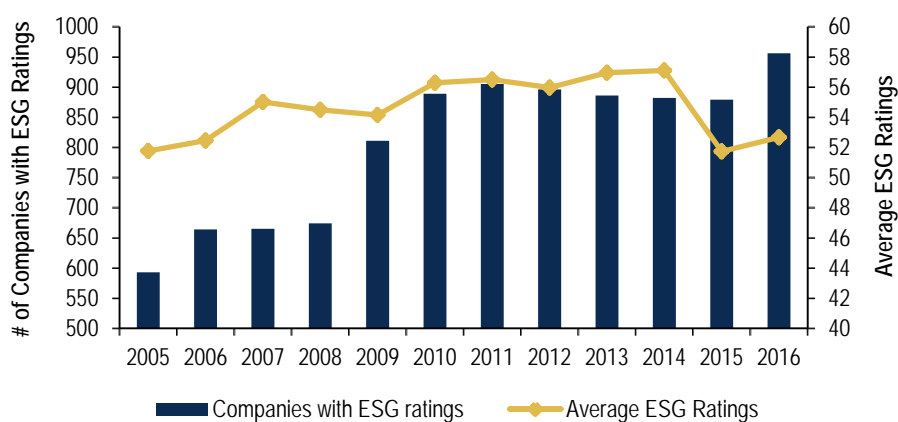
Bloomberg data

We analyzed data from Bloomberg on women on boards, female executives and female CEOs, using the current constituents of the S&P 500 index based on annual data from 2010-2017 (where beginning in 2010, at least 90% of companies each year had data available). When analyzing the forward 1-year ROE of companies based on these metrics, we considered the Bloomberg metrics from 2010-2016 and thus ROEs from 2011-2017.

Thomson Reuters data

The universe of companies used in the study consists of the BofAML US coverage universe each year for which Thomson Reuters ESG data is available. We analyze scores over this period based on annual data from 2005-2016.

Chart 39: Companies in Thomson Reuters and BofA Merrill Lynch US Research coverage universe



Source: BofA Merrill Lynch US Equity & Quant Strategy based on Thomson Reuters data

The broader Thomson Reuters dataset is broken into four broad categories or pillars: Corporate Governance, Economic, Environmental and Social (Table 6). For more on Thomson's ESG rating methodology, please see "Thomson Reuters Corporate Responsibility Ratings (TRCRR): Ranking Rules and Methodologies" (<http://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/tr-com-financial/methodology/corporate-responsibility-ratings.pdf>).

We analyzed the following Thomson Reuters' sub-pillar scores in this report:

- 1) **Board Structure/Board Diversity** (part of Corporate governance pillar): this metric is based on the percentage of females on boards. A normalized score (1-100) is produced within their country-level benchmark.
- 2) **Diversity and Opportunity Processes/Policy Diversity & Opportunity** (part of Social pillar): Yes or No score, based on whether the company describes, claims to have or mention the processes in general by which it strives to promote diversity or equal opportunities or exclude discrimination, harassment or unfair treatment of its workforce regardless of gender, age, ethnicity, disabilities, religion or sexual orientation.
- 3) **Women Managers** (part of Social pillar): percentage of women managers to the total number of managers (0-100%).

Below we provide the breakdown of ESG pillars and factors provided by Thomson Reuters.

Table 6: Thomson-Reuters ESG Factors Pillars

Pillar	Definition
Environmental	The environmental pillar measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities in order to generate long term shareholder value.
Social	The social pillar measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It is a reflection of the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long term shareholder value.
Corporate Governance	The corporate governance pillar measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long term shareholder value.

Source: Thomson Reuters

Each pillar relies on underlying factors (level 2 scores, Table 7); we also flag the sub-pillar (level 3) scores used in this report below in blue.

Table 7: Thomson-Reuters ESG Factors Hierarchy

ESG Factor	Pillar	Definition	Hierarchy Level
Environmental Score	Environmental	The environmental pillar measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems. It reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities in order to generate long term shareholder value.	1
Emission Reduction	Environmental	The emission reduction category measures a company's management commitment and effectiveness towards reducing environmental emission in the production and operational processes. It reflects a company's capacity to reduce air emissions (greenhouse gases, F-gases, ozone-depleting substances, NOx and SOx, etc.), waste, hazardous waste, water discharges, spills or its impacts on biodiversity and to partner with environmental organisations to reduce the environmental impact of the company in the local or broader community.	2
Product Innovation	Environmental	The product innovation category measures a company's management commitment and effectiveness towards supporting the research and development of eco-efficient products or services. It reflects a company's capacity to reduce the environmental costs and burdens for its customers, and thereby creating new market opportunities through new environmental technologies and processes or eco-designed, dematerialized products with extended durability.	2
Resource Reduction	Environmental	The resource reduction category measures a company's management commitment and effectiveness towards achieving an efficient use of natural resources in the production process. It reflects a company's capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management.	2
Social Score	Social	The social pillar measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. It is a reflection of the company's reputation and the health of its license to operate, which are key factors in determining its ability to generate long term shareholder value.	1
Customer /Product Responsibility	Social	The customer/product responsibility category measures a company's management commitment and effectiveness towards creating value-added products and services upholding the customer's security. It reflects a company's capacity to maintain its license to operate by producing quality goods and services integrating the customer's health and safety, and preserving its integrity and privacy also through accurate product information and labelling.	2
Society /Community	Social	The society/community category measures a company's management commitment and effectiveness towards maintaining the company's reputation within the general community (local, national and global). It reflects a company's capacity to maintain its license to operate by being a good citizen (donations of cash, goods or staff time, etc.), protecting public health (avoidance of industrial accidents, etc.) and respecting business ethics (avoiding bribery and corruption, etc.).	2
Society /Human Rights	Social	The society/human rights category measures a company's management commitment and effectiveness towards respecting the fundamental human rights conventions. It reflects a company's capacity to maintain its license to operate by guaranteeing the freedom of association and excluding child, forced or compulsory labour.	2
Workforce /Diversity and Opportunity	Social	The workforce/diversity and opportunity category measures a company's management commitment and effectiveness towards maintaining diversity and equal opportunities in its workforce. It reflects a company's capacity to increase its workforce loyalty and productivity by promoting an effective life-work balance, a family friendly environment and equal opportunities regardless of gender, age, ethnicity, religion or sexual orientation.	2
Diversity and Opportunity Processes/ Policy Diversity and Opportunity	Social	Does the company have a policy to drive diversity and equal opportunity?	3
Women Managers	Social	Percentage of women managers.	3

Table 7: Thomson-Reuters ESG Factors Hierarchy

ESG Factor	Pillar	Definition	Hierarchy Level
Workforce /Employment Quality	Social	The workforce/employment quality category measures a company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions. It reflects a company's capacity to increase its workforce loyalty and productivity by distributing rewarding and fair employment benefits, and by focusing on long-term employment growth and stability by promoting from within, avoiding lay-offs and maintaining relations with trade unions.	2
Workforce /Health & Safety	Social	The workforce/health & safety category measures a company's management commitment and effectiveness towards providing a healthy and safe workplace. It reflects a company's capacity to increase its workforce loyalty and productivity by integrating into its day-to-day operations a concern for the physical and mental health, well-being and stress level of all employees.	2
Workforce /Training and Development	Social	The workforce/training and development category measures a company's management commitment and effectiveness towards providing training and development (education) for its workforce. It reflects a company's capacity to increase its intellectual capital, workforce loyalty and productivity by developing the workforce's skills, competences, employability and careers in an entrepreneurial environment.	2
Corporate Governance Score	Corporate Governance	The corporate governance pillar measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long term shareholders. It reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long term shareholder value.	1
Board of Directors/Board Functions	Corporate Governance	The board of directors/board functions category measures a company's management commitment and effectiveness towards following best practice corporate governance principles related to board activities and functions. It reflects a company's capacity to have an effective board by setting up the essential board committees with allocated tasks and responsibilities.	2
Board of Directors/Board Structure	Corporate Governance	The board of directors/board structure category measures a company's management commitment and effectiveness towards following best practice corporate governance principles related to a well balanced membership of the board. It reflects a company's capacity to ensure a critical exchange of ideas and an independent decision-making process through an experienced, diverse and independent board.	2
Board Structure/Board Diversity	Corporate Governance	Is there female representation on the board?	3
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Source: Thomson Reuters

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
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Underperform	N/A	≥ 20%

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Research Analysts

Savita Subramanian

Equity & Quant Strategist
MLPF&S
+1 646 855 3878
savita.subramanian@baml.com

Jill Carey Hall, CFA

Equity & Quant Strategist
MLPF&S
+1 646 855 3327
jill.carey@baml.com

James Yeo

Equity & Quant Strategist
MLPF&S
+1 646 743 0187
james.h.yeo@baml.com

Dan Suzuki, CFA

Equity & Quant Strategist
MLPF&S
+1 646 855 2827
dan.suzuki@baml.com

Alex Makedon

Cross-Asset & Quant Strategist
MLPF&S
+1 646 855 5982
alex.makedon@baml.com

Marc Pouey

Equity & Quant Strategist
MLPF&S
+1 646 855 1142
marc.pouey@baml.com

Jimmy Bonilla

Equity & Quant Strategist
MLPF&S
+1 646 556 4179
jimmy.bonilla@baml.com