

Review of research literature that provides evidence of the impact of diversity and inclusion in the workplace

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Executive summary

Purpose and scope

This review of academic research and other literature on the impact of diversity and inclusion (D&I) in the workplace has sought specifically to explore the business performance, risk management and conduct outcomes of diverse and inclusive companies. Much of the evidence identified, and therefore most of this report, is about the impact of diverse senior leadership on business performance outcomes, and most commonly for the largest listed firms.

Most studies identified focus on the impact of gender, or of ethnicity with some considering sexual orientation inclusion. Few studies cover a wider range of diversity characteristics. Therefore, this review only briefly mentions research results related to age, education and experience (social mobility) and disability.

Although the UK financial services sector is our primary area of interest, the review considers evidence across all sectors and from studies of businesses in the US and the rest of Europe. 26 studies are focused on the UK; 70 are from the US, where D&I research is most prolific; 33 studies have global coverage, nine are European and 21 cover a single European country (excluding the UK).

A total of 169 studies were reviewed as in scope. The majority (93) of these studies seek to understand the impact of D&I, either among teams or senior leadership. These are known as 'impact studies' throughout this report. The majority (80) of these impact studies are written by academic researchers, with 13 by consultancies, government or trade associations. The remaining studies in scope either provide data on the progress of D&I in the workplace to today (22), provide a theoretical (5) or measurement framework (11), or present a meta-analysis (6), literature review (16) or summary (4) of previous impact studies. A further twelve studies provide an understanding of potential consumer harms arising from D&I issues in the financial services sector.

A real challenge for this review has been weighing up results from the different studies, not least because the findings from some studies contradict those of others. Stahl et al. (2010) expressed this challenge well, when they wrote that they were seeking to "reconcile the conflicting perspectives of past studies" in their meta-analysis of workplace diversity. We also see some variation in the rates of progress reported for D&I measures, such as the representation of females in senior positions, which is due to use of different datasets. One aspect where there is a broad consensus is that while there has been some progress in female representation in senior management, these women tend to reside in more operational functions eg marketing and HR (Oliver Wyman, 2020; Credit Suisse, 2014 and 2019).

In this review we have not added our interpretation or opinions on the research we have identified. Our purpose is to gather together the evidence and organise it under our particular areas of interest – business performance, risk management and conduct.

While it might be difficult to generalise the findings onto the UK financial services sector, we are still able to draw some key findings from the breadth of available wider evidence.

Key findings

The overarching finding is that the evidence on the benefits of D&I in the workplace is mixed, for a number of reasons. On balance, the evidence points to more positive outcomes, for business performance to some extent, and especially for corporate governance and risk management for diverse and inclusive organisations, particularly when it comes to gender.

Gender-diverse senior leadership is associated with positive business performance outcomes, especially when there is a 'critical mass' of women

Much of the D&I evidence reviewed focuses on the business, or financial, performance of gender-diverse boards. While we find more studies reporting positive associations with financial performance (18) compared with those reporting negative associations (8), many studies demonstrate correlation only, or find that the positive outcome is contingent on something, such as a firm being innovation focused or reaching a 'critical mass' of women on the board. Four studies reviewed find no impact of board gender diversity on performance outcomes, such as return on assets (ROA) and profitability.

Some commentators consider it likely that the more profitable firms embrace diversity, rather than that diversity necessarily enables greater financial success. As we have said, analysis of the evidence can be contradictory, sometimes even of the same evidence base. When analysis by Judge (2003) of the UK FTSE 100 showed that boards with women were less profitable, Ryan and Haslam (2005) re-examined these data and found that women were being appointed to deal with existing crises rather than being the cause of them. They coined the term "glass cliff" which describes the promotion of women to leadership roles in a time of crisis, ie when the chance of failure is high.

The impact studies on this topic are challenged when it comes to demonstrating a causal link, not least by missing variables in the analysis, such as corporate culture or principles, that could be the real factors influencing outcomes. Adams and Ferreira (2009) sought to demonstrate causality and, in doing so, saw a negative link appear between board gender diversity and ROA.

We can turn to the studies of countries that have mandated the number of women on the boards of the largest listed companies, to assess outcomes – with far fewer causality concerns. If every firm needs to comply, it is not just those that were more successful or profitable that have a higher proportion of women on the board. Again, we see mixed results, across the different regions. In Spain and Italy results are positive. For Norway and California, some studies show more negative results. Norway was the first to introduce gender quotas and California did so most recently. The early studies from Norway find a negative impact in terms of shareholder returns and profitability, as well as a decline in the average age and experience of board members. However, more recently, Eckbo et al. (2019) find that the Norwegian quota mandates have not led to a decline in shareholder value or a decline in the levels of experience of board members.

There is more evidence of positive financial outcomes for firms that have reached a 'critical mass' of having at least three, or 30%, of women on the board. Joecks et al. (2012) study listed German firms and find that gender diversity negatively affects firm performance until a critical mass of about 30% representation is reached, when higher firm performance is seen.

Gender-diverse senior leadership appears to lead to positive risk management outcomes

The body of evidence for gender-diverse boards and risk management outcomes is smaller (21 studies) but stronger, with nine studies aiming to demonstrate causality and seven of these reporting positive outcomes (two found no impact). A further five studies find positive associations with risk management outcomes for gender-diverse boards, albeit without demonstrating causality. Of all 21 studies, only one gives a negative result.

Some studies argue that women are more risk averse than men and tend to be found on the boards of less risky businesses. However, there is also evidence that this stereotyping does not hold for women who embark on a managerial career, especially in financial services (Adams and Rangunathan, 2015). There was early evidence that the perception of differing risk attitudes led to a stereotyping that caused 'glass ceilings' for women. Johnson and Powell (1994) find no differences in risk propensity between males and females in a UK 'managerial sub-population'.

Gender-diverse senior leadership is most strongly correlated with positive corporate governance and firm conduct outcomes

The evidence for the impact of gender-diverse boards on regulatory conduct outcomes – including corporate governance monitoring such as meetings frequency and the quality of information disclosure, as well as evidence of fraud and misconduct – all points to women's positive influence. We see a clearer picture across the studies that assess good conduct outcomes. This includes the recent studies that conduct causality checks, including Arnaboldi et al. (2020) who find reduced misconduct from gender-diverse boards, and Wahid et al. (2017) who report fewer financial reporting mistakes. Gul et al. (2011) also used statistical methods to address causality and find that women on boards increase the financial transparency and disclosure of information in both large and small firms.

The academics reach a consensus that gender diversity has a positive influence on board meeting attendance. Qualitative (Dhir, 2015) and quantitative studies (Adams and Ferreira, 2004; Adams and Ferreira, 2009; Adams and Rangunathan, 2015) alike find that not only do women have a better attendance record, but that men attend meetings more regularly if there are women on the board.

Of the eleven impact studies that assessed the impact of board gender diversity for aspects of corporate governance (meetings and information transparency) and misconduct, all report positive outcomes, seven of which seek to demonstrate causality. Dandanlar and Abebe (2020) draw from social role theory in their US study to argue that female leaders are better positioned to minimize diversity misconduct because of their role as individuals who emphasise care, empathy and high 'ethical sensitivity'.

Diverse teams can have differences of opinion but are more innovative and better at solving problems creatively

We also see a positive association between diverse leadership and innovation, for both gender diversity (Vafaei et al., 2020; Torchia et al., 2011) and ethnic diversity measures (Giannetti and Zhao, 2016 and 2018; Nathan and Lee, 2013). Of the ten studies reviewed for diverse senior leadership, all identify positive outcomes, measured in terms of creative outputs such as more patents or patent citations.

Torchia et al. (2011) find improved innovation outcomes when a critical mass of women is reached, while Vafaei et al. (2020) isolate the direct causal relationship between women on the board and better innovation activities. Nathan and Lee (2013) report on the importance of ethnically diverse enterprises in London, finding that companies with more ethnically diverse management introduce more product innovations.

There is also evidence that business performance improves for diverse teams that are innovation-focused (Richard et al., 2003; Deszö and Ross, 2012), but that ethnically diverse boardrooms exhibit "erratic decision-making" (Giannetti and Zhao, 2016 and 2018).

Studies on the impact of diverse teams in the workplace also find clear benefits in terms of creativity, innovation and problem-solving. Although there is also evidence of conflict among diverse teams, this is not universally experienced and there are moderating factors. Stahl et al. (2010) find from their meta-analysis of ethnically diverse teams a significant association between ethnic diversity and creativity and some evidence of task conflict. They find no evidence of relationship conflict or communication inefficiencies, contrary to their expectations.

Kochan et al. (2003) intensively studied the impact of D&I initiatives at four large organisations. They find that "racial and gender diversity does not have the positive effect on performance proposed by those with a more optimistic view of the role diversity can play, at least not consistently, but neither does it have the negative effect on group processes warned by those with a more pessimistic view." They find that some things moderated the negative effects, such as team training and development initiatives.

Inclusion is not well measured, but there are signs it correlates positively with business performance outcomes

We found limited studies that examine inclusion principles. They reveal a lack of consistent measurement data, as well as challenges in identifying direct causal relationships. However, those studies we identified (typically from management consultants, or HR and employee engagement specialists) do portray positive impacts for more inclusive firms.

Some academics have suggested frameworks for measuring the performance outcomes of inclusion, such as the Perceived Group Inclusion Scale (Jansen et al., 2014) and the three key factors of fair employment, namely fair employment practices, integration of differences and inclusion in decision-making (Nishii, 2014). These measures are based on employee perceptions, while Tworoger et al. (2010) suggest asking line managers to self-rate their skills. However, the more common approach to measure inclusion is to use established employee engagement providers. Great Place to Work (2020) analysed over 3.9 million employee survey responses across 1,672 companies between 2006 and 2019. The results show that employees with greater feelings of inclusion tend to work for businesses that outperform the S&P500. Great Place to Work (2020) also report that the proportion of people answering questions

about their sexual orientation and disability status is an important indicator of trust and inclusion. They find that as the percentage of employees' choosing 'prefer not to respond' grows, there are drops in employees' faith in management, in their sense of safety in the work environment, and in signs of teamwork – all seen as drivers of innovation and business performance.

Badgett et al. (2013) review the role of LGBT-supportive workplace policies and link a company having these with improved workplace relationships and increased productivity, while Pilcher et al. (2013) find that firms implementing LGBT-supportive policies experience increases in firm value, productivity and profitability.

1 Introduction

In this chapter we set out the purpose of this literature review, and its scope, and how we approached gathering the research for our review. We also consider some methodological challenges.

i. Purpose and scope of this literature review

This report is a review of the academic and other research literature on the impact of diversity and inclusion (D&I) in the workplace.

The purpose of the review is to facilitate a good understanding of the evidence: does diversity and inclusion (D&I) in the workplace lead to better outcomes? We can use this information to consider the regulatory case for diversity and inclusion in UK financial services.

The specific objectives of the review are to:

- 1.** Assess the strength of evidence on the links between D&I and firm overall performance.
- 2.** Identify the strength of evidence on the links between D&I and risk management, and between D&I and firm conduct.
- 3.** Assess the evidence for whether these links are causal or correlated.
- 4.** Collate the measures of diversity and of inclusion being used by academics or others.

Our brief was to look at both diversity and inclusion, and to consider diversity in terms of gender and ethnicity, in particular, but also social mobility, age, disability, sexual orientation and religion.

We explore the range of evidence on D&I in the workplace, both the evidence that would support its promotion, and also the evidence that suggests D&I in the workplace has negative outcomes. The topic of inclusion, although we observe its rising up the agenda over recent years, is short of measured, comparable data, and we found only a few relevant studies. Therefore, most of the studies reviewed are about diversity rather than inclusion.

Furthermore, most studies reviewed are about gender, and they focus on staff at the top of a company – the boards and executive committees. We also report on studies that have assessed ethnicity (although few studies assess this thoroughly), while sexual orientation and gender identity tends to be considered only in terms of the level of LGBT/LGBTQ+-supporting policies firms have in place. For the remaining protected or diversity characteristics under review, we identified very limited evidence. Some impact assessments considered the age, education and experience level of directors, but we did not find any evidence that researchers have sought to define social mobility for the purpose of measuring its influence. We reference any data points of interest, but there is insufficient evidence to warrant a chapter or section on these characteristics in this report.

While our chief area of interest was evidence from the UK, and within financial services, we explored many studies of D&I in the workplace from other sectors and jurisdictions. In this review we have not added our interpretation or opinions on the research we have identified. Our purpose is to collate the evidence and organise it under our particular areas of interest – business performance, risk management and conduct.

While it might be difficult to generalise the findings onto the UK financial services sector, we are still able to draw some key findings from the breadth of available wider evidence.

This report initially considers the current context of diversity and inclusion, in terms of the representation of minority groups and women at the top of a firm, before considering the impact on businesses, firstly on performance outcomes, then risk management and finally good conduct. We also present a couple of relevant notes on potential consumer harms arising from D&I issues in financial services, in section 5vii. For technical terms, please refer to the Glossary of terms.

ii. Identifying the literature for this review

The list of literature for review was generated in part from literature that had been cited in recently published speeches by FCA directors; in part from references and articles shared by colleagues, and largely through searches using three databases of academic and financial journals: EBSCO, Jstor and Emerald. The searches used several key terms, reflecting the goals of the review; the terms needed to appear in paper and article titles.

The summaries or abstracts of the papers or articles were reviewed for relevance, and those identified as relevant, or in scope, were then reviewed to understand what primary or secondary evidence they reported and with what results. This material generated further references of interest which were located and reviewed in a similar manner.

Around 200 literature items of potential interest in total were collated. After deeming some literature out of scope, 169 items were reviewed, and notes taken on research methodology, findings and conclusions. This information was stored in a spreadsheet, which acted as an aide memoire, allowing us to engage with particular items of literature when writing each chapter.

The literature spans academic empirical studies, experimental design, market studies, consultancy reports, meta-analyses and literature reviews. Our review includes 93 original studies that measure the impact of D&I on businesses at team or board level, of which 20 collected primary research data, with the bulk of impact studies compiling and analysing secondary data. Most impact studies are written by academic researchers (80), with ten by consultancies and three from government and trade associations.

22 studies reviewed provide data on the context of D&I in the workplace today, six comprise meta-analyses (statistical analysis of a number of previous impact studies) and 16 are other literature reviews or summaries (4). 16 studies provide a theoretical (5) or measurement framework (11) and the remaining twelve studies provide an understanding of individual's risk propensity and potential consumer harms arising from D&I issues in the financial services sector.

The vast majority of studies (118) consider gender, 86 exclusively. 40 assessed ethnic diversity (14 exclusively), twelve centre on sexual orientation with 14 in total considering this metric. 18 studies discuss inclusion of which three focus on disability inclusion.

Although the UK was our focus, only 26 studies are from the UK, with 79 from the US. 33 studies have global coverage, and we report from 30 studies conducted in the rest of Europe. Three studies are from Australia and one from China.

25 studies centre on the financial services sector, of which nine include the UK, four exclusively. The vast majority of studies cut across a spread of sectors.

While it is not possible to source and explore all references of potential interest we are confident that the most relevant studies have been included. The review took place over eight weeks across April to June 2021.

iii. Measuring the impact of diverse workplaces – methodological challenges

Most D&I impact studies conducted by academic researchers seek to measure the influence of more diverse senior leadership teams among the largest listed companies, with few studies assessing the impact of diversity of the rest of the business population. This is because for these large firms there is publicly available information on both the gender and ethnicity of boards and board meetings, and business performance data. Academic researchers tend to use existing secondary data over conducting primary research, to avoid response bias to business surveys that comes from a higher likelihood to respond by firms that are D&I advocates.

The existing data are rarely complete, however. Variables and characteristics that could be influencing the results cannot all be collected, meaning they cannot be included as control variables when analysing the impact of diversity on performance. This presents potential for 'omitted variable bias'. In other words, while many studies have identified significant associations or correlations between diverse boards and business outcomes, the exhaustive set of control variables necessary for isolating the effects of diversity and hence providing strong evidence for causality are rarely present in the data.

Some academic studies do attempt to demonstrate causality, while others note the limitation that their analysis proves correlation only. Causality is difficult to determine, essentially because directors with diverse characteristics are not randomly distributed, which leads to the possibility of sample selection bias, presenting 'endogeneity' concerns. For example, female directorships tend to be better represented in certain sectors than others and are typically found on larger boards at the larger companies.

Some have also suggested that the composition of the board, ie the presence of female directors, could be linked to past performance (good or bad) as well how ethical the business is. If we find more women on the boards of the more socially responsible, well-governed and growth-oriented firms, it can be very challenging to determine what came first: women, or some kind of organisational or business improvement.

Control variables are used to help to isolate the causal effect of D&I. Factors that are perceived to moderate the relationship between the D&I and outcome variables in scope, are considered as control variables. This might be firm characteristics such as size, sector, age and ownership and sector or country characteristics such as GDP/growth rates, as well as board characteristic such as size, number of insiders and CEO tenure and duality. Other control variables of interest can be corporate governance measures such as meetings frequency (Carter et al., 2010) and cognitive diversity such as age, education or experience of the directors (Ciavarella et al., 2018). Omitted variables that cannot be included as controls which may present bias concerns could be any of these, but also aspects of corporate culture or risk aversion principles.

The demonstration of causality also requires times series (longitudinal) data, although longitudinal data present their own challenges. The more time periods there are, the greater potential for missing data and variance due to external factors (eg economic trends). Beyond causality, there are further challenges for those seeking to identify the impact of D&I in the workplace:

- Measurement – There is not a universally consistent way in which diversity characteristics, beyond gender, are collected. The impact studies measuring the impact of ethnic diversity have used a range of different approaches, including algorithms based on names or images, or passport information to establish whether 'foreign born', which is itself not a measure of ethnic diversity. Drawing global comparisons is difficult where classifications (particularly for ethnicity, education levels or disability) vary widely between different regions. Note that we have cited terminology and groupings used within the research we have analysed, such as BAME or LGBT/LGBTQ+. We are aware that the term BAME is being considered throughout society, as this grouping can hide large differences in outcomes between ethnic groups and excludes some ethnic minorities.
- Country – It is not easy to generalise findings from one country to another, with their different cultures, board systems, legal mandates and demographics.
- Timing – It is simply too soon to draw categoric conclusions about the impact of ethnic minority and female board participants, given that diverse groups are under-represented across a range of sectors and functions. As a result of this, many early studies in the 1990s created a binary diversity variable (ethnic or gender) to indicate the presence of either women or minority ethnic groups on a board. More recent authors suggest that a critical number of female board members is needed before they can exert a positive influence (Erkut et al., 2008). The use of a binary variable to indicate the presence or absence of women or ethnic minorities on boards could be too simplistic to detect the impacts on the business of board diversity.
- Studies such as Ferrari et al. (2016), and Hwang et al. (2019), that have assessed the impact of legislation on gender quotas for corporate boards in Italy and California respectively, go some way to overcoming the challenge to prove causality, but these tended to take place quite soon after the legislative change, and so long-term effects were not yet clear. There are also concerns regarding sample selection, choice of the control group and wider confounding effects not being accounted for.
- Research focus on the boardroom – Few studies have considered the wider context of the workforce and the influence of diversity at all grades or levels in a company. Comparable data are not available to measure the impact of other business outcomes, such as customer satisfaction, employee engagement and corporate reputation (CIPD, 2018).

Further, a real challenge for this review has been weighing up results from the different studies, not least because the findings from some studies contradict those of others. Stahl et al. (2010) expressed this challenge well, when they wrote that they were seeking to “reconcile the conflicting perspectives of past studies” in their meta-analysis of workplace diversity.

2 Diversity and inclusion in the workplace today

This chapter presents a summary of the overall progress of D&I in the workplace today and contains a section for each diversity characteristic, inclusion and measurement.

i. Overall progress

There has been some real progress across D&I in the workplace over the past decade, in response to legal and voluntary requirements, but many areas are still lagging.

The majority of data available that paints a picture of D&I in the workplace today pertains to gender, and occasionally ethnicity, but almost always at the top of only the largest companies with very little data collected for wider businesses. The Institute of Directors (IoD) sought to address the gap in data in a 2019 survey of its members outside the FTSE350 (n=1,378). 64% agreed that "a diverse board is a strong driver of an effective business" with only 11% disagreeing, yet the vast majority (76%) "did not have a programme in place to recruit, develop or retain a diverse or inclusive workforce".

McKinsey (2020) suggests that the rate of progress has slowed across the globe in recent years. They report a lower rate of growth for female and ethnically diverse executives between 2017 and 2019 compared with 2014 – 2017 and remark that "More than a third of the companies in our data set still have no women at all on their executive teams." They found the gap to be widening between D&I leaders and companies that have yet to embrace diversity while the study also found evidence of large corporates that were 'Resting on Laurels' where diversity levels had dropped since 2015.

ii. Gender diversity

In the UK, the representation of women on company boards has steadily grown over the past decade, increasing from just 10% of all FTSE 350 directorships in 2011, to 27% in 2018 (IoD, 2019). There is a current target of 33% female representation for each FTSE350 board, set in 2016 by the Hampton-Alexander Review.¹ This replaced the earlier target of 25%, which was reached by FTSE100 firms in 2015. Three in ten FTSE350 firms had reached this target by 2018, and there were just five all male FTSE350 boards at this time, compared with 152 in 2011. McKinsey (2020) report a similar picture of growth. For the 365 UK and US large companies (revenues > \$1.5bn) that McKinsey has monitored since 2014, gender representation in the executive leadership team grew from 14% in 2014 to 20% in 2020.

¹ <https://www.gov.uk/government/publications/ftse-women-leaders-hampton-alexander-review> – successor to the earlier Davies Review (2010).

The UK is middling in its progress on board gender diversity compared to its European neighbours, according to global MSCI (2018) data. They reported that 29% of UK directorships were held by women. This compares with 41% in France and 23% in Germany. Zehnder (2020) says that the UK is one of 18 countries in its annual diversity survey to have at least three women on their large-cap company boards (market capitalisation > EUR6bn). Analysis of the top listed companies across twelve peer countries in the Hampton Alexander Review shows the FTSE100 to be in fifth position, with 36% of directorships held by woman, compared to France's CAC40 at 44% (1st) and Germany's DAX30 at 30% (12th). Of the 10 European countries in the list, the majority have mandatory quotas in place for companies in their leading indices. The UK (5th) and Finland (7th) have voluntary targets in place, with the UK endeavour extending two management layers below the board. Two further countries in the peer group list, Australia and Canada, also have voluntary requirements for their top index companies and are at 32% female representation. Catalyst (2016) attributes the success of the approach in the UK to the government's "unprecedented level of support" for the Hampton-Alexander Review voluntary quotas initiative.

However, despite the positive trends reported in the proportion of female directorships, there has not been an increase in the representation of women at the very top of the FTSE350 firms. In fact, the IoD (2019) reports a decline, from a peak of 18 female CEOs in 2016 to just twelve in 2018, while the figure stood at 15 in 2011. The Hampton Alexander Review also highlighted the weakness in gender diversity at the very top of FTSE100 companies, with only eight out of a possible 98 roles in 2020.

There are also concerns that the representation of women tends to fall into roles with less influence. Credit Suisse (2014) shows that the proportion of women in senior management globally is similar to that seen on the boards of companies, but their roles are skewed towards roles which offer less opportunity to move into the most senior positions in a company – tending to be most concentrated in 'shared services' such as HR, marketing and compliance/legal.

There are also clear variations in gender representation within different sectors. Healthcare and service sectors are most likely to have female directors on their boards.

iii. Gender diversity in financial services

In the UK, Suss et al. (2021) show a steady increase in the number of females in authorised positions across banks and building societies, albeit from, and remaining at, a very low base. The proportion of females in authorised positions rose from 9% in 2001 to 20% at the end of 2020. They also find relatively slower increases in gender diversity for more senior positions, providing evidence of a 'glass ceiling' in the UK banking sector. For CEOs, the proportion of females rose from 1.7% in 2001 to 9.7% by the end of 2020.

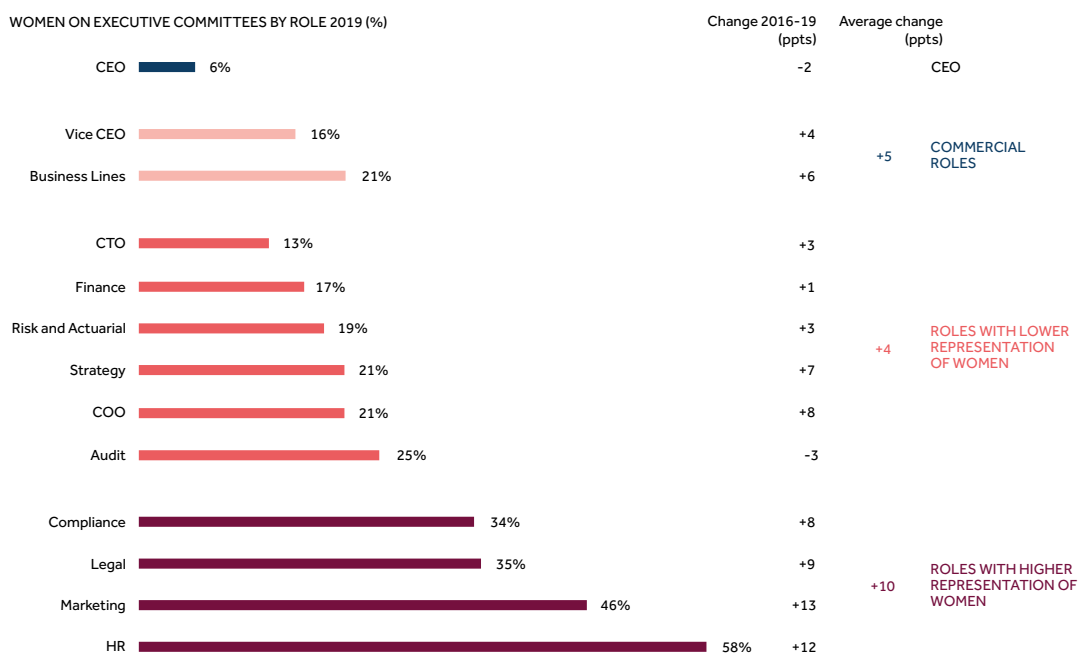
Board Monitor Europe (Heidrick and Struggles, 2016) report that the financial services (FS) sector was below average in the proportion of new directorship appointments. 7 out of the 27 new directors appointed to FTSE100 FS boards in the UK in 2016 were female, equating to 26%, compared with 34% across all sectors in the UK that year. This study found that the FS sector tended to recruit the most experienced directors in the UK, which may help to explain the lack of new female directorships recruited.

Globally, the financial services sector performs above average in terms of gender diversity in leadership and is also a fast growing sector on this metric (McKinsey, 2020). MSCI (2018) analysis shows the finance sector to have the highest proportion of companies with 3+ women on boards, at 41%.

Turning back to Europe, the European Banking Association (EBA) diversity survey, conducted in 2018, found that only 58% of the 864 credit and investment institutions that responded had a diversity policy. This had increased notably from 35% in 2015, in response to legal requirements, but shows a significant minority had not yet met the requirements under article 91(11) of Directive 2013/36/EU that requires all institutions to have a diversity policy.

As seen for the wider industry, Oliver Wyman (2020) reports that women at the top of global financial services firms tend to work in the operational functions of legal, marketing and HR, with representation lower in more senior and strategic areas.

Table 2.1: Representation of women on Executive Committees by role in major financial services firms globally



Source: Women in Financial Services, Oliver Wyman (2020)

There are also differing levels of representation for women between different financial institutions. The EBA (2018) diversity survey reported particularly low levels of female representation in investment firms and small credit institutions. The proportion of EU small credit institutions that have a woman on the management body actually fell between 2015 and 2018, from 46% to 31%.

Oliver Wyman's (2020) global study shows growth in female representation on the boards of asset management companies, increasing from 19% in 2016 to 26% in 2019. Fintech is new to the study but an area of concern, with just 14% of Fintech board roles fulfilled by women in 2019. Oliver Wyman (2020) also notes that progress has been made at the global payment providers Amex, Visa, Mastercard and PayPal, giving the payments sector the highest share of women on executive committees, rising from 23% in 2016 to 34% in 2019. The report also states that 22% of board roles in the payments sector are occupied by women in 2019.

iv. Ethnic diversity

As stated by the McGregor-Smith Review (BEIS, 2017), there is a wealth of evidence suggesting that minority ethnic individuals struggle to achieve the same progression opportunities as their counterparts in the UK. Research by Business in the Community (2015) showed that, while one in ten workplace positions were held by ethnic minorities (BME), only one in sixteen top management positions were held by an ethnic minority person – reporting no change between 2007 and 2012.

The McGregor-Smith Review found that, although ethnic minority individuals are more likely to participate in higher education than white British individuals, this does not translate into equal outcomes after graduation. In a paper on the business case for equality and diversity, BIS (2013) report anecdotal evidence from a survey of 285 diversity managers that “a lack of equality policies can lead to greater staff turnover rates, with an associated loss of talent, as well as potential employment tribunals and associated bad press”.

McKinsey (2020) report that their analysis shows that “the UK, at 9% non-majority representation on executive teams, is just under halfway to achieving fair-share representation of ethnic minorities (20%), while all others are further behind, including the US (14% on executive teams compared to 37% share).”

Heidrick & Struggles (2016) found that the UK was the most likely to recruit foreign-born directors (57%) compared to France (47%) and Germany (36%). There was no breakdown on this statistic for ethnic minorities, nor for financial services specifically. IoD (2019) finds from its survey of FTSE350 boards that 21% are represented with at least one minority ethnic (BAME) individual.

The Parker Review (BEIS, 2017) set the challenge that FTSE100 boards should have at least one ‘director of colour’ by 2021 (and by 2024 for FTSE250 boards). The Review authors find that, out of 1,050 directors in the FTSE100, only 85 are persons of colour (8%, compared with 14% of the wider UK population). Furthermore, 51 FTSE100 firms have no directors of colour at all, and only six people of colour hold the position of Chair or CEO. By March 2021, 81 FTSE100 boards had at least one ‘director of colour’.

Early findings from the Green Park Business Leaders Index (2021) show a decline in the number of black leaders and the ‘black pipeline’ for FTSE100 companies, although overall there was a moderate increase in other minority ethnic group members (Muslim, Hindu and Sikh, and Chinese and East Asian) in these top positions. Across the top three roles in the FTSE100, only ten out of 297 positions were occupied by individuals with an ethnic minority background, the same proportion as when Green Park began their FTSE100 analysis in 2014.

There is also survey data highlighting how minority ethnic individuals feel that their identity or background impacts the opportunities given in the workplace. CIPD (2017) conducted a survey to understand the workplace barriers for BAME individuals. 35% of BAME individuals agree that “In my organisation, your identity or background can have an effect on the opportunities you are given,” compared with 26% of white British individuals. Although males are more likely to agree with this statement, the difference is more pronounced between BAME females (31%) and white females (19%). There are signs that these perceived barriers are dissipating among 18-34 year olds. 64% of BAME individuals in this age cohort agree that “In my organisation everyone has the opportunity to achieve their

potential at work, no matter your identity or background", compared with 65% of their white counterparts and 45% of 45-54 year old BAME employees.

v. Sexual orientation

We have found limited data on the representation of openly LGBTQ+ people in the workplace, especially so for executives and board members at the top of the company. Employee engagement surveys can be used to measure sexual orientation and gender identity. However, such questions can attract high rates of refusal. Great Place to Work (2020) highlights that for every two employees who identify as LGBT (or living with a disability), there are three who actively refuse to share their identity. The only statistic found pertaining to roles at the very top of companies was from the IoD (2019) directors survey of non-FTSE350 firms, where 7% of respondents report that their board is represented by someone openly LGBTQ+. Note that the ONS (2019) Annual Population Survey estimates that "2.7% of the UK 16+ population identifies as lesbian, gay or bisexual".

There is evidence of the concerns that LGBTQ+ individuals feel in the workplace. In a survey of over 100,000 LGBT people in the UK (Government Equalities Office, 2018), 23% had experienced a negative or mixed reaction from others in the workplace due to being LGBT or being thought to be LGBT.

vi. Other diversity characteristics

We found little data on disability and while educational attainment/background has been considered in some impact studies, we do not find any examples of the impact of social mobility being directly assessed. As with education and experience (such as tenure in the organisation or on a board, prior sectors and specialisms), age is considered in some studies that assess the impact of diverse boards. However, education, experience and age variables can also be used as controls or moderators in the model and might be considered as outcome measures, for example to understand whether a mandatory change in gender representation leads to a change in the education/professional background of the directors, or a lower or higher average age.

IoD (2019) report from its survey of members that 6% of FTSE350 boards are represented by a member that is registered disabled, but we found no studies that provide this measure for the largest listed companies. The ONS (2020) reports that 19% of working age adults are disabled, and 52% of these are in employment (compared with 82% of the non-disabled working age population)

In the UK, the Cranfield School of Management (2005-2020) tracks the progress of female representation on the boards of FTSE100 companies, in its *The Female FTSE Board report*, collecting name, age, tenure, position and number of directorships held by each director. The series had been started in 1999, by Singh and Vinnicombe of Cranfield University. In 1999 just 6% of FTSE 100 directorships were female and one third of these were peers or held other titles. Singh and Vinnicombe (2003) suggest that social exclusion was the primary barrier to female progress in the boardroom. In its latest report, Cranfield (2020) report that female directors are slightly younger (two years on average) than their male counterparts.

vii. Inclusion

We can see inclusion steadily growing in prominence globally. Grant Thornton (2021) report from a survey of midcap businesses that those 'creating an inclusive culture' is up from 31% in 2019 to 36% in 2021.

Thomas Reuters established a 'Global Diversity and Inclusion Index' in 2016, which provides a useful example of how inclusion is becoming important. Reuters assigns a score to the top 100 global companies based on 24 underlying metrics in four areas: Diversity, Inclusion, People Development, and News Controversy. This annual index is used to inform an ethical fund as well as job seekers who want to work in progressive companies. The analysis is based on publicly available information (eg annual reports).

HR specialist Josh Bersin (2021) advises that "Inclusion should be the goal, and Diversity the result." The company undertook a global study of D&I interviews with 800 companies and found unclear goals and a shortage of training and HR expertise. They find that the focus on D&I has "sky-rocketed", but also report some concerning statistics: fewer than 12% of companies recognise senior leaders for inclusion or diversity goals; 76% of companies have no diversity or inclusion goals, and only one third mandate D&I training for staff or managers. They also report that, from an assessment of 3,500 HR professionals, just 3% have deep expertise in D&I, while the vast majority (4 in 5) assess themselves as D&I beginners. This makes D&I by far the lowest of 20 HR capabilities assessed.

Although rising up the agenda, the majority of UK businesses have yet to embrace inclusion. In the 2019 IoD survey of non-FTSE 350 companies, 76% reported that their organisations did not yet have an official program in place to specifically recruit, develop or retain a diverse or inclusive workforce.

viii. Measurement of diversity and inclusion

There is no consistent way in which data about diversity in the workplace are being collected in any one industry, or in any one country – nor is there much evidence of the collection of inclusion data. This lack of data is a key reason why researchers struggle to find robust evidence of the impacts of D&I in the wider workplace. Analysis of large US firms led Rand Corporation (2008) to conclude "What the diversity literature lacks at this point is substantive, data-driven research, with empirical evidence for what constitutes an effective strategy and appropriate measures of achievement. Currently, companies are relying on beliefs, not facts."

Management consultants are aware of this gap. As a result, measurement has become one of the leading recommendations to firms looking to improve D&I (Oliver Wyman, 2020; Culture Plus Consulting, 2018).

The CIPD (2019) advises assessing whether all employees feel the workplace is inclusive, and whether people management and HR practices themselves are inclusive, as there is a "key role that leaders play in creating inclusive workplaces". In their review of inclusion in the workplace, CIPD (2019) summarised the tools provided by academics to measure inclusion, as shown in Table 2.2.

Table 2.2: Summary of inclusion measurement tools from academic literature

| Source | Type of measurement | Inclusion definition | Measurement |
|------------------------|--|---|--|
| Jansen et al. (2014) | Individual perceptions of inclusion within a team | Inclusion is based on belonging and authenticity. The tool aims to understand whether employees feel included within their team. | The Perceived Group Inclusion scale, which measures perceptions of belonging and authenticity such as being allowed to be their authentic self, and feelings of belonging to the group. |
| TwoRoger et al. (2010) | Individual line manager beliefs and behaviours associated with inclusion | The authors identify several competencies associated with inclusion, such as valuing difference and managing conflict. | The questionnaire includes a number of behaviours and beliefs for managers to self-rate their skills. Eg whether they believe different thinking styles are beneficial, and how far they support fair recruitment, promotion and reward. |
| L. Nishii (2014) | Employee views of key factors associated with inclusive climate – at an organisation or departmental level | Three key factors associated with an inclusive organisational climate: fair employment practices, integration of differences, employee inclusion in decision-making. | This measure asks individuals to rate the fairness of various practices (like promotion processes), how far the organisation integrates difference (for example, valuing who employees are as people), and how far people are included in decision-making. |
| Mor Barak (2005) | Employee-level perceptions of a variety of organisational behaviours, practices and values | Inclusion and exclusion exist on a continuum, and hinge on five levels of inclusion – at a work group, organisation, line manager, senior leadership and informal/social level. | This scale (the Mor Barak Inclusion Exclusion Scale, or MBIE) assesses individual-level feelings of inclusion at all organisational levels – from manager information-sharing to inclusion in informal ‘water cooler’ conversations, along with the extent to which the organisation is committed to D&I |

Source: CIPD (2019). *Building Inclusive Workplaces*

In their review of workplace support for LGBT employees, Webster et al. (2017) discuss the general approaches used to measure how supportive an organisation is towards sexual orientation and gender identity. This includes:

1. The extent to which sexual orientation and the full range of LGBT identities is included in an organisation’s policies.
2. The Organizational Tolerance for Heterosexism Inventory – From four scenarios where LGBT employees experience mistreatment, participants are asked how their firm might respond.
3. An adaptation of Rankin’s (2003) campus diversity metric; participants rate their work environment using a semantic binary differential question (eg respectful – disrespectful).
4. The LGBT Climate Inventory (LGBTCL; Liddle et al., 2004), which is a 20-item measure assessing LGBT perceptions of their organisations’ supportiveness, was most commonly used in the LGBT-workplace support studies reviewed by Webster et al. (2017).

Examples of measurement suggested by management consultants include:

- The Catalyst Inclusion Accelerator, provided by the D&I not-for-profit organisation, for their supporters, to evaluate and monitor how teams and employees experience inclusion.
- Oliver Wyman (2020) suggests "tracking behaviours, attitudes, and what is driving them. It requires real-time data instead of annual surveys to provide actionable insight."
- Culture Plus Consulting (2018) suggests that businesses consider the following metrics as they endeavour to understand and improve D&I:
 - Representation – at all levels and functions;
 - Retention – comparing average tenure across monitored groups, ideally segmented into voluntary and involuntary. Exit interview notes should be used to track the reasons for leaving;
 - Recruitment & selection – comparing applicants and appointments across monitored groups, internally and externally;
 - Promotion & development – tracking promotions, lateral moves, acting roles, training and other stretch assignment opportunities by monitored group;
 - Pay & benefits – comparing financial and non-financial rewards earned across monitored groups; and
 - Employee engagement – comparing results between monitored groups, with specific questions related to D&I (eg how employees experience inclusion).

Other potential sources of D&I measurement data suggested by Culture Plus Consulting (2018) include grievances and lawsuits, assessing how customer satisfaction and employer brand perceptions may vary between different groups, and tracking supplier diversity metrics.

3 Evidence of links between diversity, inclusion and business performance

This chapter presents a review of the research literature that explores the impact of D&I on business performance outcomes, specifically financial outcomes such as profit and shareholder returns.

The chapter starts with a summary of the impact of diversity characteristics, inclusion and measurement at team level and in the wider workplace, considering the various academic theories, before reviewing the breadth of literature that assesses the impact of diverse senior leadership on business performance outcomes. Most of these studies focus on gender, or ethnicity. We have a section detailing the findings for each, including a sub-section that focuses on studies that have reviewed the impact of gender quota mandates.

i. Overall summary

The vast majority of studies that seek to determine the impact of diversity on firm performance measures are based on the diversity of the board and senior executives, and at team level, with very few assessing results in the context of the diversity of the overall firm. The evidence base surrounding the business benefits of diverse teams is large and quite mixed. Broadly, diverse teams bring benefits in terms of creativity and wellbeing but can cause efficiency losses due to conflict, although this can be moderated by inclusive workplace practices.

Overall, the empirical evidence for the impact of diverse workforces and boards on business performance is inconclusive, largely as a result of the various methodological challenges discussed in Section 1iii, but also because the studies explore a range of sectors and geographies, which cannot necessarily be compared or generalised to other areas.

The greatest weight of evidence is for gender-diverse boards, where the majority of studies do find a positive association with business performance but many of these confirm correlation only. We also see a positive impact for the more 'inclusive' firms and those with LGBTQ-supportive policies or disability inclusion strategies, but there are fewer studies conducted in these areas.

While age and education diversity metrics have been considered in some gender and ethnic diversity focused studies about the impact of diverse boardrooms, we found no impact studies that included disability as a diversity metric. 'Cognitive diversity' – which can include age, education and experience, such as the number of directorships held and sectors where these are held – is sometimes included in a model to understand how it influences the relationship between gender or ethnic diversity on business performance.

ii. The impact of diverse teams (excluding senior leadership teams) on business performance

We report from 15 empirical studies, two meta-analyses and two literature reviews that have assessed the impact of team or workplace diversity on business outcomes (excluding the senior leadership).

The three main theories that suggest different outcomes for diverse teams at all levels are:

- **Social identity theory**, proposed by Tajfel and Turner (1986), suggests that individuals experience collective identity based on their membership of a group, such as racial/ethnic and gender identities. It is a person's sense of who they are based on their group membership(s).
- **Social role theory**, as proposed by Eagly (1987), posits that widely shared gender stereotypes develop from the gender division of labour within a society, and that even in situations where gender stereotypes are less apparent, men and women may still act differently due to their gender differentiated skills.
- **Groupthink**, first coined by William Whyte writing in Fortune Magazine in 1952 as a "philosophy" of "rationalized conformity," was reconceptualized by Janis (1972) twenty years later as a bias that afflicts groups. Groupthink operates not as a consciously held belief, but as an invisible pressure to conform that arises spontaneously in the moment, affecting people's judgment without their even knowing they are being affected. Groupthink, in other words, is an unconscious bias.

Further theories related specifically to inclusion and senior management teams are detailed in the relevant later sections of this chapter.

Van Dijk et al. (2012) studied the relationship between demographic diversity (gender, ethnicity, age and education) and performance in a meta-analysis of 146 studies. In another meta-analysis, Stahl et al. (2010) assessed the impact of ethnic diversity, considering both surface-level diversity (ethnicity and nationality) and deep-level diversity (cultural views and attitudes), seeking to reconcile the conflicting perspectives of past studies. Most impact studies we reviewed assessed teams at unit level on business performance metrics, such as sales and customer satisfaction; while we can point to positive outcomes, the overall conclusion is that there is no impact on business performance outcomes of diverse teams below senior leadership level (Van Dijk et al., 2012; Stahl et al., 2010).

Van Dijk et al. (2012) find from the current evidence that there is no association between demographic diversity and objective team performance. Although for subjective performance measures (self-ratings, for example) they do see a small but significant negative association, for each measure of gender, ethnicity, age and education, suggesting mixed teams tend to underrate their own performance. They also see a large variation in results across the studies reviewed, partly owing to the type of outcome measures used.

Stahl et al. (2010) conducted a meta-analysis that spanned 108 empirical studies across 10,632 teams. They hypothesise that ethnic diversity has a negative impact in terms of greater task conflict and lower social integration, which their results "partially confirm". Conflict is considered as differences in opinion or priority. They find a statistically significant positive association between ethnic diversity and task conflict, but there is no link between ethnic diversity and relationship conflict, communication effectiveness

or process conflict. Further, ethnic diversity has no impact on business performance "consistent with results seen in other reviews and meta-analyses", they concluded. The study looks at the role of contextual influences, such as the nature of the task and the team structure, and finds more conflict for more complex tasks, for co-located rather than dispersed employees, and among those with longer tenure. In another literature review, Fine et al. (2020) report that the most consistent positive associations with gender-diverse workforces are with metrics of occupational well-being.

In terms of the impact studies we reviewed, Hoogendoorn (2013) reports from a field experiment with business studies students in the US that mixed gender teams perform best in terms of sales and profit.

At the business unit level McKay et al. (2011) examined the diversity of employees (gender, race and age) on customer satisfaction for a large US retail organisation and find that, as hypothesised, diversity is positively related to customer satisfaction measured a year later. Ellison and Mullin (2014) analyse team performance in a US office setting and find lower employee cooperation but higher sales performance for gender-diverse offices. The study involves eight years of data from one firm. The results indicate that having an equal gender split in an office is associated with a 41% increase in revenue than the same office staffed by only men or only women. Badal (2014) studies business units in both a retail and a hospitality company in the US and finds that the gender-diverse units have better financial outcomes. In a review of studies that sought to understand what moderates the effects of workplace diversity, Guillaume et al. (2017) finds that diversity improves performance for growth-oriented or innovation-oriented companies.

Kochan et al. (2003) led a research consortium of four large US firms to investigate the influence of diversity at team and business unit level and to examine the impact of diversity and inclusion on business performance. All four firms were D&I advocates and had incorporated diversity processes and training. The study finds that "racial and gender diversity does not have the positive effect on performance proposed by those with a more optimistic view of the role diversity can play, at least not consistently, but neither does it have the negative effect on group processes warned by those with a more pessimistic view." Gender diversity has either no effects or positive effects on team processes, while racial diversity has either no effects or negative effects. They find that some things moderated the negative effect, such as team training and development initiatives.

iii. The impact of inclusive workplaces on business performance

We see only positive impacts on business performance for studies that have assessed inclusion, typically by measuring the role of diversity policies or employee engagement survey results. However, these studies tend to show links rather than causation. There are few empirical studies that measure the performance outcomes of inclusion. Nishii (2013) conducted a study of a large US biomedical firm, finding gender biases owing to different job status and educational attainment between males and females. The study hypothesises and finds that inclusive climates help to reduce interpersonal gender bias in such a way that minimises conflict, ultimately improving unit-level satisfaction.

There are several theories that support inclusion: Optimal distinctiveness theory; Self-determination theory; Team identity, and Leader-member exchange (LMX), discussed below:

- **Self-determination theory**, also known as authenticity, posits that at a fundamental level, humans need to feel connected to others (relatedness), while also being able to act in line with their own sense of self (autonomy). An inclusive group, then, allows people to feel connected to one another, while being themselves in an authentic way.
- **Team identity** refers to an individual's feelings about their team. Often, when individuals feel part of a team, or group, they tend to evaluate that group favourably, and part of that feeling is received value and respect from other team members. However, team identity can be impacted by factors such as status or difference within a team. In an inclusive organisation, these factors need to be managed to ensure everyone has a voice.
- **Leader-member exchange (LMX) theory** suggests that the quality of exchange between the leader and those who report directly to them can impact on how employees evaluate themselves and their experience of the working environment. If a manager enables employees to feel that their contribution to the business is valued and that they 'belong' in a team, this can enhance feelings of inclusion.

Survey research in US public service organisations supports the idea of LMX. Over a 12-month period in 2004-05, strong LMX was associated with perceptions of inclusion, more so than organisation commitment and job satisfaction (Brimhall et al., 2017). This study, although only concerning one organisation in the US and unable to prove cause and effect, does highlight a positive link between inclusion and line management relationships.

A number of management consultants and HR specialists have found links between inclusion and business performance. Josh Bersin (2021) analysed more than 80 different D&I practices across 800 organisations in the US, to identify the specific D&I strategies that are more effective than others at improving business outcomes. In addition to strengthening HR capabilities, they find senior level commitment is crucial and more important than workforce training programmes. In fact, D&I training rated at the bottom of Josh Bersin's list for impact on business and workforce outcomes and sometimes even showed a negative correlation. "Accountability," Josh Bersin (2021) argues, "is really the one topic that moves companies into the highest level of maturity in D&I. When the CEO sets the strategy and frequently communicates D&I progress, the company is 6.3 times more likely to have a diverse leadership team and also to be a leader in its industry segment."

Cloverpop (2017) studied 600 business decisions from 200 different business teams over two years, finding that when people from different geographies, age groups and genders were included in decision-making, these inclusive teams delivered 60% better results (that met or exceeded expectations), compared with homogenous (all male teams).

Great Place to Work (2020) analysed over 3.9 million employee survey responses across 1,672 companies between 2006 and 2019. The results show that employees with greater feelings of inclusion tend to work for businesses that outperform the S&P500. This trend was first spotted during the global financial crisis, when the companies whose minority groups (including women, people of colour and long-tenured employees) had a very positive experience at work were more likely to

be "thriving". Another employee engagement study of almost one million data points – Glint (2020) – shows that employees with a strong sense of belonging are over six times more likely to be engaged than those without.

We have identified two studies that assess the impact of disability inclusion in the US. Kalargyrou (2014) examined the business benefits of disability inclusion at a large pharmaceuticals retailer and finds lower absenteeism, higher retention, and increased staff loyalty as a result of a focus on disability inclusion. Accenture (2018) interviewed 140 companies that feature on the US Disability Equality Index – a benchmarking tool that scores businesses on their disability inclusion and practices. These are typically very large companies with revenues in excess of \$43bn – they feature on the index because they are "advancing disability inclusion". Accenture (2018) identifies the top 45 companies as "Disability Inclusion Champions" and then shows a clear link between these "Champions" and financial performance outcomes, with 28% higher revenue, twice the net income and 30% higher profit margins in these 45 companies compared with the other companies in the index. The analysis accounts for temporal and industry sector variation but cause and effect are not clear, ie we cannot be certain whether better disability inclusion improves performance outcomes, or if the more financially successful companies promote disability inclusion more strongly.

Finally, we note recent evidence that D&I policies are not currently impactful. In the 2019 IoD survey, of the 25% of firms that state their organisation has an official programme in place to specifically recruit and retain a diverse and inclusive workforce, only 24% claim it had improved productivity.

iv. Impact of sexual orientation policies on business performance

While gender and ethnic minority impact studies are typically assessed against measures of how well represented these groups are in the workforce, especially on the board, any evidence we have found relating to the impact of 'sexual orientation or gender identity' diversity tends to measure the presence of LGBTQ+-supportive strategies and feelings of LGBTQ+ inclusiveness among workers, rather than how well represented LGBTQ+ individuals are in the workplace.

In their review, Badgett et al. (2013) agree, stating that "the business impact of LGBT diversity tends to focus on the impact of policies rather than on the sexual orientation and gender identity diversity of an employer's workforce per se.". Badgett et al. (2013) report the most positive outcomes for LGBT-supportive policies:

- Greater job commitment (16 out of 21 studies find a positive relationship versus just one that reports a negative relationship);
- Improved health outcomes (14 positive studies, 2 with no impact and 1 negative study);
- Increased job satisfaction (11 positive studies, 3 with no relationship and none reporting a negative outcome); and
- Improved workplace relationships (3 positive studies).

They also found studies that, in the main, report fewer discrimination cases and more openness about being LGBT for firms with LGBT-supportive policies. Interestingly, an association has been seen between gender-diverse boards and LGBT-friendly policies (Cook & Glass, 2016)

Although the Badgett et al. (2013) review links improved workplace relationships as a result of LGBT-supportive policies with increased productivity, they find few studies that directly measure the impact of LGBT-supportive policies on firm performance metrics. Pilcher et al. (2013) find that firms implementing LGBT-supportive policies experience increases in firm value, productivity and profitability. The authors state they are among the first to link LGBT-supportive policies specifically to financial performance outcomes.

In 2016, Credit Suisse created an 'LGBT 270', comprising firms they identified as "supporting and embracing LGBT employees". The LGBT 270 outperformed the MSCI ACWI by 3% per annum during the period 2010-2016 and saw 10-21% higher ROEs and cash flow returns. As with prior Credit Suisse analysis, the findings show correlation and cannot prove causation. Similarly, Shan et al. (2017) use a four-year dataset of US public firms (2002-2006) and show that firms with a higher degree of "corporate sexual equality" have higher stock returns and higher market valuation.

In the Great Place to Work study (2019), the proportion of people answering questions about their sexual orientation and disability status is seen as an important indicator of trust and inclusion. For every 10% of employees who choose not to respond, there is a six-point decrease in a company's overall levels of trust and pride in the company, and camaraderie. For example, a company with a 3% refusal rate has a trust index score of 92% whereas trust drops to 86% for a firm with a 13% refusal rate to this question, or 57% for a 43% refusal rate. More specifically, as the percentage of employees' choosing 'prefer not to respond' grows, there are drops in employees' faith in management, their sense of safety in the work environment, and signs of teamwork – which are all seen as drivers of innovation and business performance.

v. Impact of diverse senior leadership on business performance

Overview

We report from 47 studies that have assessed the impact of diverse senior leadership on business performance, comprising 30 academic impact studies, nine impact studies from consultancies and trade associations, six literature reviews and two meta-analyses. Most (35) of the 39 impact studies include gender as a key diversity variable, typically considering the gender of board directors and the CEO. Ethnicity is the next most considered diversity characteristic of senior leadership, covered in seven studies. Additional diversity demographics considered are age/experience of the directors and education level.

The performance outcomes measured include:

- Return on equity (ROE);
- Return on assets (ROA);
- Stock market returns (or Tobin's Q);
- Earnings before interest and taxes (EBIT)/profit;
- Total assets; and
- Total return to shareholders.

We found no studies which assessed the impact of board members for other diversity measures, such as those who are disabled or openly LBGTQ+.

There is a range of theories that academics have used to inform study hypotheses and explain the findings, such as human capital theory, agency theory, resource dependence and critical mass theory, detailed below:

- **Human capital theory** focuses on the benefit the individual can bring to the board. Studies show that women and ethnic minority directors are more likely to hold advanced degrees (Hillman et al., 2002). This theory posits that by widening the range of directors' skills, abilities, managerial approaches and preferences, board diversity is expected to yield benefits in terms of monitoring effectiveness. However, these potential benefits are not without costs, as conflicts may arise in more diverse boards, leading to more unpredictable decision-making.
- **Agency theory** is the process of delegating some decision-making authority to enable a clear separation between management and control. "Board balance comprising representation from diverse groups such as different gender provides a more balanced board that is likely to prevent an individual or a small group of individuals from dominating the decision-making process," states Hampel (1998). Agency theory is therefore said to predict that a more diverse directorship would improve corporate performance.
- **Resource dependence theory** presents the role of the board of directors as a resource to the firm. It suggests that those responsible for recruiting directors seek particular characteristics in new appointees to complement the existing board and to provide connections to new resources to secure the future of the firm. Pfeffer and Salancik (1978) were the originators of this theory. Carter et al. (2010) suggest that "Resource dependence theory provides the basis for some of the most convincing theoretical arguments for a business case for board diversity. Since they are less likely to be insiders or business experts, diverse directors can bring varied perspectives and non-traditional approaches to problems, enhancing complex problem solving and improving the quality of strategic decision-making."
- **Critical mass theory** is the theory that female directors are more influential if they reach a critical mass and are supported by other women in leadership roles. Three is considered the minimum number of female directors to enable the benefits of critical mass to be felt, or 30% of the board.

Gender

The impact of female directors has been the focus of business researchers since the late 1990s, when the vast gap in leadership between the genders caught the public's attention. The results from studies at that time are very mixed; the media attention at the time was more critical towards gender diversity. Judge (2003) wrote in an article for The Times that "Corporate Britain may be better off without women," suggesting that the Cranfield School of Management studies of the FTSE100 over 1999-2003 show an association between female representation at board level and poor share price performance.

However, Ryan and Haslam (2005) re-examined the data and show that poorly performing FTSE companies were more likely to appoint females to the board. They also conducted experimental research, uncovering hidden gender biases. Business leader respondents tend to select the female leader for a company in crisis, which is seen as a poor career opportunity for a man but a good opportunity for a woman. Ryan

and Haslam (2005) coin the term 'glass cliff' to emphasise that females were being appointed to deal with existing crises rather than being the cause.

This is in contrast to Farrell and Hersch (2005) who in a study of Fortune 500 firms from 1990–99 find that women tend to serve on the better performing boards. They see no positive or negative impact on stock market returns on the announcement of a woman appointed to the board. They also spot a curious trend. The firms that lose a female director are most likely to replace them with another women. The authors conclude that these boards are aiming to be diverse, in response to government and reputation considerations.

18 of the 30 board impact studies reviewed find a positive link between the presence of women on the board and business performance outcomes, including those that consider endogeneity and test for causality (Campbell and Minguez-Vera (2010); Ciavarella et al., 2018; Deszö and Ross (2012); Farrell and Hersch (2005); Ferrari et al., 2016; Geysman et al. (2018); Gong and Girma, 2021; Joecks et al., 2012; Owen and Temesvary (2018); and Smith et al., 2006) where we can be more confident that the presence of women improves performance, rather than it just being that the best performing companies attract more women. The other studies report a positive performance impact for gender-diverse boards, but these tend to prove correlation only.

Smith et al. (2006) test for causality on their sample of 2,500 large Danish firms during 1993–2001 and find that a positive relationship observed is due to board gender diversity affecting firm performance, not the opposite. Ciavarella et al. (2018) explore a large sample of listed companies (n=4,883) across five EU countries, including the UK. Controlling for firm characteristics, they find a positive impact on ROA for gender-diverse executive directors, although there is no link for ROE.

Table 3.1 summarises the methodology and outcomes for studies that have assessed the impact of gender-diverse boards on business performance and find a positive outcome.

Table 3.1 – Gender-diverse senior management impact studies finding positive financial performance outcomes

| Author (year) | Gender diversity variable(s) | Performance variable(s) | Region | Number of firms | Main result | Quality notes |
|----------------------------------|---|--------------------------------------|--------|-----------------------------------|-------------------------------|--|
| Bernardi et al. (2012) | No women; 1 woman; 2+ women (on board) | Change in stock prices | US | 449 Fortune500 firms | +ve link | No controls or attempt to overcome causality/ endogeneity |
| Campbell and Minguez-Vera (2010) | women (yes/no); women's ratio | Tobin's Q proxy | Spain | 105 announcements/68 listed firms | +ve link | Uses system GMM technique to solve endogeneity |
| Carter et al. (2003) | women (yes/no); women's ratio | ROA, Tobin's Q proxy | US | 638 Fortune 1000 firms (1997) | +ve link (Tobin's Q) | Controls to understand endogeneity but failed to account for omitted variables |
| Catalyst (2004) | women's ratio in top management | ROE and Return to shareholders (TRS) | US | 353 Fortune 500 firms | +ve link | Controls but admits cannot demonstrate causality |
| Ciavarella (2018) | Above/Below median number of females on board | ROA/ROE | Europe | 4,883 listed firms in 5 countries | +ve link (ROA); no link (ROE) | Uses firm fixed effect model and lagged variables to account for endogeneity |

| Author (year) | Gender diversity variable(s) | Performance variable(s) | Region | Number of firms | Main result | Quality notes |
|---------------------------|---|--|---------|---|---|--|
| Credit Suisse (2014) | women (yes/no) | ROE, Stock price performance | Global | 3,000 | +ve link | Correlation only. No controls and does not address causality |
| Deszö and Ross (2012) | women (yes/no) | Tobin's Q | US | S&P 1500 (1992-06) = 21,790 firm-years | +ve only for 'innovative' firms | Uses prior performance to test for reverse causality |
| EBA (2020) | women's % representation in management bodies | ROE | Europe | 864 credit and investment firms | +ve link | Correlation only |
| Farrell and Hersch (2005) | No. of women directors added | Sales, ROA, stock returns | US | 2,974 firm-years (Fortune 500 firms 1990-1999) | Mixed (+ve for ROA/ no impact for stock returns) | Use lag variable to check causality |
| Ferrari et al. (2016) | women's % representation on board > 20%/ CEO female | Tobin's Q, ROA, profit, debt, stock returns | Italy | Italy 40 (n=184 firm-years, 2010-2014) | Mixed (no impact for ROA/+ve for stock returns) | Small sample, further split into 'reform cohorts', but providing useful analysis. |
| Geyfman et al. (2018) | women (yes/no); women's ratio | Asset size, loan to assets, ROE, ROA | Data | 792 (2007); 692 (2010); 517 (2015) | +ve link | Uses lags on all control variables to account for endogeneity |
| Gong and Girma (2021) | Appoint a 1st women director (yes/no) | Sales growth, Asset growth, ROA, profit, labour efficiency | UK | Unlisted firms (n=3,989, 761 in treatment) | Mixed (+ve for growth/ no impact for profit) | Treatment vs Control with sensitivity tests to check for unmeasured confounding |
| IMF (2016) | women's ratio on board | ROA | Europe | 2,000,000 | +ve link | Includes controls but cannot state causality |
| Joecks et al. (2012) | No women on board; at least 1 but less than 20%; 20-40%; >40% | ROE | Germany | 151 listed firms, 842 firm-years | Mixed: -ve link until >30% women, then +ve | Uses lag variables to address endogeneity and reverse causality |
| Kotiranta (2007) | women's ratio on board/CEO gender | ROA | Finland | Unknown (90% of Finland's working pop) | +ve link | Controls for size & sector but cannot infer causality |
| Mateos de Cabo (2012) | women's ratio on board | 6 year growth rate (assets)/ ROA | Europe | 612 firms; 20 countries | Mixed: (no impact for ROA/+ve for growth) | Includes controls but cannot infer causality |
| McKinsey (2020) | women's % representation at Exec and board | EBIT/ROA | Global | 1,039; 15 countries, (n=365 UK & US firms since 2014) | +ve link | Correlation only. Compares % financial outperformance of diversity quartiles vs national industry median |
| Owen and Temesvary (2018) | women's ratio on board | ROA | US | 168 US banks (1999-2015) | Mixed: +ve link only for well-capitalised banks with high women's ratio | Addresses endogeneity through IV method, lags variables and controls for fixed effects |
| Smith et al. (2006) | women's ratio on board | profit, sales, income assets, | Denmark | 2,500 Danish firms ('93-'01) | +ve link | Controlled for direction of causality |

A number of studies that find a positive financial performance outcome also report no impact for other outcomes measured. One such study is Gong and Girma (2020) who study the impact of appointing a first female director. They find a positive link with firm growth and labour cost efficiency, but insignificant results for ROA, profit and productivity. However, a positive impact on profit does appear three years after the appointment.

Turning now to studies that find a negative outcome for performance of gender-diverse boards, of which eight report a negative outcome. (Adams and Ferreira, 2009) adopts the instrumental variable method to isolate causality and includes procedures to tackle omitted variables. As a result, they see the correlation between gender diversity and firm value and operating performance disappear and move into the opposite direction once these tests were applied. A negative link emerges as "firms perform worse the greater the gender diversity of the board" (Adams and Ferreira, 2009).

Adams and Ferreira (2009) also find that the negative effect of gender diversity on firm performance is driven by companies that are already well governed. More recently, Hernandez-Nicolas et al. (2021) find in a cross-sectional study of the construction industry in Spain, that firms managed by females are less profitable. This presents an up-to-date view of a still male dominated industry; 15% of businesses in the sample were led by a woman.

In the UK, Haslam et al. (2010) investigated the relationship between the presence of women on company boards and considered both accountancy-based and stock-based measures of company performance for FTSE100 firms between 2001 and 2005. They study 458 firm-year observations and examine time-lagged correlations to assess causality. They find a negative relationship between boards with women and stock-based measures of performance (Tobin's Q) and find no direct relationship between women's presence on boards and ROA or ROE.

Causality checks show that there was "bilateral causality between stock performance and the gender-based composition of company boards" but that the impact of board composition on subsequent values of Tobin's Q was stronger than the impact of Tobin's Q on subsequent board composition. This negative relationship was consistent with previous 'glass cliff' research, but also confirmed, as previous academic researchers had also shown, that "there is no necessary correspondence between company performance and perceived company value, and no requirement that the details of one inform the dynamics of the other."

The results support claims that women are found on the boards of companies that are perceived to be performing poorly and that their presence on boards can lead to the devaluation of companies by investors. Yet the findings also indicate how stock prices are not always aligned with the underlying realities of company performance. This is an important consideration for studies that assess stock market performance as an outcome measure.

Table 3.2 – Gender-diverse senior management impact studies finding negative financial performance outcomes

| Author (year) | Gender diversity variable | Performance variables | Region | Number of firms | Main result | Quality notes |
|---------------------------------|---|--|------------|------------------------------|--|--|
| Adams and Ferreira (2009) | women (yes/no); women's ratio | ROA, Tobin's Q (proxy) | US | 1,939 firms (1996-03) | -ve link | Tackles omitted variables and causality |
| Ahern and Dittmar (2012) | women's ratio on board | Tobin's Q | Norway | 248 listed firms (2001-09) | -ve link | Did not correct estimated standard errors/cannot infer causality |
| Hwang et al. (2019) | shortfall in women on board (to meet quota mandate) | stock price returns | California | 405 firms | -ve link | Assesses causality via a control sample from other states |
| Haslam et al. (2010) | women (yes/no); women's ratio | ROE, ROA Tobin's Q | UK | 126 FTSE 100 firms (2001-05) | Mixed: no link (ROA and ROE); -ve link (Tobin's Q) | Examines time-lagged correlations to assess causality |
| Hernández-Nicolás et al. (2021) | CEO gender | ROA | Spain | 8,492 construction firms | -ve link | Controls for possible endogeneity |
| Matsa and Miller (2013) | No. and share of women | ROA, employment, operating profit/assets, debt/assets/labour cost/assets | Norway | 104 listed firms | -ve link -ROA and operating profit, as labour costs increased) | Controls for size and turnover. Compares to other Nordic countries |
| Ryan and Haslam (2005) | Women's ratio on board | stock price returns | UK | 100 FTSE firms | -ve link | Correlation only – causality tests show women appointed to poor performing firms |
| Von Meyerinck et al (2020) | shortfall in women on board (to meet quota mandate) | stock price returns | California | 2,454 non- FS firms | -ve link | Matched control group from states that 'follow California' |

A number of studies that investigate the impact of quotas also report negative performance outcomes for gender-diverse boards (Matsa and Miller, 2013; Ahern and Dittmar, 2012; Hwang et al., 2019); these are discussed further when we review the impact of quota mandated jurisdictions below. This includes the more recent examination of the data in Norway which finds no impact on firm value (Eckbo et al., 2019).

We also report from four studies that find no impact of board gender diversity on financial performance outcomes. Carter (2010) finds "no empirical evidence of causation going from board diversity to financial performance, either positive or negative" from a study of S&P 500 firms over a five-year period (1998-2002). Randøy (2006) studied Scandinavian firms prior to the Norway quota mandate, finding no link between gender diversity and performance metrics.

Table 3.3 – Gender-diverse senior management impact studies finding neutral financial performance outcomes

| Author (year) | Gender diversity variable | Performance variables | Region | Number of firms | Main result | Quality notes |
|----------------------|--|--------------------------|-------------|---|---|--|
| Carter et al. (2010) | No. of women on board/No. of women on committees | Tobin's Q/ ROA | US | 641 S&P 500 firms =2,563 firm-years | No link (after controlling for causality) | Uses 3SLS estimation to address causality |
| Eckbo et al. (2019) | women's ratio on board | Stock returns/ Tobin's Q | Norway | 248 listed firms (2001-09) | No link | Addresses endogeneity |
| Randøy et al. (2006) | women's ratio on board | ROA, stock market value | Scandinavia | 154 DAN + 144 NOR + 161 SWE firms ('05) | No link | Controls for size/ industry but no account for endogeneity |
| Suss et al. (2021) | % women on board/senior management | ROA | UK | 181 banks (2001-2020) | No link | Controls for bank characteristics |

Some studies have identified different nuances in their analysis of the impact of women in senior leadership positions on business performance (Dwyer et al., 2003; IMF, 2016).

Dwyer et al. (2003) study US firms and find that the impact of gender-diverse management (below senior management level) in an organisation depends on its culture and growth orientation. The authors suggest a supportive environment needs to be in place to fully realise the beneficial aspects of gender diversity.

In a 2016 working paper, the IMF presented new evidence on the role of women in managerial and board positions in shaping firm financial performance. The IMF analysed a much larger dataset than had been done previously (2 million listed and non-listed EU firms – all non-financial) and used a 'difference in difference' approach to understand the influence of diversity on financial outcomes. They find a positive association between gender equality in senior positions and firm performance, that is significantly stronger in sectors with more women in the labour force.

Specifically, for a firm in an industry in the top quartile in terms of female representation, having one more woman on the board or in senior management, while keeping the size of the board unchanged, is associated with about 20 basis points higher ROAs. For a firm in an industry with relatively few women in its labour force, having more women in top management does not impact profitability. IMF (2016) also finds that knowledge-intensive and high-technology sectors – which, they say, demand the higher creativity and critical thinking that diversity in general may bring – benefit significantly more from a higher share of women in senior management. Although the sample size is very large here and a range of control variables were included in the model, the study is again limited in that it cannot infer causality.

Finally, we report from a recent meta-analysis of 78 studies (Hoobler et al., 2018) that finds that having more women in leadership (CEO and directors and top management teams) positively influences firm performance. The majority of studies measured the impact of firms' boards of directors (62 studies, across 75,978 firms) which showed the most positive association with overall financial performance. CEO gender was only linked to one performance measure – sales, from 10 studies covering a total of 18,077 firms. The benefit of a female CEO was most apparent in countries with greater gender parity in the workplace.

The impact of gender quotas on business performance

To overcome the challenge that there is a widely accepted association between gender-diverse boards and better performance that is not proven as causal, some academics have looked to the mandated increase in women in the boardroom, resulting from legislation in Norway, Spain, Italy, Germany and, most recently, California, to determine the impacts on business performance.

Norway set a requirement for 40% female representation on boards by 2008. Ahern and Dittmar (2012) find a negative effect of the gender quota on Tobin's Q in a study of Norwegian firms between 2001 and 2009. They conclude that the quota requirement had a negative impact on firm value because the newly added board members were younger and less experienced. Matsa and Miller (2010) also report a short-term fall in profit following the Norway law change, which they suggest is due to increased labour costs. However, other researchers have criticised these studies. They say that Ahern and Dittmar (2012) over-sampled younger and very small firms, and that both studies took place soon after the quotas came into effect, which coincided with the global financial crisis. A later study of Norway (Eckbo et al., 2019) makes "necessary econometric adjustments" and finds that quota mandates did not lead to a decline in shareholder value or a decline in board experience, in contrast to the earlier Norway studies.

In Spain, Campbell and Minguez-Vera (2010) find that stock markets react positively to the appointment of female board members and a positive association with firm value is recorded over a sustained period. An examination of board gender quotas in Italy in 2011 (Ferrari et al., 2016) finds no impact on firm performance (ROA). However, they also study reactions when gender quotas were introduced in Italy and see a positive effect on stock market returns, suggesting a positive reaction from the market. The authors suggest that the difference in results between Italy and Norway is because reform was more necessary in Italy, evidenced by the higher education level of directors observed post reform.

For California, we have reviewed two studies that paint a broadly negative picture of the 2018 quota mandate, but as this legislation was introduced in 2018, current studies can only show very short-term effects. Hwang et al. (2019) report a statistically significant abnormal return of -1.4% at the announcement of the signing of the SB 826 mandate for companies headquartered in California. They analyse the impact on shareholder value according to the shortfall in women directors that firms faced, with those needing to recruit more women directors seeing sharper declines in shareholder wealth than firms closer to the requirement. These results are robust to controlling for industry and firm characteristics but do not prove causality. The authors suggest that the declines are owing to concerns over 'supply-side constraints'. Firms distant from a local pool of qualified female directors experienced greater negative abnormal returns. There is also evidence of a large increase in appointments of female directors for the first time in these locations.

A second study of the Californian mandate (von Meyerinck et al., 2020) also finds large negative announcement returns and identifies a ripple effect with negative announcement returns seen for states considered most likely to "follow California". They show that the fall in stock returns are not explained by frictions in the labour market and believe it is due to "Shareholders' distaste for the government's attempt to legislate non-economic values and their estimation of how likely a state will follow California's legislative lead."

It is perhaps too soon for the studies to draw conclusions from California, and indeed other regions where female representation is below the "critical mass".

Looking at the theory of critical mass, some question the merit of this target. Oliver Wyman (2020) global analysis of the financial sector finds some firms that had reached 30% female representation on Executive Committees had since "crept backward" in terms of female representation.

However, a number of academics do find evidence of the benefits of a critical mass of women on the board. Joecks et al. (2012) puts critical mass theory to an empirical test. Their study of 151 listed German firms between 2000 and 2005 finds that gender diversity negatively affects firm performance until a critical mass of about 30% representation is reached, when higher firm performance is seen. Although the sample is relatively small, this is a robust study that uses lag variables to address problems of sample selection biases and reverse causality. Gong and Girma (2021) find that gender diversity on UK boards has its greatest positive impact on labour efficiency and sales growth when the proportion of female directors reaches 30%. Owen and Temesvary (2018) find a U-shaped relation between female representation on US bank boards and performance. Once a 'critical level' of gender diversity is reached, they argue, performance benefits begin to materialise, but only in better capitalised banks.

The impact of ethnic diversity on business performance

Overall, there is a mixed picture as to the benefits of ethnically diverse workforces on business performance, although there are certainly hints of positive associations. More research is needed in this area, particularly in the UK, as there will always be challenges in generalising findings from other parts of the globe. The theory is also rather mixed. Westphal and Milton (2000) highlight how social barriers between different demographic groups can be minimized when individuals have shared prior experiences "thus unleashing the potential beneficial effects of diversity on organizational outcomes".

Seven of the board impact studies we reviewed incorporated an ethnic diversity metric. In one study the metric was measured in conjunction with other diversity characteristics for a combined variable, so we are unable to unpick the role of ethnicity in the findings (Erhardt et al., 2003). Of the remaining six studies reviewed, three find a positive impact and three find a neutral impact on performance outcomes. This suggests that, at the least, there are unlikely to be negative performance outcomes for ethnically diverse boards.

The studies reviewed are from different regions and thus vary in their approaches to measuring ethnic diversity, as there is little reliable data on ethnicity. Some authors (eg Giannetti and Zhao, 2016) use an established algorithm to assign directors to ethnic groups based on their name. Some supplemented information from names with photos where available, while others base the measure on nationality, or whether 'foreign born'. Global studies such as McKinsey (2020) are challenged because the ethnic group classifications vary widely in different regions. They count 'non-majority executives', which means those with an ethnic background that does not represent the majority for that country. However, it is still challenging to compare countries on this metric. Singapore is considered by far the most ethnically diverse region sampled, but this could be due to boards in Singapore being over-represented by western 'ex-pat' directors.

Most studies assess ethnic minority representation, alongside gender, and some include age/experience diversity variables. Carter et al. (2003) investigates ethnicity in US firm boards and finds that organisations with two or more ethnic minority board members have a higher value (Tobin's Q) than those that have none, although the difference was only marginally significant. This study controlled for various measures but failed to consider omitted variables such as firm culture that could bias results. In a later study of gender and ethnically diverse boards, Carter et al. (2010) run additional regression models to address causation and find no direct link between board diversity and business performance.

Ciavarella (2018) study firms in five EU countries and find better performance for both ROA and ROE when foreign directors are more represented, although this study measures nationality diversity rather than ethnic diversity. Randøy et al. (2006) finds no impact, but again this study measures foreign directors, rather than ethnicity. Finally, Erhardt et al. (2003) study the relationship between gender and racial diversity of executive board members for a sample of large US firms, and find a positive association with ROA and ROI, but this study uses a combined gender and ethnic diversity metric and only seeks to understand trends, and not causality.

Richard et al. (2003) assessed the wider context of racial diversity at an organisation, focusing on banks in the US (n=177). He conducted a survey of senior executives at a sample of US banks, collecting data on the racial demography of the workforce alongside questions to ascertain business strategy and innovation. He found that increases in racial diversity enhanced financial performance for innovation-focused banks, whereas for banks low in innovation, performance declined. This followed another study he conducted in 2000, where he found positive financial outcomes for racially diverse banks, but only for those with a growth strategy, although the overall sample here was very small (n=63).

4 Evidence of links between diversity and risk management

In this chapter we discuss the findings from 11 studies that have assessed how attitudes towards risk vary between males and females, firstly amongst general consumers, exploring how this plays out for consumers in the financial services sector, and then at the corporate level.

We then address the core objective of this research – what the evidence says about diversity influences on risk management outcomes. As with performance outcomes, the majority of evidence pertains to the impact of diverse boards and specifically, gender-diverse boards.

We have reviewed a total of 23 impact studies that measure a broad spectrum of either positive or negative risk management outcomes for senior leadership, in terms of:

- Firm performance volatility;
- Stock return volatility;
- Debt levels;
- Insolvency; and
- Research & Development (R&D) investment decision-making.

This chapter also draws on findings from one meta-analysis and one literature review.

i. Overall summary

The common hypothesis is that women are more risk averse than men. However, context is found to be very important, particularly in relation to financial decision-making with no gender differences seen when participants need to make decisions in the same context (Schubert et al, 1999). It also does not necessarily follow that female leaders are risk averse (Adam and Raganathan, 2015). We report from studies that suggest the impact of women being perceived in this stereotypical way can have negative consequences:

1. For consumers, financial providers might assume female customers to be naturally more risk averse and target products differently to comparable male customers.
2. Early D&I studies suggest that the perception that women are more risk averse was felt to prevent more women from attaining board positions.

Overall, the evidence base is too limited to draw robust conclusions as to the impact of diversity metrics on risk management outcomes other than gender. For gender, there is a body of evidence that diverse boards lead to positive risk management outcomes.

Of the 23 senior leadership impact studies reviewed, 21 studied gender, 17 only considered gender. Five investigated the impact of ethnicity, two exclusively. Although some studies considered age, cognitive diversity, experience or education, these characteristics were typically assessed in terms of how they interplay with gender

differences. Only two studies considered the impact of these diversity metrics on risk management outcomes (Erhardt et al., 2003; Bernile et al., 2016) but these authors incorporated different measures of diversity into one multi-dimensional measure.

Of the nine studies which attempted to account for causality, seven find an association between gender-diverse boards and positive risk management outcomes (Adams and Ferreira, 2009; Wilson and Atanlar, 2009; Cumming et al., 2012; Chen et al. 2015; Ferrari et al., 2016; Huang and Kisgen (2013); and Hernandez-Nicolas et al., 2021), and two find no impact (Sila et al., 2015; and Adams and Ragunathan, 2015).

ii. Gender influences on attitudes towards risk

The evidence tends to support the general perception that, in a consumer setting, on average women are more risk averse than men. The academic literature on risk-taking is extensive, examined at both individual and team level, and in a range of contexts (ie university, workplace, financial decision-making, company boards). On balance, the evidence among consumers shows that women are more risk averse than men. Although some academic studies find no gender difference, these tend to be in the minority.

A large scale meta-analysis of 150, predominantly US, studies (Byrnes et al., 1999) concluded that there is greater risk-taking in males compared with females. There were two areas where these gender differences were consistent across all age bands – in gambling and driving, which highlights where the difference in risk attitudes between the genders holds out regardless of age and related lifestyle changes.

iii. Diversity influences on financial decision-making

The 1990s saw a number of research studies investigate the role of risk in financial decision-making between genders. There are clear differences, with women typically more risk averse, but it is suggested that a range of wider influences are also at play. Sunde'n and Surette (1998) conclude that gender and marital status significantly affect how individuals choose to allocate assets in defined contribution plans. However, because unobserved differences may affect investment behaviours, they view their results as descriptive rather than causal. Jianakoplos and Bernasek (1998) find that single women exhibit relatively more risk aversion in financial decision-making than single men with a comparable income. They suggest that gender differences in financial risk-taking are also influenced by age, race, and number of children.

In the UK, Powell and Ansic (1997) conducted an experimental analysis to explore gender differences in risk behaviours in financial decision-making and concluded that women are more risk averse, although their sample was not particularly large (n=126).

Schubert et al. (1999) examine whether there is evidence to support the stereotypical view that women are more risk-averse than men in financial decision-making and question whether "abstract gambling experiments are relevant for the analysis of gender specific risk attitudes towards financial decision-making". The authors conducted an experimental study in Switzerland, finding that the comparative risk propensity is strongly dependent on the context of the financial decision, with no gender differences seen when participants need to make decisions in the same

context. On the grounds that all financial decisions are 'contextual' the study concludes that "male and female subjects do not differ in their risk propensities". The authors suggest that perceived more risk averse attitudes of female investors and managers may be more prejudiced than reality and can be a source of discrimination. However, it should be noted that experimental studies such as these are not real life as they are carried out under controlled conditions.

Gysler, Kruse and Schubert (2002), in another Swiss experimental study, attribute differences in investment behaviours or financial decision-making between genders to objective knowledge and overconfidence (of males). They conclude that gender predicts the choices made when individuals are confronted with uncertainty.

A relatively recent study of financial risk tolerance amongst US consumers also found income uncertainty to be an important variable, alongside gender. Fisher et al. (2017) uncovered a more nuanced picture of differing gender attitudes towards risk tolerance when making financial investment decisions. The study finds that women are less tolerant, but that it is the differences between key determinants of risk tolerance (income uncertainty and net worth) and gender, that tend to lead to the gender differences seen for risk tolerance. Policy makers and financial advisers must better understand the reasons behind gender differences in risk tolerance, Bajtelsmit and Bernasek (1996) concluded; in a review of the literature regarding gender differences in investment, that women tended to invest more conservatively but that more research was needed to thoroughly investigate the causes of gender differences.

We see a mixed result for the influence of gender on investment decision-making behaviour for fund management teams in the US. An experimental design was used by Bogan et al. (2013), with teams of four persons each given the task of making investment portfolio management decisions. The paper finds evidence that a male presence increases the probability of selecting a higher risk investment. However, the all-male teams are not the most risk-seeking, and having a male presence was also shown to increase loss aversion.

We also report from an experimental study conducted in South East Asia and the US. Levine et al. (2014) report that ethnic diversity in teams leads to an increase in scrutiny and ultimately better decision-making. Participants were randomly assigned to ethnically homogenous and diverse markets, where they traded stocks to earn money. In more homogenous markets, overpricing is higher as traders are more likely to accept speculative prices and when bubbles burst, they crash more severely than in diverse markets.

iv. Gender influences on corporate risk management

The literature reviewed generally reports more positive risk management outcomes for boards that are more gender-diverse.

Of 21 studies reviewed that quantitatively assessed the impact of gender-diverse boards on risk management, 12 find that a female presence has a positive influence. Although causality is hard to prove, given some studies argue that women tend to be found on the boards of less risky businesses, nine studies do seek to overcome causality concerns, of which seven report a positive link and two find no impact.

There is evidence that the perception of different risk attitudes between genders led to a stereotyping that caused 'glass ceilings' in corporate promotion ladders (Johnson and Powell, 1994), who find no differences in risk propensity and decision quality between males and females in a 'managerial sub-population' in the UK.

Adams and Ferreira (2004) find a relationship between US boards with more males and performance volatility, but they are unable to confirm whether this is due to risk aversion theory associated with female directors, or a preference for homogeneity for the boards of riskier businesses. Arnaboldi et al. (2020) suggest that regardless of the reason, "the implication is that more limited opportunities exist for female board candidates to enter risky environments".

Wilson and Altanlar (2009) examine the characteristics of the directors and owners of private companies (mainly SMEs) in relation to insolvency risk, with a specific focus on the incidence and impact of female directors. They analyse over 900,000 limited companies in the UK, including over 17,000 that had ceased trading. Controlling for a wide range of company, industry and governance characteristics, they find compelling evidence that more gender-diverse boards have lower insolvency risk. This study uses a robust methodology and a recursive process to check for causal direction.

Prior studies led Cumming et al. (2012) to believe that women on boards can help to better monitor firms' activities and mitigate fraud. This study conducted robust analysis of detected fraud cases in China (n=1,422 cases) and find that the presence of woman on the board mitigates the frequency of fraud. This study controls for other corporate governance and firm characteristics.

Chen, Ni and Tong (2015) link gender-diverse boards to effective managerial decision-making in R&D risk management. This builds on studies that show R&D investment increases volatility of future firm performance. Using a US sample of firms and following R&D risk measurement developed in the prior literature, they find evidence that gender-diverse boards reduce the positive relationship between R&D and earnings/returns volatility and that the adverse impact of R&D on cost of debt is less severe when more female directors serve on the board. The recent study of the construction industry in Spain (Hernandez-Nicolas et al., 2021) finds that companies managed by women are less indebted.

Adams and Ferreira (2009) finds that US firms facing more variability in their stock returns have fewer women on their boards, while the study of the impact of gender quotas in Italy (Ferrari et al., 2016) also finds lower variability of stock market prices. Huang and Kisgen (2013) assess the impact of gender in making executive financial and investment decisions, using a data set of executive transitions from 1,866 US firms. They use a 'difference-in-difference' approach, comparing activity before and after transitioning from a male to a female executive with a control sample of firms that had replaced a male director with another-male, helping to overcome sample selection concerns. They also conduct tests using the instrumental variable approach to try to isolate causal direction. Results show that male executives undertake more acquisitions and issue debt more often, and that these announcements have lower returns than acquisition and debt announcements by female executives. The authors suggest this shows that "men exhibit relative overconfidence in significant corporate decision-making compared to women".

Market studies also show clear risk management benefits for gender-diverse boards. Moody's Investor Services reports have shown, in both the US and Europe, that companies with higher credit ratings have greater gender diversity on their boards. Although they cannot confirm whether companies with higher credit ratings attract females at board level or whether the presence of females improves credit ratings, the differences are striking. In Europe, women make up 28% of boards in Aaa-rated companies and 32% in Aa-rated firms, compared to 16% in Caa-rated companies. Brendan Sheehan, author of Moody's reports, states that "We consider a board with less than 30% gender diversity as being one of many indicators that stray from the standards we define as a credit-friendly board."

Adams and Funk (2009) find in a survey of Swedish directors (n=628) that "female and male directors differ systematically in their core values and risk attitudes," though not necessarily in a stereotyped way. While female directors were found to be more benevolent and less power-driven than male directors, they were also found to be "more risk-living."

In a study of US non-financial companies, Sila et al. (2015) use a dynamic model that controls for reverse causality and for potential unobservable firm factors (omitted variables). They find no evidence that gender diversity on boards influences equity risk. Credit Suisse (2014) expanded on an earlier methodology to incorporate additional risk-based measures in their study of the impacts of diverse senior management. Interestingly, this study finds no evidence that female-led companies reflect greater financial conservatism, but this study shows correlation only.

v. Gender influences on corporate risk management in financial services

We reviewed five studies that assess the influence of board gender diversity in the financial sector, of which two report a positive impact (Palvia et al., 2014, and Mateos de Cabo, 2012). None reported a negative link.

The importance of risk management in financial services gained more attention following the global financial crisis. Several reports have shown that in the midst of the 2008–09 crisis, banks with a higher share of women on their boards were more stable than their peers (Arnaboldi et al., 2020; Geyfman, 2018; Palvia et al., 2014; and Credit Suisse, 2014).

Palvia et al. (2014) explore the gender of CEOs and board chairs in a large sample of US commercial banks (n=6,729) and, while gender is not related to bank failure in general, there is evidence that smaller banks with a female CEO and board chair were less likely to fail during the crisis. They also find that banks with a female CEO hold higher levels of equity capital, a finding which holds true when controlling for a number of bank attributes, including asset risk.

As with wider industry, Mateos de Cabo et al. (2012) suggest that the perception that women are more risk averse than men is a key factor influencing the low presence of women on bank's boards: "When a firm/bank assumes a significant level of risk, it is less likely to hire women for the board, since women are seen as less skilled in making the risky decisions that may be necessary for a bank's success." Their analysis of a sample of EU banks (n=612) shows that the proportion of women on the board is higher for lower-risk banks.

Recent analysis of authorised individuals at regulated banks in the UK by the Bank of England (Suss et al. 2021) finds that gender diversity is associated with lower risk. However, when fixed firm characteristics are controlled for there is no association. While in their analysis of gender diversity on US bank boards (n=365), Adams and Ragnathan (2015) find that the banks with more female directors did not necessarily have lower risk or participate in fewer risky activities.

Geyfman et al. (2018) consider the role of risk in their study of board gender diversity and bank performance. They use an executive compensation dataset for data on director remuneration, and various accounting and market figures for financial institutions in the US from 2007-2015 (n= 2,001 firm years). While gender diversity appears to improve performance and lower performance volatility, there was no impact on bank risk, giving a mixed result on risk management measures.

vi. Ethnicity and other diversity factors influencing risk management

We identified four studies that assess a wider range of diversity metrics in risk management behaviours at director/board level, all of which considered ethnicity, but with variable measurement approaches, the results are not conclusive.

In the UK, Suss et al. (2021) initially finds nationality diversity to be associated with lower risk, but when fixed firm characteristics are controlled for there is no association.

Giannetti and Zhao (2016) conducted analysis of S&P1500 firms' board data (excluding financial institutions) over the period 2001-2012 (n=12,104 firm-years), finding high volatility in performance and stock market returns. Together with more frequent board meetings and frequent changes to strategy, they take this as evidence of erratic decision-making. However, they find no evidence that firms with ethnically diverse boards take on more risk (ie they do not invest more, do not make more acquisitions, and they have similar debt levels as non-diverse boards). They base ethnicity on ancestral background according to the origins of director's surnames (British, Central European, African, etc). Giannetti and Zhao (2018) repeat the methodology with a larger dataset (n=23,970 firm year observations over the period 1996–2014) and utilise Ancestry.com to refine director origins to specific nationalities (British, Irish, German, etc). They report similar findings – seeing greater volatility for ancestrally diverse boards and evidence of more erratic decision-making, yet they find no evidence of more risk-taking in terms of debt and investment.

Bernile et al. (2018) investigate the effects of board diversity on corporate policies and risk in the US. They find that greater diversity leads to lower volatility and better performance. They state: "The lower risk levels are largely due to diverse boards adopting more persistent and less risky financial policies. However, consistent with diversity fostering more efficient risk-taking, firms with greater board diversity also invest more in R&D and have more efficient innovation processes." This study employs a robust sample of 21,572 firm year observations from 1996-2014, but it uses a multidimensional diversity index, including gender, age, ethnicity, educational background, financial expertise, and breadth of board experience. Breaking down the index by its individual components or by component type (cognitive or demographic) reveals that no single component of diversity alone drives the relation between the diversity index and firm risk.

5 Evidence of links between diversity, inclusion and good conduct

This chapter considers the findings of 29 studies that assess the impact of D&I in the workplace on good conduct outcomes, including six literature reviews and three meta-analyses. Of the 21 impact studies found, only three focus on financial services (one covering the UK). As with the earlier chapters in this review, the vast majority of studies reviewed pertain to gender and specifically the influence of gender-diverse boards on conduct outcomes. We divide these impact studies into three broad areas:

1. Development of quality products & services, ie innovation and creativity. This can be measured by the number of patents produced, the ratio of R&D expenditure to assets, and responses to survey questions related to innovation.
2. Aspects of corporate governance in terms of meetings frequency, length and/or attendance, information transparency, quality of disclosures and adherence to strategy.
3. Misconduct (fines, sanctions, diversity misconduct and financial reporting irregularities).

The evidence base is much smaller for other diversity metrics, although we do report from a limited number of studies covering ethnic diversity (7), sexual orientation and gender identity (2), education and experience (1), and inclusion (1). Additionally, we consider D&I outcomes for corporate social responsibility (such as sustainability and ethical issues), and we end the chapter with some examples of consumer harms as a result of potential diversity biases, uncovered during the review but not a main goal of it. This chapter starts with an overview and brief summary of the findings related to creativity and innovation outcomes from team-level studies.

i. Overall summary

The evidence points to a clear positive link between D&I and creativity/innovation outcomes, while all aspects of corporate governance assessed are associated with gender-diverse boards. There is a mixed picture for ethnically diverse boards, which are found to be more innovative but also more 'erratic'.

In their critique of the board diversity and corporate governance literature available, Wagana and Nzulwa (2016) note that few studies examine "non-financial performance measures (eg innovation, employee retention and customer satisfaction)". We agree that there is a real dearth of literature on the impact of diverse boards and firm conduct, especially in financial services. Much of the research is focused on analysis of secondary data sources (eg board and director demographics and firm-level financial data), and we only find five papers which involve the collection of primary data, such as a survey of directors (Torchia et al., 2011).

ii. Evidence of workplace diversity and innovation

There is long-standing evidence that heterogeneity in teams aids problem-solving and decision-making, bringing creativity and innovation, owing to the lower probability of 'groupthink' occurring. Cox and Blake (1991) report that in one of the several University of Michigan studies in the 1960s, 65% of heterogeneous groups produced high quality solutions (solutions that provided either new, modified, or integrative approaches to the problem), compared to only 21% of the homogeneous groups.

The Stahl et al. (2010) meta-analysis of 108 studies finds creativity gains for ethnically diverse teams. They find a statistically significant link between ethnic diversity and creativity. Studies assessed creativity in terms of the novelty of ideas generated on a brainstorming task, generating creative solutions to problems and developing creative endings to short stories.

In a study of banks in the US, Richard et al. (2003) conducted a survey with executives (n=177) to identify the racial diversity of the organisations and the emphasis placed on innovation. Survey data were analysed alongside financial performance data. The study finds that the level of association between ethnic diversity and performance depends on the firms' levels of innovation. For innovation-focused banks (according to the survey results) increases in ethnic diversity is linked to enhanced financial performance, but for banks low on innovation, higher ethnic diversity lowered financial performance. The authors state that this study supports the theory that there is a contingency element to resource dependence theory, in that diversity needs to be set in an appropriate context (ie in more creative environments) to fully realise the benefits.

In a series of experiments, Nemeth (2006) found that those with minority views can stimulate consideration of non-obvious alternatives in task groups. She concluded that the groups exposed to minority views were more creative than the more homogeneous, majority groups and that persistent exposure to minority viewpoints stimulates creative thought processes.

Open For Business (2018) analyse global data to assess the business case for LGBT inclusion and finds a link between the most LGBT+ inclusive cities and the number of patents registered. Further, we note from a Deloitte (2013) survey of 1,550 employees in Australia that there was an 83% uplift in employees reporting an ability to innovate among those that feel included.

iii. Diverse senior leadership and innovation outcomes

We report from ten academic studies that measure the impact of diverse senior management on innovation using secondary data sources; two focus on gender and both find a positive impact (Vafaei et al., 2020; Torchia et al., 2011); and three on ethnic diversity (Giannetti and Zhao, 2016 and 2018; Nathan and Lee, 2013) where the evidence leans towards positive outcomes. The primary outcome measure used is number of patents. The positive link with innovation mirrors the team-level studies that point to beneficial creativity outcomes for diverse teams. We also report in this section on studies that find the innovation strategy of the company to be an important contingency factor in delivering positive business performance outcomes (Deszö and Ross, 2012; Richard et al., 2003), as well as positive outcomes from a study that assesses the role of education and experience (Talke et al., 2011) and one on inclusion (Chung et al., 2019).

Most recently, Vafaei et al. (2020) study the largest firms in Australia, adopting the instrumental variable method used by Adams and Ferreira (2009) to isolate direct causal relationships. They find a significant positive relation between gender-diverse boards and firm innovation activities. A further study reports a survey of 317 Norwegian firms in 2006 (Torchia et al, 2011); it aims to identify the importance of "critical mass" on firm innovation. The survey was with firm directors, collecting data for aspects related to innovation and board tasks. The results suggest that going from one or two women ('tokens') to at least three women enhances the level of firm innovation.

Nathan and Lee (2013) centre on the importance of ethnically diverse enterprises in London. In addition to the outcome that companies with more ethnically diverse management introduce more product innovations, they also find diversity to be important for reaching international markets and serving London's cosmopolitan population.

Giannetti and Zhao (2018) analyse board data of a large dataset of non-financial firms in the US, comprising 2,947 firms and 23,970 firm-year observations. They measure the number of patents produced in a given year and show that firms with boards from a diverse ancestral background cite more patents. In addition, the strategies of these firms conform less to those of their industry peers, which the authors say is "consistent with the idea that diverse groups experiment more." They base ancestral background on the origins of director's surnames (British, Irish, German, etc). A prior study of US firms by Giannetti and Zhao (2016) found that ancestrally diverse boards had more patent citations, but not necessarily more patents, which they suggest is a sign that these boards are more creative, and innovation focused.

Further, Deszö and Ross (2012) study the effect of gender diversity on performance and innovation for S&P1500 firms over a 15-year period. They measure the firms' "innovation intensity" via the ratio between R&D expenditure and assets, finding that companies that prioritised innovation saw greater financial gains when women were part of the top leadership ranks. This study controls for a wide array of firm and time specific observable and unobservable factors that may affect firm performance, and also addresses the possibility of reverse causality.

In terms of other D&I metrics, we report from one study that considers education and experience and from one centred on inclusion. In a study of German manufacturers, heterogeneity in education and experience of senior leadership has a strong association with a firm's innovation orientation (Talke et al., 2011). Chung et al. (2019) surveyed 79 life science and biotech organisations in the US to assess the relationship between inclusive HR practices and organisational outcomes. They find a positive relationship between firms with inclusion values and staff retention metrics, and an even stronger relationship between inclusion and the development of quality products and services. The study also investigates the role of intellectual capital (human and social), finding inclusive HR practices to be especially important when organizations are low on intellectual capital. They suggest that inclusion "should help compensate for deficiencies when organisations have weaker social capital" as "inclusive HR practices would encourage employees to share information, relate positively to one another and contribute to innovation and organizational performance". This is a unique study but is limited to one sector only and has a small sample, so we should take care not to generalise the findings. Further, the authors note that we cannot infer causal findings.

iv. Diverse senior leadership and corporate governance outcomes

There is a strong consensus within academic literature that a greater number of women on the board improves performance on corporate governance metrics. Of the seven empirical studies reviewed, all found evidence that increased gender diversity in the boardroom positively influences board monitoring functions, such as attendance, quality of discussions, and monitoring effectiveness including better oversight of a firm's disclosures and reports. No studies reported a negative or mixed outcome on this metric. Due to the strong association, it is common for some academics in the field of board diversity research to include a corporate governance metric as a control variable when seeking to understand the impact of gender-diverse boards on other business outcomes.

One study focused on financial services (Adams and Rangunathan, 2015). In their analysis of gender diversity on US bank boards (n=365), they find better governance for banks with more female directors in terms of meeting attendance and committee duties.

Adams and Ferreira (2009) analyse data from US firms and find that the gender diversity of boards has a positive impact on the intensity of board monitoring. They sampled observations from 1,939 firms for the period 1996–2003. This study led the field of board diversity research to more strongly consider endogeneity and reverse causality concerns. Adams and Ferreira used the instrumental variable method to isolate whether there is a direct causal relationship. In doing so, they find a negative gender impact on business performance, but there remains a significant positive impact on the corporate governance outcomes. Female directors have better attendance records than male directors; male directors attend board meetings more regularly, the more gender-diverse the board is, and women are more likely to join monitoring committees.

The results show that gender diversity has beneficial effects in companies with weak shareholder rights, where additional board monitoring could enhance firm value, but has detrimental effects in companies with strong shareholder rights. This leads the authors to suggest that mandating gender quotas for directors could reduce firm value for well-governed firms. One possible explanation offered is that greater gender diversity leads to over-monitoring in those firms, which can be inefficient and impact decision-making. An earlier study by Adams and Ferreira (2004) also find that female directors attend meetings more regularly than male directors.

Gul et al. (2011) measure the financial transparency and disclosure of US firms with gender-diverse boards by assessing how the information provided to the market reflects in stock prices. They find that women on boards increase the financial transparency and disclosure of information through both "increased public disclosure in large firms and by encouraging private information collection in small firms". They find a stronger relationship between gender diversity and financial transparency for firms with weaker corporate governance suggesting that gender-diverse boards could help substitute for corporate governance that would be otherwise weak. This is a robust peer-reviewed academic study that controlled for corporate governance, earnings quality, institutional ownership and acquisition activity in the regression model. The study authors use instrumental variables and lagged control variables to address reverse causality, which they do partially, but this does not fully solve endogeneity.

Fan et al. (2019) find critical mass to be important in analysis of reported financial performance in the US. They studied 4,823 bank-quarter observations for 137 women directors in 91 bank holding companies during 2000-2014, paying attention to endogeneity concerns. They find that boards with 1-2 women directors were more likely to distort reported firm financial performance but bank boards with 3+ women directors were less likely to. Controlling for board and firm characteristics, Abada et al. (2017) find that higher gender diversity on boards of non-financial listed companies in Spain (n=531 firm years) reduces the chance of variation in the range of information held about a company in the market.

Dhir (2015) carried out qualitative interviews with 23 directors in Norway to understand their views on the impact of quotas. The benefits include increased quality of boardroom deliberations and overall corporate governance, as well as a more thorough selection process for directors, as companies expanded their "one-dimensional picture of what [a] board member should be." Directors reported how they had initially opposed the quota law but changed their views after "seeing the law in action".

In a review of corporate director data across 43 countries, Terjesen et al. (2009) test the influence of women on boards and gender equal pay at a firm, finding that gender diversity is important. They concluded that women directors contribute to governance outcomes as "they play direct roles as leaders, mentors, and network members as well as indirect roles as symbols of opportunity for other women and inspire them to achieve and stay with their firm."

v. Diverse senior leadership and misconduct outcomes

We report from two academic studies of secondary data that both find fewer incidences of misconduct for more gender-diverse boards, and two studies that consider the influence of D&I on reducing the likelihood of discrimination lawsuits.

Arnaboldi et al. (2020) examine the fines received by European banks from US regulators during the 2007-15 period (n=789 firm-year observations). They show that greater female representation significantly reduces the frequency of misconduct fines, equivalent to savings of \$7.48 million per year. They also find that female directors are more influential if they reach a "critical mass" and are supported by women in leadership roles. The authors believe that it is the ethicality and risk aversion of the female directors driving the different outcomes. Their findings control for a range of country and bank characteristics and are robust to reverse causality. This research also assesses further measures of diversity – ethnicity, age and education/social mobility, but the impact of these other types of board diversity is not determined to be significant.

Wahid et al. (2017), who use the instrumental variable method in their study of US listed companies from 2000-2010 (n=38,273 firm-years), find that gender-diverse boards commit fewer financial reporting mistakes and engage in less accountancy fraud. These results hold whether the existing firm governance is weak or strong, highlighting the benefits of gender-diverse boards in already well-governed firms. While some suggest three to be the number required before the benefits of a 'critical mass' is felt, Wahid et al. (2017) find that the financial reporting benefits are strongest for companies with two female directors, with no incremental benefit for firms with 3+ female directors.

Dandanlar and Abebe (2020) analysed data for 462 US-based S&P firms from 2010-2015. They find a link between female CEOs and diversity misconduct. Female CEOs were 21% less likely to face discrimination lawsuits, while there was no impact for female representation in the senior executive and board. In their meta-analysis of LGBT impact studies, Webster et al. (2017) find a strong relationship between a LGBT-supportive climate and a reduction in perceived discrimination.

vi. Corporate social responsibility outcomes

In this section we highlight some studies that show higher levels of 'corporate social responsibility' (CSR) for gender-diverse boards, measuring a range of reputational and environmental, social and governance (ESG) outcomes. These studies are noted for interest. We find a clear consistently positive impact on CSR measures for gender-diverse boards, although none of the studies reviewed attempt to account for causality. Note that these CSR studies are not considered as part of the good conduct outcomes discussed earlier in this chapter.

We report from six impact studies and two literature reviews in this area. All studies are focused on gender and all reported that gender-diverse boards had positive CSR outcomes. Only one study reviewed considered wider diversity characteristics (Hafsi and Turgut, 2013).

Rhode & Packel (2014), in their review of the literature on board diversity, financial performance, and good governance, find a more compelling "business case for diversity" for social justice, equal opportunity, and corporate reputation. A later meta-analysis (Byron and Post, 2016) also finds that female board representation is positively related to corporate social responsibility and social reputation, with the impact most pronounced in countries with greater gender parity in the workplace.

Bear et al. (2010) use CSR ratings provided by the 'Worlds Most Admired Companies' list and find the more gender-diverse boards have better ratings, with the ratings improving as the number of female directors increases, backing up 'critical mass' theory. Bernardi et al. (2009) conducted a study of Fortune 500 firms that used a similar approach, examining the association between the number of women directors on a board and the company's appearance on Ethisphere Magazine's World's Most Ethical Companies list (2009). This approach was used again by Larkin et al. (2012), additionally including Fortune's 100 'Best Companies' list in the analysis. Larkin et al. (2012) find an incremental benefit for gender-diverse boards that already have a good reputation in CSR, seeing an "interactive effect between corporate reputation and the number of female directors". These studies all show that the number of women on the board is positively associated with better corporate social responsibility ratings, but none prove causation. It should be noted that other reviewers have questioned the use of 'best company lists' to infer the impact of diversity on CSR. It is likely that these lists use some of the same diversity measures as part of their ranking methodology, while a wide spread of firms tend to feature across the different lists, presenting concerns.

Hafsi and Turgut (2013) sought to find out whether there is a significant relationship between boardroom diversity (gender and age) and social performance via a cross-sectional study of S&P500 firms (n=95 firms/1,028 directors). Social performance was measured using 43 indicators from an annual data set of positive and negative ESG performance indicators applied to publicly traded companies. Controlling for sector

and financial performance, this study shows that the more gender-diverse boards have better social performance. No impact is seen for ethnic diversity, while a surprising negative relationship is observed for age diversity. The authors note the limitations from the relatively small and multi-sector sample; causation was not assessed.

Galbreath (2011) finds some evidence of a link between gender-diverse boards and corporate sustainability in Australia, considering sustainable economic growth, environmental quality and social responsibility. The study used annual report data to identify corporate sustainability on these measures. Women on boards are positively linked with both economic growth and social responsibility, with no impact for environmental outcomes.

Finally, we note the evidence and theory behind why the presence of women on boards might lead to better CSR outcomes. Bart & McQueen (2013) report from a survey of board directors at US firms (n=624) that female directors achieve significantly higher scores than their male counterparts on the complex moral reasoning dimension which essentially involves making consistently fair decisions when competing interests are at stake. Dandanlar and Abebe (2020) draw from social role theory in their study of diversity misconduct in the US, to argue that female leaders are better positioned to minimize diversity misconduct because of their role as individuals who emphasise care, empathy and high 'ethical sensitivity'.

vii. Examples of consumer harms as a result of possible D&I issues in the FS industry

During this literature review, we have come across potential consumer harms that may be due to inherent biases in the financial sector, specifically toward female customers. These are across two core areas – access to finance, including venture capital, and investment planning.

Access to finance

Oliver Wyman (2020) sets out to assess the overall value currently being lost by a non-diverse FS industry, believing there to be "unintentional blind spots" and "significant revenue uplift potential for firms that listen to and understand their female customers". In identifying this missed potential revenue, the report also highlights apparent unequal gender access to finance:

- Women are less likely to be approved for mortgages and other retail credit; and
- Women are less likely to receive funding to start and grow their businesses.

The source for Wyman's data here is an OECD policy briefing on woman's entrepreneurship (OECD, 2017). The OECD (2017) data finds that women are less likely than men to indicate that they can access the financing needed to start a business, which holds across all EU Member States. The gap is substantial in several countries. In seven states men were more than 1.5 times as likely as women to report that they could access the finance to start a business. This ranged from 1.5 in Germany to 2.3 Italy. In the UK men were 1.7 times more likely than women to report that they could access the finance to start a business.

The hurdles include gender-biased credit scoring and gender stereotyping in the lending process (Alesina et al., 2013; Saporito et al., 2013,), as well as lower levels of entrepreneurial experience and participation in more marginal female-dominated sectors. Alesina et al. (2013) find robust evidence that women in Italy pay more for overdraft facilities than men. They could not find robust evidence that women are riskier than men, or use a different type of bank, finding that the same bank charges different rates to male and female borrowers. They suggest that it is owing to higher levels of trust towards male borrowers.

A consequence is that self-employed women are less likely than self-employed men to seek finance (OECD, 2017). Shaw et al. (2009) conducts research with 30 matched pairs of male and female business owners and finds that women entrepreneurs typically start their businesses with less money and are more reliant on self-financing.

OECD (2017) also report on some academic studies that find women face “higher hurdles” in financing their businesses (Brush et al., 2014). Brush et al. (2014) provides a comprehensive analysis of venture capital investments in the US, which they state is the first since the original ‘Diana Project’ research conducted in 1999. The Diana Project (1999) finds fewer than 5% of all ventures receiving equity capital had women on their executive teams. While conventional wisdom had suggested that women entrepreneurs were neither prepared nor motivated to found high-potential businesses, the Diana Project finds that many fundable women entrepreneurs had the requisite skills and experience to lead high-growth ventures, but were consistently left out of the networks of growth capital finance and appeared to lack the contacts needed to break through.

We also report from a study about the provision of venture capital to diverse segments (Extend Ventures, 2021). Analysis of the perceived gender, ethnicity and educational background of some 3,784 entrepreneurs who started 2,002 companies between 2009 and 2019 provides some telling statistics:

- All-ethnic teams received 1.6% of total venture capital;
- Only 38 Black entrepreneurs received 0.24% of the total sum invested;
- Just 0.02% went to Black female entrepreneurs;
- All-female teams received 2.9% compared with 68.3% for all-male teams; and 43% of seed stage funding goes to those with an elite education, which includes Oxford, Cambridge, Harvard, Stanford and their respective business schools.

Investment planning

We also see potential gender biases that may lead to financial harm in investment and retirement planning. In section 4, we highlight the importance of better understanding the gender influence on risk tolerance levels. Fisher et al. (2017) analysed US Consumer Finance survey data and find that there is gender difference in financial risk tolerance, but this is explained by the differences between the genders for the key determinants of risk tolerance, namely income uncertainty and net worth. The authors suggest that financial advisers need to understand how the differences in income uncertainty and net worth between men and women relate to risk tolerance and financial decision-making.

The headline finding from this study has been quoted in other literature (Oliver Wyman, 2020), to highlight the importance of not assuming women are inherently more risk averse, and that context is important.

However, the more nuanced study findings from Fisher et al. (2017) are not always discussed. While income uncertainty lowers risk tolerance among women, it does the opposite for men. High net worth men have higher risk tolerance but there is no association between net worth and risk tolerance for women. The key takeout is that income uncertainty and net wealth need to be considered in the context of risk tolerance levels, along with gender, when make financial planning recommendations. Indeed, this greater level of awareness could benefit men too, as, while high net worth females may not be taking on enough risk, males with uncertain incomes may be taking on too much risk. Such inherent biases or misconceptions may be of interest for the industry to understand further.

The US Government Accountability Office (GAO) is particularly concerned with the wealth expectations for women in retirement in the US. Their 2012 study, of why women are more likely to live in poverty in old age, finds that women are more likely to be single, live longer and have lower average earnings. They also find that the disruptions that occur as a result of later-life events, such as divorce and widowhood, can be financially devastating for women. As retirement income is increasingly dependent on individual choices regarding how much to save, how to invest, at what age to retire and how to make those savings last throughout retirement, the role of advisers and how they interpret risk propensity is increasingly vital.

List of Abbreviations

| Abbreviation | Description |
|---------------------|--|
| Cap | Capitalisation |
| CEO | Chief Executive Officer |
| CSR | Corporate Social Responsibility |
| EBIT | Average earnings before interest and taxes |
| ESG | Environmental, Social and Governance |
| GAO | Government Accountability Office (US) |
| R&D | Research and Development |
| ROA | Return on assets |
| ROE | Return on equity |
| ROI | Return on investment |
| SME | Small and medium-sized enterprise |

Glossary of terms

| Item | Definition |
|---------------------------------------|--|
| Causality | This is when there is a link between a dependent variable and an independent variable, but the direction is not known (whether x causes y, or y causes x) |
| CEO duality | This is when the Chair of the Board is also the Chief Executive Officer |
| Confounding factor | One or more factors driving the outcome that are also correlated with the independent variable of interest, eg women's ratio, average age |
| Control variable | <p>An independent variable that is introduced to a regression model to determine if it moderates the relationship between another independent variable (the treatment) and the dependent variable (the outcome).</p> <p>Control variables help to isolate the causal effect of a treatment on an outcome. Using control variables enables the unique effect of the treatment on the outcome over and above the non unique part explained by its correlation with the control variable to be isolated and estimated</p> |
| Dependent variable | Outcome variable in the regression model, eg ROA, number of fraud cases |
| Difference-in-difference (DiD) | A statistical technique comparing the change in the differences in observed outcomes between treatment and control groups, across pre and post-treatment periods |
| Director firm-years | Used in longitudinal datasets, this is the number of yearly director observations for all firms in the sample and therefore the total director sample size |
| Diversity | The practice of including people from a range of different social and ethnic backgrounds and of different genders, sexual orientations and other protected characteristics |
| Endogeneity | In this literature review, endogeneity usually refers to sample selection biases associated with board gender diversity (ie is a woman board member selected because the company is already more profitable or innovative, or less risky – but that information is not known). This adds to the difficulty in determining causality. Technically put, an endogeneity problem may occur when the independent variable is itself an outcome caused by other variables in the model, or there are omitted variables |
| Ethnic diversity | The representation of minority ethnic individuals in the workplace, or on the board |
| Firm-years | Used in longitudinal datasets, this is the number of yearly firm observations in the sample and therefore the total firm sample size |
| Gender diversity | The representation of women in the workplace, or on the board |

| Item | Definition |
|--|--|
| Inclusion | The extent to which everyone at work, regardless of their background, identity or circumstances, feels valued, accepted and supported to succeed |
| Independent variable | Predictor variables in the regression model include, for example, women's ratio, director age, firm size |
| Insider | Used to describe a board member who has been recruited from within the organisation |
| Instrumental variable (IV) method | A method used by economists and statisticians to isolate direct causal relationships when controlled experiments are not feasible. Instrumental variables are independent variables that are correlated with one or more other independent variables and correlate with the dependent variable only via its relationship with these variables. Their inclusion in a model allows the 'direct effects' of independent variables (eg women's ratio) to be isolated, helping make the case for causal inference |
| Lagged variables | A variable (usually a dependent variable) that is lagged in time, which is typically the case when the effects are only likely to appear at future observations (such as the impact of a new director on business outcomes) |
| Mid-cap enterprise | Typically defined as having 5–500 employees, although definitions do vary |
| MSCI ACWI | MSCI's All Country World Index, a global equity index, designed to represent large- and mid-cap stocks across 23 developed and 26 emerging markets |
| Omitted variable bias | This is when unknown or unmeasured variables (eg aspects of company culture) not in the model may be influencing outcomes and the values of other independent variables in the model |
| Quota | A target number or percentage that specifies the representation of women and/or men on a board that is required to be achieved by law |
| Small and medium-sized enterprise | Typically defined as having 1–250 employees, although definitions do vary |
| Target | A set number, range, or percentage of women and/or men on boards aimed to be achieved by a specific date |
| Tobin's Q | A measure developed by Tobin (1969) that compares the market value of a company with the replacement value of a company's assets |

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Author

Vicky Whiting is a Senior Associate in the Partnerships and Consumer Research team at the FCA. Vicky has worked as a market researcher in the financial services and public sectors for 20 years, including prior roles at Harris Interactive Ltd, the Money Advice and Pensions Service and The Pensions Regulator. She works across qualitative and quantitative research methodologies.

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