PAX World Funds
Advised by Impax

The Investment Case for Gender Equality

by Julie Gorte, Ph.D., Senior Vice President for Sustainable Investing

Imagine that some all-powerful, alien being issued a decree to all U.S. businesses that they may empower only half their workers, and must discriminate against the rest. And then, because that being is all-powerful, it jumped into the future to see how its experiment turned out. I'll bet that in this fictional scenario the alien found that the U.S. struggled mightily to compete with more adept businesses in other countries. The World Economic Forum regards gender equality in the business environment to be part of labor market efficiency, one of twelve pillars of national economic competitiveness, and countries whose rankings drop are often flagged for gender inequality in labor markets.[1]

Sadly, this isn't all science fiction: discrimination against women—roughly half the workforce—is a fact, all over the world, and in some places more than others. But it's possible that we will look back on 2017 and say "that was the year the needle moved." Time's Person of the Year was The Silence Breakers, or women who spoke up about sexual harassment. 2017 was also the year that some of the largest asset managers on the planet began to vote against certain board members when the boards consisted only of men.[2] The proportion of shareholders voting in favor of board diversity resolutions in 2017 averaged 31%, up from 26% in 2016.[3] PriceWaterhouse, in its most recent annual corporate director survey, noted that "gender diversity on corporate boards has also become a clear priority for institutional investors in 2017."

Gender diversity, it seems, has arrived as an investment issue. Yet across the globe, with few exceptions, women are underrepresented in management, on corporate boards, and in better-paid technical professions. They are paid less than men for substantially equal work. They are discriminated against in ways ranging from the horrific, like genital mutilation, to perniciously subtle, like unconscious bias. While correcting these imbalances would certainly benefit women, gender equality is not a zero-sum game. Achieving gender equality is a good thing for everyone. Moreover, it's good for business, and good for investors.

KEY TAKEAWAYS

Gender equality is not a zero-sum game. Achieving gender equality is a good thing for everyone. Moreover, it's good for business.

Eliminating the gender gap would improve economic efficiency and could add $28 trillion to global GDP.

Companies that include women among senior decision-makers and provide equal opportunities to men and women, do better than their competitors.

---

[1] Klaus Schwab, "The Global Competitiveness Report 2016-2017," World Economic Forum Insight Report, 2016.
[2] See, for example, Emily Chasan, "After Fearless Girl, State Street Puts Men-Only Boards on Notice," Bloomberg Markets, July 26, 2017; and Trevor Hunnicutt, "BlackRock supports effort to boost number of women board members," Reuters, July 13, 2017.
[3] "2017 Proxy Season Review," Sullivan & Cromwell LLP, July 17, 2017.

ECONOMIC IMPACT

An overwhelming body of research supports the business case for gender equality. Starting at the macro level, management consulting firm McKinsey reported that the global economy could be between $12 trillion and $28 trillion larger in 2025 if gender gaps were reduced or eliminated.[4] The lower figure represents the potential if all countries matched the performance of the best country in their respective region in terms of eliminating gender gaps, and the higher figure represents what could happen if all gender gaps were eliminated. What does $28 trillion look like? It's about the size of the gross domestic product (GDP) of the U.S. and China combined—which currently rank first and second on the global GDP list.

In its 2016 gender gap report, the World Economic Forum notes that economic gender parity could add $240 billion to the GDP of the UK, $1.2 trillion to that of the U.S., $526 billion to the GDP of Japan, and $285 billion to the GDP of Germany.[5] The International Monetary Fund asserts that closing gender gaps is as much a part of economic development as poverty reduction, and adds that greater gender equality improves economic efficiency in three ways: improved productivity, using more household resources to benefit children, and improved decision- and policy-making of institutions.[6]

The same principle applies domestically. Brookings notes that "The U.S. economy will not operate at its full potential unless government and employers remove impediments to full participation by women in the labor market… In fact, barriers to participation by women also act as brakes on the national economy, stifling the economy's ability to grow."[7] These barriers are not isolated: legal barriers to economic development on the part of women persist in every region, and in developed as well as developing economies, or to be specific, in 155 of the world's 195 countries.[8]

Now let's take a closer look at the world of corporations and their investors. There is often an assumption that corporations, being economic actors on a competitive stage, always act in their own self-interest as skilled competitors are assumed to do, and thus if women are less well represented in senior and technical roles it must be for solid financial or competitive reasons. That's the same fallacy as assuming that there cannot be a $20 bill on the sidewalk, because if there were, it would have been picked up already. A wealth of literature shows that corporations that include women among senior decision-makers, eliminate pay gaps, and provide equal opportunities to men and women, actually do better than their competitors.[9]

THE COST OF GENDER BIAS AND DISCRIMINATION

Just as greater equality can boost economic performance, discrimination can impair it. This point is particularly striking in a year when sexual harassment arrived as a mainstream issue. While the overall economic cost of discrimination and harassment is not known, it is likely to be substantial, with reports of figures like 80% of women who have been harassed leaving their jobs within two years.[10] The EEOC convened a special task force to illuminate the economic impact of harassment in the workplace, and concluded that it is a persistent, often unreported, problem, but the economic toll of direct costs—the minority of cases that are reported and penalties are levied—came to $164.5 million in 2015.[11] Moreover, that figure might be far higher if harassed workers feel more empowered to report incidents; the EEOC reports that three of every four people experiencing harassment have never reported it. The penalties that are paid is money down the drainpipe. In addition to the monetary penalties paid, the total cost is even greater if we think of the opportunity cost, or opportunities foregone, due to bias and discrimination.

But penalties for noncompliance with equal opportunity statutes is probably a small part of the overall cost to the economy of discrimination and harassment. A report on the impact of gender bias in society on GDP growth globally concluded that societies that have more gender bias have lower per capita GDP.[12] In the US, it is estimated that harassment costs $4.4 million annually in lost wages[13] and 973,000 hours of unpaid leave each year as a result of debilitating reactions to harassment. If we count the economic toll of subtle discrimination—discrimination that is rarely possible to prove, and thus rarely incurs penalties—the drag on the economy is worse. University researchers

[4] McKinsey Global Institute, "How advancing women's equality can add $12 trillion to global growth," September 2015.
[5] World Economic Forum, "The Global Gender Gap Report," 2016.
[6] Ana Revenga and Sudhir Shetty, International Monetary Fund, "Empowering Women Is Smart Economics," Finance & Development, March 2012, Vol. 49, No. 1.
[7] Diane Whitmore Schanzenbach and Ryan Nunn, "The 51%: Driving growth through women's economic participation," Brookings Institution, Thursday, October 19, 2017.
[8] Rachel Vogelstein, "Let Women Work: The Economic Case for Feminism," Foreign Affairs, January-February 2018.
[9] Visit Pax World's Gender Research page for a list of studies on the relationship between gender diversity and corporate performance: https://paxworld.com/category/research/gender/
[10] Nilofer Merchant, "The Insidious Economic Impact of Sexual Harassment," Harvard Business Review, November 29, 2017.
[11] Chai R. Feldblum & Victoria A Lipnic, "Select Task Force on the Study of Harassment in the Workplace," EEOC, June 2016.
[12] Debasis Bandyopadhyay, "Gender Biased Institutions and the Wealth of Nations," Social Science Research Network, February 24, 2017.
[13] Equal Rights Advocates "Missing from the Women's Agenda: The Threat of Sexual Violence at Work," February 4, 2014.

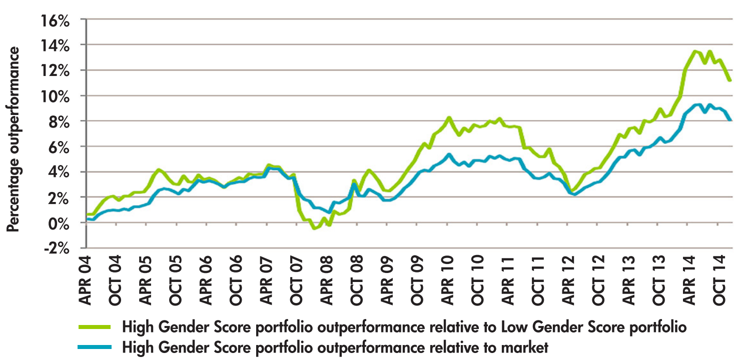
conducted a meta-analysis of all forms of discrimination, both blatant and subtle, and concluded that "the effects of subtle discrimination were at least as bad as, if not worse than, overt discrimination."[14]

LEADERSHIP AND WORKFORCE

More equal gender balance in the places where corporate decisions are made—the boardroom and the executive suite—is associated with better financial outcomes.

One of the most extensive studies that support the case for gender equality is also one of the newest, from Credit Suisse Research Institute.[15] This study looked at the impact of both board and executive diversity at over 3,000 companies globally, and found clear evidence that more women on boards and in senior management generated higher returns on equity, while still having more conservative balance sheets. That means that having more women decision makers is associated with improved returns without raising the risk. As investors, we expect to get higher returns if we take more risks; getting higher returns without paying for it in terms of heightened risk indicates a very robust source of value. Moreover, the companies in this group of 3,000 large companies[16] with at least one woman on the board outperformed the group with no women for over 10 years, from 2006 through mid-2016.

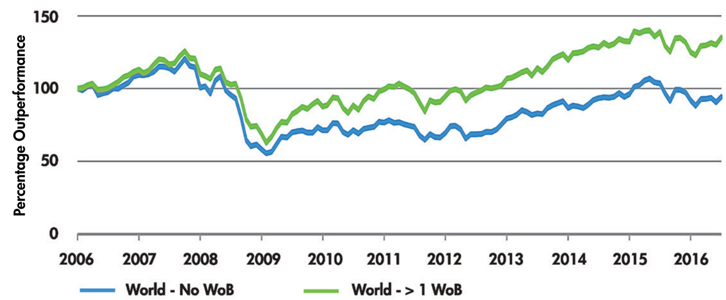
TOP-RANKED COMPANIES BASED ON THE ROBECOSAM GENDER SCORE OUTPERFORM



Source: RobecoSAM, "Does Corporate Gender Equality Lead to Outperformance?" 2015

That finding also applies to women in senior management. Companies with more women in senior management—even when "more" is limited to a single woman—outperformed the entire sample of over 3,000 companies in terms of share price from 2009 through mid-2016. In addition, the share price performance for companies with more women in management was better than the performance of companies with fewer. The best-performing cohort was the group of companies with greater than 50 percent women in senior management.

GLOBAL PERFORMANCE:
COMPANIES MARKET CAP >USD 10 BILLION

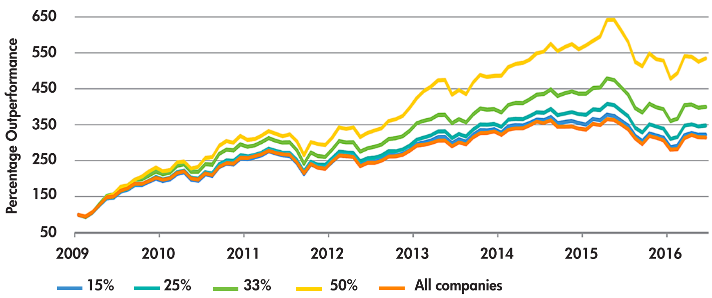


Source: Bloomberg, Credit Suisse Research, "The CS Gender 3000: The Reward for Change" 2016
Past performance does not guarantee futures results.

In 2015, RobecoSAM looked at gender diversity across all organizational levels, constructing one portfolio of companies with low gender scores (lower proportions of women in the workforce and management, and higher pay disparity) and high gender scores.[17] The companies in the portfolio with the top gender rankings outperformed the market over the decade between 2004 and 2014, and the highest-ranked companies outperformed the portfolio with the lowest gender score by an even greater margin.

[14] Eden King and Kristen Jones, "Why Subtle Bias Is So Often Worse than Blatant Discrimination," Harvard Business Review, July 13,2016.
[15] Credit Suisse Research Institute, "The CS Gender 3000: Reward for Change," September 2016.
[16] "Large companies" in this study, is defined as companies with a market capitalization exceeding $10 billion.
[17] RobecoSAM, "Does corporate gender equality lead to outperformance?" 2015.

SHARE PRICE PERFORMANCE FOR BASKETS WITH DIFFERENT TIERS OF FEMALE PARTICIPATION IN SENIOR MANAGEMENT



Source: Bloomberg, Credit Suisse Research, "The CS Gender 3000: The Reward for Change" 2016

But what about the United States? There's a widely-held belief that Europe is ahead of the rest of the world when it comes to diversity; are these global results perhaps driven by Europe? No. A recent academic paper looks at the performance of over 2000 firms in the United States between 2000 and 2013, using a new technique to help explain the diversity of findings in previous academic work.[18] The striking insight from this work is that for high-performing companies, having women on the board is positively and significantly associated with better financial performance.[19] What that means, for people who aren't statistics whizzes, is that having more women on boards can be a very good thing for financial performance, but that it's not enough to overcome other factors that make performance dismal at companies. That makes sense. If women were really some kind of silver bullet that overcame every other wrong decision and misguided strategy, it's very likely that someone really would have picked up that particular $20 bill, if it ever had been on the sidewalk to begin with.

The same theme comes out when we look at management diversity. One study looked at executive team diversity in most of the US firms in the S&P 1500 between 2001 and 2014, and found that firms with diverse executive teams "dramatically outperform" firms with homogeneous teams. Investing in companies with diverse teams and selling those with homogeneous teams delivered a cumulative risk-adjusted return of 60%, exceeding returns to momentum, profitability, asset growth and accrual strategies. Moreover, this style of investing "combines high returns with low volatility," which yields a Sharpe Ratio[20] (which measures risk-adjusted return) that dominated all other investment strategies considered.[21]

Outside of Europe and the US, some new work has also shown that better gender balance on boards is valuable financially. KPMG reported that Australian companies with more women on their boards achieved higher revenue growth, profitability and shareholder returns compared with companies with all-male boards. Moreover, while only 21 companies in the ASX 300+[22] had female CEOs, the 21 companies that did increased revenues by 9% in 2016, compared with 0.5% average for the entire group.[23] New studies published in 2017 also showed that board or executive diversity improved financial performance for companies in many other places, including Zambia,[24] Egypt,[25] and Sri Lanka.[26]

Grant Thornton also shows a strong link between gender diversity in corporate decision-making and the growth prospects of businesses.[27] They examined companies in the U.S., UK and India, and concluded that companies with women on boards and in executive management had better returns on assets in all three markets. Overall, the opportunity cost, or potential value sacrificed by companies with no women in leadership ranks, totaled $655 billion in all three markets.

There has been relatively little work done on the links between gender diversity throughout companies and financial performance, in part because data on firms' overall employment diversity is largely unavailable. Morgan Stanley did examine gender diversity in 108 tech companies, and found that over the five years ending in September 2016, those with better gender diversity (including percentages of women employees, executives, managers and board members) returned 5.4% more annually than peers with less gender diversity. Companies that employed more women at all levels had better returns

[18] Martin Conyon and Lerong He, "Firm Performance and Boardroom Gender Diversity: A Quantile Regression Approach," March 16, 2016.
[19] Financial performance is measured by Tobin's Q, the value of the firm's debt plus equity divided by total assets.
[20] Sharpe Ratio is the average return earned in excess of the risk-free rate per unit of volatility, or total risk.
[21] Alberto Manconi, Antonio Emanuele Rizzo and Oliver G. Spalt, "Diversity Investing," Social Science Research Network, August 16, 2017.
[22] The S&P/ASX 300 index (ASX 300+) is a market-capitalization weighted and float-adjusted stock market index of Australian stocks listed on the Australian Securities Exchange from Standard & Poor's.
[23] "Secrets to success of the ASX 300+," KPMG Enterprise, 2017.
[24] Bryson Mumba, "Board Gender Diversity and Firm Performance: An Empirical Analysis of Panel Data from Companies Listed on the Lusaka Stock Exchange," Social Science Research Network, November 2, 2017.
[25] Malsa Ararat, Moataz El-Helaly and Nermeen F. Shehata, "Boards' Gender Diversity and Firm Performance Before and after the Egyptian Revolution," Social Science Research Network, July 1, 2017.
[26] R.G.M.N. Rupawaththa and Welamedde Gedara Vishaka Gunasekara, "Do Women in Top Management Affect Firm Performances? Analysis of Public Quoted Companies in Sri Lanka," Social Science Research Network, December 8, 2016.
[27] Francesca Lagerberg, Grant Thornton, "The value of diversity," September 29, 2015.

than companies with similar levels of gender diversity in other sectors—something that bears repeating, in a period where gender discrimination is under the microscope for tech firms.[28]

Morgan Stanley also weighed in on the value of gender diversity in 2016, taking a very comprehensive approach to what "gender diversity" means in business.[29] That approach included five themes: gender diversity in executive ranks and on boards; pay equality; representation of women at employee, manager, executive and director levels; policies promoting equal opportunity and diversity; and work-life balance programs. The study found that companies with better gender diversity had better financial performance (return on equity) and lower volatility than less diverse peers, and that outperformance stretched over a five-year period. Moreover, the top fifth of companies, in terms of gender score, had much better performance[30] than peers, indicating that having better gender balance was better for companies than a tick-box approach of having token women in decision-making roles.

THE VALUE OF DIVERSITY IN DECISION-MAKING

If you take a quick trip through literature, both academic and popular, on the value of diversity in decision-making, a couple of ideas jump out. One is that diverse groups are smarter than homogeneous ones, in terms of solving problems and making decisions.[31] People who bring different experiences, skills and backgrounds to group decision-making process force the group members to examine more alternatives, prepare better for decision-making, and anticipate different viewpoints. The variety of ideas that come up in diverse groups is one source of this outperformance, and another is more careful information processing that happens in more diverse groups.[32]

Being better at group decision-making and diversity doesn't mean being more comfortable. It is often more difficult to reach a decision, much less a consensus, in a diverse group, and the likelihood of conflict is greater. In short, just because diversity makes for better decision-making doesn't mean it's more fun. Perhaps that's one reason for the glacial pace of progress in achieving greater diversity in corporate executive ranks and boardrooms; the network of people we know, like and are comfortable with, just feels more convivial than groups that include people we don't usually think of as being in the tribe. This is a place where the "no pain, no gain" advice has some traction.

Was it fun for the board of Nike to listen to its first woman member, Jill Ker Conway, exhorting the company to pay more attention to the female athletic equipment market? We may never know, but we can certainly imagine that it wasn't. Judy Rosener writes about Nike's and Conway's journey in her book America's Competitive Secret: Women Managers, noting that the board took a while to warm up to Conway's idea that the company create a women's division.

"Initially her idea was rejected out of hand. As Nike president Richard Donahue recalled, "Our habit was to make a male product, color it pink and sell it." Conway kept arguing for a separate division run by women and targeting female customers. Eventually the board acquiesced, and by late 1993 the women's division accounted for 20 percent of Nike's domestic revenues."[33]

By May 2016, Nike's revenues from its women's segment had revenues of nearly $6.3 billion, and the company announced plans in 2015 to grow that to $11 billion by 2020.[34]

Yes, that's an anecdote, and that is not the same as proof. But it does comport with the results of real research, such as a Harvard study that documented that teams with more women on them outperformed teams with higher IQ scores on a set of tasks including brainstorming, decision making, and visual puzzles.[35]

"The bottom line is that there are good, well-researched reasons why having more equal gender balance results in better outcomes."

CONTRIBUTIONS TO SPECIFIC OUTCOMES

i. Innovation

It is widely understood that the proportion of women in STEM fields is low, and making progress in evening the scales has been difficult and slow. So, we often tend to think of research and development (R&D),[36] or the whole enterprise of innovation, as being a man's world—and while it often is, there is evidence that gender diversity brings value to it.

[28] Morgan Stanley, "Women Employees Boost the Bottom Line for Tech Firms," May 3, 2017.
[29] Morgan Stanley, "Gender Diversity is a Competitive Advantage," May 12, 2016.
[30] This was measured by information ratio, a measure of risk-adjusted returns.
[31] Katherine W. Phillips, "How Diversity Makes Us Smarter," Scientific American, October 1, 2014.
[32] Katherine W. Phillips, Katie A. Liljenquist and Margaret A. Neale, "Better Decisions Through Diversity," Kellogg Insight, 2009.
[33] Judy B. Rosener, America's Competitive Secret: Women Managers, (New York: Oxford University Press), 1995, pg 127.
[34] Trefis Team, "Here Are The Three Key Growth Drivers For Nike," Forbes, November 24, 2015.
[35] Anita Woolley and Thomas W. Malone, "Defend Your Research: What Makes a Team Smarter? More Women." Harvard Business Review, June 2011.
[36] Research and development (R&D) refers to the investigative activities a business conducts to improve existing products and procedures or to lead to the development of new products and procedures.

In examining whether diverse teams were better at producing innovation, and in particular, radical innovation (as opposed to incremental innovation),[37] researchers found that the probability of making a radical innovation increased significantly when the R&D team was more gender-diverse. That comports with the findings of a paper that came out in 2015 looking at board diversity and innovation, which found that firms with more gender-diverse boards achieved greater innovative success.[38] The two works focused on gender diversity in very different places—R&D teams and boards—yet both found value in that diversity.

Another benefit of diverse teams resonates well for innovation: more gender-balanced teams are also more likely to experiment and be creative. "At the heart of the innovation strategy are people prepared and able to work collaboratively in teams and to exchange and synthesize knowledge from many different sources."[39]

A study of the impact of women in top management over a 15-year period found that having women in top management improved firm financial performance[40] in companies focused on innovation, in part because of the ability of diverse groups to bring different perspectives to the process of decision-making.[41] Another part of that equation was that women tend to have some of the behavioral attributes in managers that are particularly supportive of creativity and innovation: bargaining and negotiation, and coalition building and cooperation, rather than domination.

ii. Risk

Innovation is, of course, only one source of corporate competitive success and only one parameter of investment performance. So why focus on that? Because it helps to illuminate another area where perception and reality may not match perfectly: risk. Research and development, and especially radical innovation, is generally thought of as a risky enterprise. There's a vast collection of literature documenting the idea that most new products fail.[42] When they win, the success is spectacular enough to keep the enterprise of innovation going, but the risks are significant. The idea that women are more risk-averse than men is pervasive. But is it right? Not entirely, at least not in the simplistic women-run-from-risk-while-men-live-on-tightropes form. Credit Suisse notes that in their study of 3000+ firms around the globe, women appear to manage more for downside risk, rather than focusing on absolute return as male managers seem to do.[43] Firms with more women decision makers tend to have higher dividend payouts and higher returns on capital employed, which "implies better returns for lower risk," per Credit Suisse. This is consistent with the findings that gender diversity on boards is correlated with decisions that add a hedging value premium and a reduction in risk.[44] An earlier study looked at insolvency, a different facet of risk, and found compelling evidence that having more women on the board is associated with a lower probability of insolvency for companies.[45]

The quality of financial information can also pose a risk to investors. It is well understood that companies can manipulate their financial reporting—often called earnings management—in ways that make them appear healthier financially than they really are. A recent study showed that Spanish companies with more gender-diverse audit committees had higher earnings quality: fewer errors, less non-compliance or omission of information. Moreover, higher percentages of women on these audit committees and female committee chairs also was associated with greater transparency in audit reports.[46]

This kind of risk impact is echoed in sectoral work as well. Two studies looked at the impact of gender diversity in banking, a sector where risk management is particularly critical. One showed that having more women on the boards of banks was associated with greater bank stability and lower nonperforming loan ratios.[47] Another surveyed the behavioral economics literature on gender diversity in senior leadership and risk taking in financial institutions, and noted that while the literature is still a bit thin, it appears that greater gender diversity does offer benefits in risk mitigation.[48]

---

[37] Díaz-García, Cristina; González-Moreno, Angela; Sáez-Martínez, Francisco Jose, "Gender Diversity within R&D Teams: Its Impact on Radicalness of Innovation," Innovation: Management, Policy & Practice, Vol. 15, No. 2, June 1, 2013.
[38] Jie Chen and Woon Sau Leung and Kevin P. Evans, "Board Gender Diversity, Innovation and Firm Performance," November 30, 2015.
[39] The Lehman Brothers Centre for Women in Business, "Innovative Potential: Men and Women in Teams," 2007.
[40] Measured by Tobin's Q.
[41] Cristian L. Dezso and David Gaddis Ross, "Does Female Representation in Top Management Improve Firm Performance? A Panel Data Investigation," Strategic Management Journal.
[42] See, for example, Joan Schneider and Julie Hall, "Why Most Product Launches Fail," Harvard Business Review, April 2011; Anne Fisher, "Why most innovations are great big failures," Fortune, October 7, 2014.
[43] Credit Suisse, "The CS Gender 3000: The Reward for Change," September 2016.
[44] Rubeena Tashfeen, "Board Gender Diversity and Risk Management: And a View of The Financial, Investment and Liquidity Policies," July 17, 2016.
[45] Nick Wilson and Ali Altanlar, "Director Characteristics, Gender Balance and Insolvency Risk: An Empirical Study," September 22, 2009.
[46] María Consuelo Pucheta-Martínez, Inmaculada Bel-Oms and Gustau Olcina-Sempere, "Corporate governance, female directors and quality of financial information," Business Ethics: A European Review 25:4, October 2016.
[47] Ratna Sahay, Martin Čihák, Papa N'Diaye, Adolfo Barajas, Annette J. Kyobe and Srobona Mitra, "Banking on Women Leaders: A Case for More?" Social Science Research Network, September 2017.
[48] Kristin N. Johnson, "Banking on Diversity: Does Gender Diversity Improve Financial Firms' Risk Oversight?" Social Science Research Network, October 10, 2017.

Risk can show up in a thousand ways, including some that are sometimes cryptic. One of the subtler indicators of possible risk is earnings management, or the use of accounting techniques to create rose-colored glasses of corporate financial performance. Understandably, investors prefer to see corporate financial performance as it is, and quite a lot of financial analysis is aimed at penetrating the appearance of robustness created by earnings management to get at the true picture. From the studies that have been done on the intersection between gender diversity and earnings management, it appears that women's greater propensity to monitor risk manifests itself in accounting decision-making: women on boards and women CFOs are associated with lower earnings management, and higher quality earnings.[49]

THE BOTTOM LINE

The lives we live, from perspectives biological, societal, economic, and financial, are driven by heterogeneity. Men and women together can do more, and do better, than either gender—or really, any gender—can do alone.

Often, the resistance to achieving better gender balance is driven by the unspoken fear, on the part of the haves, that empowering have-nots will diminish their own opportunities or wealth. The economic studies, as well as the financial ones, cited here show the exact opposite: the world of economics and finance is not a zero-sum game. We're all better off when we all have equal access to opportunities, including the opportunity to make strategic decisions.

Julie Gorte

Julie Gorte, Ph.D. is Senior Vice President for Sustainable Investing and oversees environmental, social and governance-related research on prospective and current investments as well as the firm's shareholder engagement and public policy advocacy. Julie is also a member of the Pax World Gender Analytics team and the portfolio management team of the Pax Ellevate Global Women's Leadership Fund. Prior to joining Pax, Julie served as Vice President and Chief Social Investment Strategist at Calvert. Her experience before she joined the investment world in 1999 includes nearly 14 years as Senior Associate and Project Director at the Congressional Office of Technology Assessment, Vice President for Economic and Environmental Research at The Wilderness Society, Program Manager for Technology Programs in the Environmental Protection Agency's policy office and Senior Associate at the Northeast-Midwest Institute. She received her Bachelor of Science in Forest Management at Northern Arizona University and a Master of Science and Ph.D. from Michigan State in resource economics.

[49] See, for example, Ferdinand A Gul, Bin Srinidhi and Judy Tsui, "Do Female Directors Enhance Corporate Board Monitoring? Some Evidence from Earnings Quality," September 2007; Gerdinand A. Gul, Marion Hutchinson, and Karen M. Y. Lai, "Gender-Diverse Boards and Properties of Analyst Earnings Forecasts," Accounting Horizons, September 2013, Vol. 27, No. 3, pp. 511-538; and Bill Francis, Iftekhar Hasan, John Chool Park, and Qiang Wu, "Gender Differences in Financial Reporting Decision Making: Evidence from Accounting Conservatism," Contemporary Accounting Research, November 5, 2014.

Pax World Funds
30 Penhallow Street, Suite 400
Portsmouth, NH 03801
800.372.7827

info@paxworld.com
www.paxworld.com