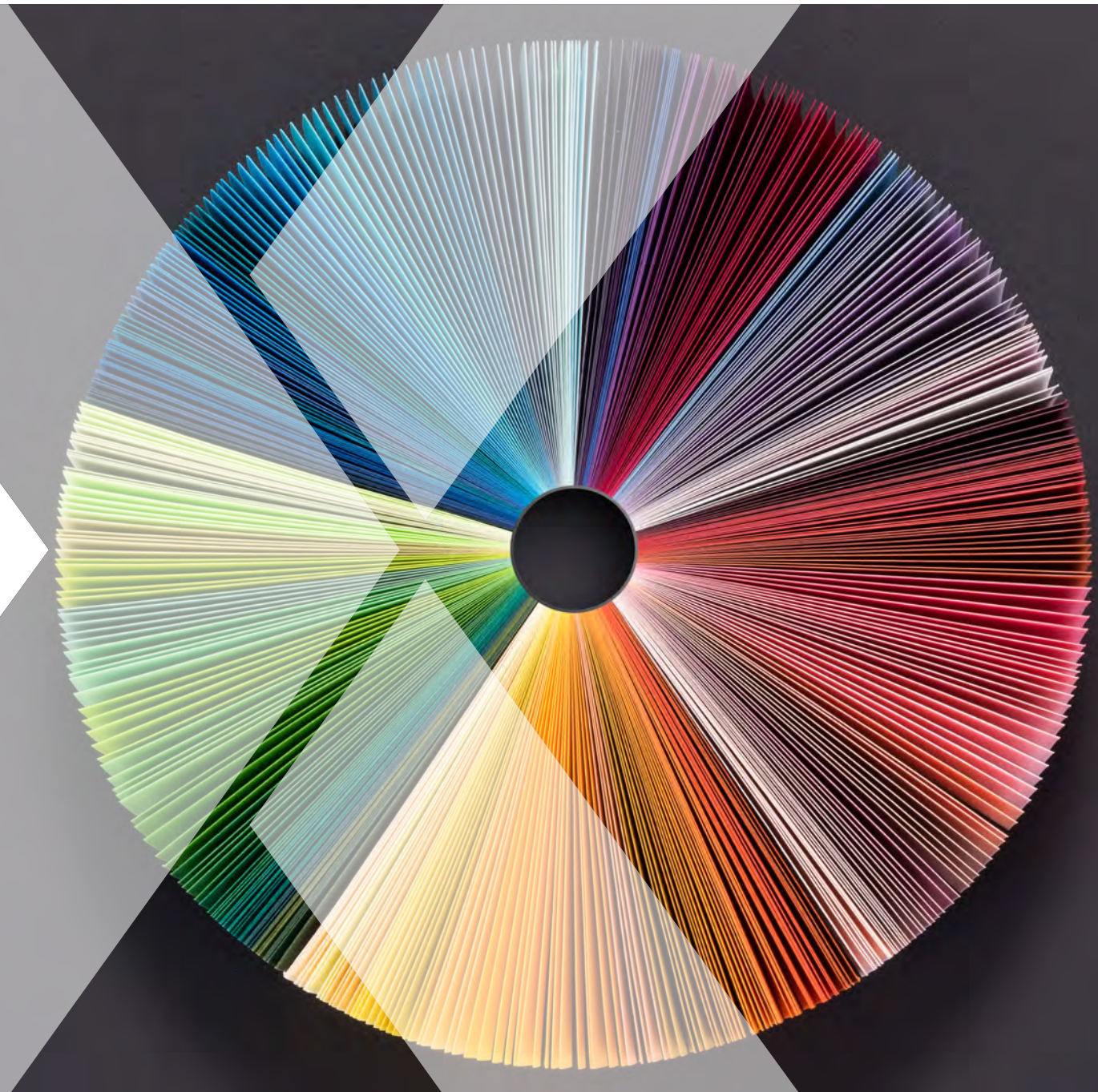


The business case for diversity: 2022 update

Julie Gorte, Ph.D.





Julie Gorte, Ph.D
SVP, Sustainable Investing

Julie Gorte is Senior Vice President for Sustainable Investing at Impax Asset Management LLC, the North American division of Impax Asset Management Group and investment adviser to Pax World Funds.

She 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 Impax Gender Analytics team.

Prior to joining the firm, Julie served as Vice President and Chief Social Investment Strategist at Calvert. Her experience before she joined the investment world in 1999 includes a various number of roles. Julie spent nearly 14 years as Senior Associate and Project Director at the Congressional Office of Technology Assessment. Additionally, she has held the roles of Vice President for Economic and Environmental Research at The Wilderness Society, and Program Manager for Technology Programs in the Environmental Protection Agency's policy office and Senior Associate at the Northeast-Midwest Institute.

Julie serves on the boards of the Endangered Species Coalition, E4theFuture, Clean Production Action and is the board chair of the Sustainable Investments Institute.

Julie received a Ph.D. and Master of Science in resource economics from Michigan State University and a Bachelor of Science in forest management at Northern Arizona University.

Contents

The business case for diversity: 2022 update	1
A new business challenge: reproductive wellness	2
Board and Executive diversity	2
Why diversity outperforms: human resource management	4
Culture and innovation	5
Resilience	6
Environmental impact	7
Summary	7



The business case for diversity: 2022 update

Discriminating against other people limits the talent available. In a world confronting the global challenges of racial discrimination and inequality, climate change, resource scarcity and biodiversity loss, all that talent will be needed.

Labor shortages in many markets, exacerbated by the “Great Resignation” during the COVID-19 pandemic, make staff retention and recruitment more critical. People want meaningful, rewarding work and they need to feel valued for doing it. To ensure that all workers feel welcome and that no human talent is wasted, we must eliminate the bias and discrimination many groups face in the workplace.

The good news is that we know far more about diversity and its impact on economics and finance than we used to. For example, most of the improvement in the gender diversity of boards has occurred among larger companies, often because of regulatory mandates. We not only have interesting new data on gender and board diversity every year, but we also have more insight into how broader corporate diversity contributes to economic and financial success through innovation, human resource management and governance.

We believe investors who take advantage of the updated research will be better equipped to find strong, resilient investments. Read on for a summary that offers insights and opportunities for investors.



A new business challenge: reproductive wellness

Following the US Supreme Court ruling on *Dobbs versus Jackson* in June 2022, individual US states now have the right to restrict access to abortion. Many states have already established such restrictions. We believe the Court's ruling, combined with the setbacks many working women suffered during the pandemic, have set back the clock for women's equality.

These developments also sharpen the focus on the role that companies play in providing workplace and economic opportunities to women. While abortion is often framed as a cultural issue, it is also a healthcare issue and an economic issue. Allowing states not only to prohibit abortion, but also to criminalize women for miscarriages and medical complications that terminate pregnancy, may increase already high barriers to economic security and equality, particularly among poor women and women of color.

That, in turn, will affect business performance and national economic performance. Even before the recent Supreme Court decision, curtailments of abortion and other reproductive healthcare services in some states have had a significant economic impact: the Institute for Women's Policy Research [estimated](#) those restrictions cost state and local economies \$105 billion annually across the country.¹

Restrictions on abortion can narrow the talent pool: [research](#) suggests that Targeted Restrictions on Abortion Providers (TRAP) laws (which curtail access to contraceptives and reproductive services including, but not limited to, abortion) make women less occupationally mobile, reduce the number of women entering the workforce, trap women in dead-end jobs, and reduce the number of women entering and graduating from college.² Thus, for many employers, abortion prohibitions may mean that they will have a reduced labor talent pool as women may have to leave the workforce, cut

back hours, or choose to move from states where access to reproductive healthcare is restricted or unavailable.

Employers such as Citigroup, Salesforce, Procter & Gamble, Amazon, Bank of America, Bumble, CVS, Dick's Sporting Goods, Goldman Sachs, Hewlett Packard and many more, responded by announcing that they will pay travel expenses for employees who cannot obtain abortions in the state where they live. This is evidence that some businesses are already concerned about the consequences for their workforces and are taking action.

It is also important to note that the US is one of a tiny minority of developed countries that does not mandate paid family leave. US working mothers are guaranteed a place to pump milk in the workplace, which has been [shown to contribute](#) to higher employee productivity and retention, not to mention fewer days off to care for sick babies. However, childcare duties are at the root of the wealth gap between women and men, and the career interruptions many women experience as a result beget losses that are never fully recouped.

Board and Executive diversity

A decade or two ago, much of the literature that looked at the relationship between financial performance and diversity focused solely on women, and it reported correlations without much speculation as to why the correlations were or were not present. The typical study 15 years ago looked at correlations between board gender diversity and some measure of financial performance, be it return on assets (ROA), return on equity (ROE), Tobin's Q or stock price.

Newer papers do similar work: Nash and Guido correlated various measures of financial performance with board and management diversity for more than 30 countries and over 2,500 large firms.

They found that, in any given year, the profit margins of firms that rank in the top third of diversity measures are approximately 20% higher in the succeeding year than firms in the bottom third.³ Gender diversity was also correlated with

1 Institute for Women's Policy Research, 2021

2 Washington Center for Equitable Growth, 2022



Board and Executive diversity (continued)

lower 12-month volatility. The study also noted that higher-diversity firms tend to have positive correlations between gender board/management diversity and ROA, ROE and both gross and net profit margins. The data show that the difference in ROE is significant, even in year 1, but the disparity

between the 5-year cumulative ROE of those companies in the top and bottom thirds for board diversity was 20.5%. For companies with diversity in senior management the difference was even higher: 29.6% (see Figures 1 and 2 below).

Figure 1: Senior Management Gender Diversity vs. Cumulative ROE

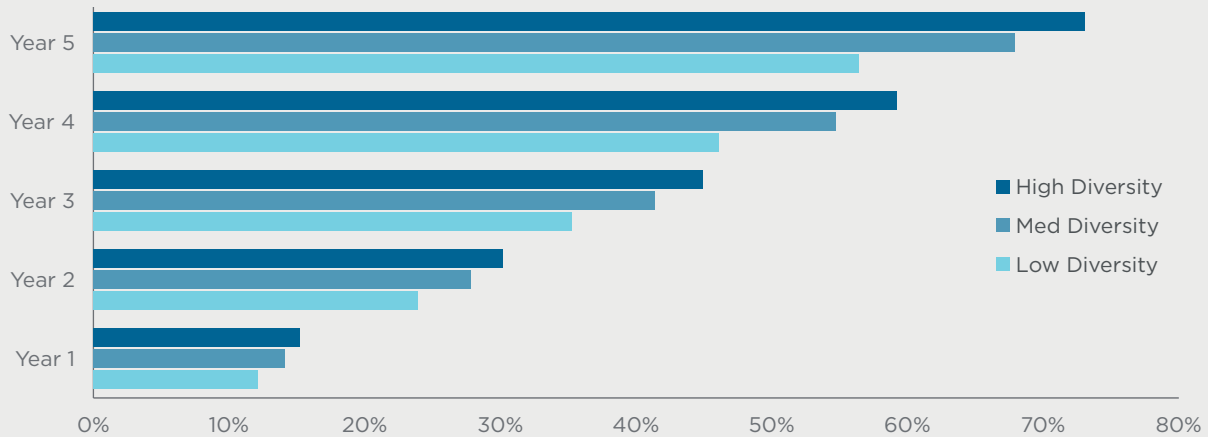
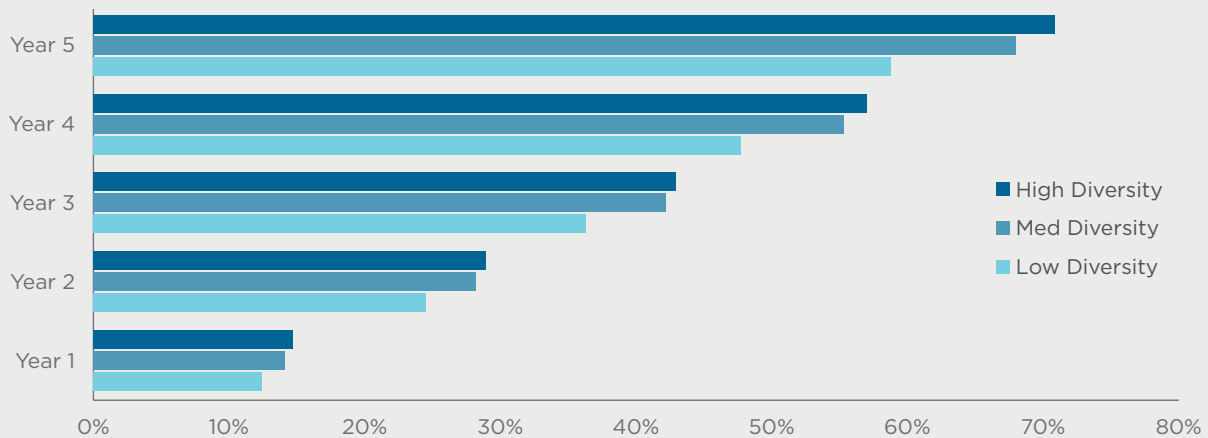


Figure 2: Boardroom Gender Diversity vs. Cumulative ROE



Another new [study](#) found that firms with a history of greater credit risk were less likely than peers to have a woman serving as chief executive officer (CEO), chief financial officer (CFO), or on the board

of directors.⁴ This study found that probability of future default also tended to be smaller in companies with women executives, although not in those with women on boards.

3 Dr. Joanna Nash and Dr. Ron Guido, "Beyond lip service: tracking the impact of the gender diversity gap," Realindex investments, 2021. [realindex_lipservice_report.pdf](#) (firstsentierinvestors.com.au)

4 Iness Aguir, Narjess Boubakri, Miriam Marra and Lu Zhu, "Gender Diversity in Leadership: Empirical Evidence on Form Credit Risk," Social Science Research Network, 23 May 2022.



Why diversity outperforms: human resource management

Most studies on the impact of diversity on financial performance are correlations. While the relationship between variables may be significant, we should remember that they are not necessarily causal. It can be tempting to shoehorn causality into the findings, for example, by concluding that “diverse executive suites make companies more profitable.” Statistically speaking, that’s a bridge too far.

There is emerging literature exploring some of the reasons behind the correlations, at least suggesting (and sometimes testing) that the correlation is not spurious.

One very recent study provides some insight into possible reasons why companies with more diverse groups of decision-makers might perform better. [Latura and Weeks](#) compared progress in Italy, which adopted a gender quota for boards in 2011, and Greece, which has no such mandate.⁵ After the quota was imposed in Italy, the authors found that there was a 50% increase in Italian companies’ gender equality initiatives, compared with Greek companies. The authors note that both countries have relatively low social spending compared with other EU nations but, after the imposition of the board gender quota, Italian companies’ provision of workplace childcare in 2017 was well above the EU average.

The Latura and Weeks study examined a number of workplace policies related to gender equality, including but not limited to pay gaps and various ways of providing family care.

The importance of the labor force gained particular attention during the pandemic, spotlighting the importance of front line workers, often women, and disproportionately women of color. Women have

long opted out of workplaces at higher rates than men, but the pandemic’s impact exacerbated the existing trend. In 2020, all parents, and especially mothers, considered opting out of the workforce at much higher rates than in the past, often to provide childcare and home schooling during the months that those services were largely unavailable.⁶

While the pandemic’s effects are considered unique, they do help to highlight the importance of treating employees fairly and equitably and of creating opportunities for better work-life balance under all circumstances. The simple fact is that some women tend to be less satisfied at work than men for a variety of reasons, including gender pay gaps, lack of support for family responsibilities, lower prospects for career advancement, discrimination, and harassment.

The logical conclusion? Family-friendly workplaces that address gender inequities may be better positioned for performance.

[Chen et. al](#) found, using data from Glassdoor, that women are more likely than men to prefer family-friendly workplace policies and smaller pay gaps, and that US firms that have better policies in these areas tend to perform better, measured by Tobin’s Q.⁷

Focusing on pay disparities in particular, a new paper from [Delis et. al](#) established a positive and significant link between more female decision-makers in firms and lower wage disparity within the firms, both large and small.⁸ While this study did not attempt to then correlate wage disparity with financial performance, others have. [Rouen’s](#) Harvard Business School working paper found “robust evidence” for a negative correlation between firm performance and unexplained pay disparity.⁹ The greater the unexplained pay disparity, the worse the performance.¹⁰

5 Audrey Latura and Ana Catalano Weeks, “Corporate Board Quotas and Gender Equality Policies in the Workplace,” *American Journal of Political Science*, Vol. 00, No. 0, 2022.

6 McKinsey & Company, “Seven charts that show COVID-19’s impact on women’s employment,” March 8, 2021.

7 Jie Chen, Chenxing Jing, Kevin Keasey, Ivan Lim and Bin Xu, “Gender, Workplace Preferences, and Firm Performance: Looking Through the Glass Door,” *Social Science Research Network*, 10 May 2022.

8 Manthos Delis, Iftekhar Hasan, Maria Iosifidi, Panagiotis N. Politsidis & Anthony Saunders; “Gender of Firm Decision-Makers and Within-Firm Wage Disparity”. posted to SSRN June 28, 2022.

9 Unexplained pay disparities are defined as disparities in pay levels unrelated to experience, qualifications, performance, or similar work-related factors.

10 Ethan Rouen, “Rethinking Measurement of Pay Disparity and its Relation to Firm Performance,” *Harvard Business School Working Paper 18-007*, 2017.



Boards with more heterogeneous educational, industrial and organizational experience can boost the quantity and impact of path-breaking corporate innovation.¹²

Culture and innovation

A new strand of emerging literature in the financial and business field focuses on corporate culture. Experts note that there isn't a simple or single definition of corporate culture. It is a combination of values, attitudes, and beliefs that, translated into corporate policies and practice, create a work environment that drives people within the firm to be more (or less) motivated and productive, and can be an intangible asset that affects corporate resilience in the face of rare or unexpected events. There are many variants on the corporate culture theme – governance culture, innovation culture, diversity culture and many more. That often makes it difficult to study empirically, where researchers must not only define what 'culture' they're studying but also find ways to measure it quantitatively despite its qualitative nature.

Despite the difficulty, this literature has become much more interesting. One recent example is a paper by [Likitapiwat et. al](#), who use machine learning to interpret corporate culture, and how that is influenced by female board representation. Specifically, the study examines the relationship between board gender diversity and a culture of innovation. It finds that increasing the proportion of women on the board by one standard deviation improves corporate innovative culture by 2.37%.¹¹ Moreover, greater board gender diversity is also correlated with lower negative impacts on corporate innovation arising from hostile takeover threats.

Another angle on firms' abilities to innovate looks at a different kind of board diversity: knowledge diversity. [Ma et. al](#) found in a 2022 paper that boards with more heterogeneous educational, industrial and organizational experience can boost the quantity and impact of path-breaking corporate innovation.¹²

¹¹ Tanakorn Likitapiwat, Sirimon Treepongkaruna, Pornsit Jiraporn and Ali Uyar, "Corporate culture, innovation, and female board representation: Evidence from earnings conference calls," Social Science Research Network, 22 August 2022.

¹² Wenting Ma, Aurora Genin, Gennaro Bernile and Vineet Bhagwat, "Board Knowledge Diversity and Radical Innovation," University of Miami Business School Research Paper No 3908606, posted on Social Science Research Network, 23 August 2021.



Resilience

Past studies have often found that greater diversity in the ranks of corporate decision-makers was associated with greater resilience to external shocks, like pandemics or financial downturns.

There is abundant evidence that the world is in for a more volatile future than its past would suggest. While the pandemic is no longer the disruptor that it was, it is possible that future pandemics will be more frequent than in the past, largely due to the consequences of climate change. Moreover, physical climate risks – floods, droughts, heat, storms and cyclones, severe precipitation, wildfires, sea level rise – also put a premium on resilience.

Recent experience has shown that our economies are more vulnerable to disruptions at every scale, from local to global.

These circumstances may make corporate resilience to shocks increasingly valuable. There are many factors that can boost resilience, and diversity has been shown to be a positive contributor.¹³

Tarkom et. al shed some light on one likely

mechanism behind this relationship. The paper shows that female CFOs are more efficient than male CFOs at managing working capital (WC), noting that “many business failures are due to inadequate planning by financial managers to strategically manage and control WC”.¹⁴ Days WC, a measure of how long companies take to turn WC into sales revenue, was shorter for companies with female CFOs than for those with male CFOs. Our own research at Impax also shows that having a female CFO is positively associated with financial performance. Since 2016, the gender of the CFO has been a consistent positive contributing factor to better performance both in the US and in the MSCI EAFE Index of developed market stocks that excludes the US and Canada.¹⁵

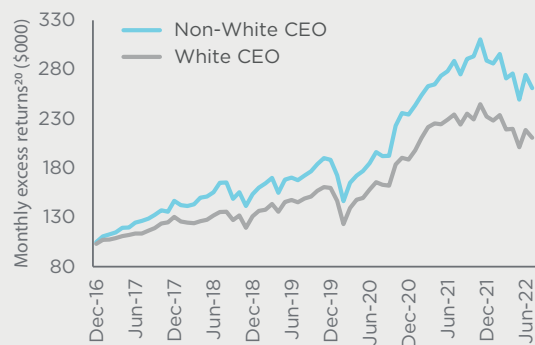
Systemic racism may have also historically contributed to preventing people of color from serving on boards and being promoted to upper management.

Promoting people of color to positions like CFO and CEO is just good business, according to our research. US companies with a CFO and/or CEO of color have performed better than those with white CEOs and CFOs¹⁶ (see Figures 3 and 4):

Figure 3: Non-white CFO & Excess Returns



Figure 4: Non-white CEO & Excess Returns



13 See, for example, Theresa Harrison and Cate Mork, “Diverse sourcing is both a social and business imperative that can help drive supply chain resiliency as well as ESG goals,” EY, 22 October 2021, How diverse sourcing can create more resilient supply chains | EY - Global; and Patrick Reinmoeller and Nicole van Baardwijk, “The Link Between Diversity and Resilience,” MIT Sloan Management Review, July 15, 2005, The Link Between Diversity and Resilience (mit.edu).

14 Augustine Tarkom, Leiza Nochebuena-Evans, and Haibo Wang, “CFO gender and working capital management,” posted on Social Science Research Network, 3 June 2022.

15 Source: Impax Asset Management.

16 Average monthly excess returns for Russell 1000 companies from 12/2016-7/2022. Source: Impact Asset Management.

Environmental impact

Like inequality, climate change is one of the most vexing problems confronting the global community. Importantly, there is some synergy in the solutions to these problems. There is a small but growing literature examining the connections between gender diversity and environmental impact.

[Issa and Salem](#) examined the commitments made by firms in the FTSE 100 index of UK-listed companies to reduce greenhouse gas emissions. This research finds that between 2011 and 2020 firms with more women board members were more likely to deliver better greenhouse gas emissions reductions.¹⁷

A recent [study](#) went further, considering total emissions (scope 1, 2, and 3) for S&P 500 companies between 2002 and 2018, and found that lower total emissions were indeed linked to higher percentages

of women on boards.¹⁸ This effect was stronger with more carbon-intensive firms, which makes sense as they may have more to gain from lowering emissions.

This study also noted that environmental innovation, crucial to reducing carbon emissions, tends to happen more in companies with more gender diversity. The authors shared that “the reduction of GHG emissions in carbon intensive firms is more pronounced when environmental innovation and board gender diversity interact.”

Summary

Diversity is a good thing – from an economic standpoint as well as a normative one.

The evidence that talent is not differentially distributed by gender, age, race or ethnicity is abundant and robust. It stands to reason that diversity has value in business and in financial markets, where competitiveness depends on the ability to make productive and fair use of all the talent available. The fact that diverse groups of people bring different experience and perspectives to the table, providing for more robust oversight, discussions and decision-making, is not only logical but also supported by a compelling arsenal of research. Simply put, diversity brings demonstrable value to business and investors, and to society.

¹⁷ Ayman Issa and Nesrine Ben Salem, “Board Gender Diversity, Corporate Social Responsibility Strategy, and Greenhouse Gas Emissions,” posted to Social Science Research Network, 9 August 2022.

¹⁸ Renata Konadu, Gabriel sam Ahinful, Danquah Boakye, Hany Elbardan, “ Board Gender Diversity, Environmental Innovation and Corporate Carbon Emissions.” posted to researchgate October 2021.





Indices

The **Financial Times Stock Exchange 350 Index (FTSE 350)** is a market capitalization-weighted stock market index incorporating the largest 350 companies by capitalization that have their primary listing on the London Stock Exchange.

The **Russell 1000 Index** is a subset of the Russell 3000 index. It represents the 1,000 top companies by market capitalization in the United States.

The **Russell 3000 Index** is a [market capitalization-weighted equity index](#) that tracks the performance of the 3,000 largest US-traded stocks.

The **MSCI ACWI (Net) Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 50 country indexes comprising 23 developed and 27 emerging market country indexes. The developed market country indexes included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom and United States. The emerging market country indexes included are Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. Performance for the MSCI ACWI Index is shown “net,” which includes dividend reinvestments after deduction of foreign withholding tax.

The **S&P 500 Index** is an unmanaged index of large capitalization common stocks.

Definitions

C-suite comprises the senior leaders of an organization, whose titles typically begin with “C,” as in “chief.”

Earnings Before Interest and Taxes (EBIT) is revenue minus expenses, excluding tax and interest. EBIT indicates a company’s profitability.

Return on equity (ROE) is a ratio that provides investors insight into how efficiently a company (or more specifically, its management team) is managing the equity that shareholders have contributed to the company.

Tobin’s Q, or Q Ratio, equals the market value of a company divided by its assets’ replacement cost.



The business case for diversity: 2022 update

Julie Gorte, Ph.D.

Important information

Impax Asset Management Group plc includes Impax Asset Management Ltd, Impax Asset Management (AIFM) Ltd., Impax Asset Management Ireland Ltd, Impax Asset Management LLC, and Impax Asset Management (Hong Kong) Limited (together, "Impax"). Impax Asset Management Ltd, Impax Asset Management (AIFM) Ltd and Impax Asset Management LLC are registered as investment advisers with the U.S. Securities and Exchange Commission ("SEC"), pursuant to the Investment Advisers Act of 1940 ("Advisers Act"). Registration with the SEC does not imply a certain level of skill or training. Copies of the most recently filed Form ADV for Impax and additional information about registered investment advisers is available through the Investment Adviser Public Disclosure website at www.adviserinfo.sec.gov.

The views, opinions, and forecasts included or expressed herein are as of the date indicated and are subject to change without notice. You should not assume that such information, views and forward-looking statements would remain the same after the date indicated.

The information presented herein is provided for general informational purposes only and is not intended to provide legal, tax, investment, or financial planning advice. It does not constitute an offer, invitation, solicitation, recommendation, or advice to buy or sell any securities, financial instruments, investments; to follow a particular investment strategy; to engage in any other transaction; or to engage Impax to provide investment advisory or other services.

Certain content (including data) contained within may include, or be based on, data obtained from statistical services, company reports or communications, or other third-party sources, that Impax believes are reliable. However, Impax has generally not verified this information where Impax believes the third-party source is reliable and, therefore, there is a risk that information from such third-party sources are inaccurate or incomplete. You should not rely on the information presented here as a basis for investment decisions. IMPAX is a U.S. registered trademark of Impax Asset Management Group Plc.

IMPAX ASSET MANAGEMENT

✉ clientservices@impaxam.com

 Impax Asset Management

 @ImpaxAM

impaxam.com