

# **Interrogating diversity: Feminism and the deconstruction of Australian board appointment practices**

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## Abstract

**Research Question/Issue:** How have social movements influenced the diversity of Australian corporate leadership? Although board diversity is crucial for corporate governance, the research in this topic is bifurcated between studies examining interlocking directorates and the presence of boardroom gender diversity.

**Research Findings/Insights:** In this study, we use a novel dataset and method to understand board diversity. We integrate the analysis of *social diversity* (structural connections) and *demographic diversity* amongst ASX50 boards in 2019 and 2023. Social network analysis (SNA) reveals a closely connected corporate community, with prosopography data identifying a narrow range of 'acceptable' demographic characteristics.

**Theoretical/Academic Implications:** We extend institutional theory by examining the role of global social movements (GSMs) for the deconstruction of board appointment practices, and the resulting uneven progress on equality. Activism from the global feminist movement has applied multi-dimensional coercive and normative pressures to develop a 'pipeline' and 'catalyst' for women's board appointments. Simultaneously, the absence of targeted action on other diversities, and the intensification of directors' professional requirements, has institutionalised the group's social and demographic profile.

**Practitioner/Policy Implications:** These findings are relevant to policymakers and corporations, highlighting the role of social movements for disrupting the status quo,

and the multidimensional institutional pressures needed to destructure entrenched appointment practices.

**Key words:** board diversity, corporate governance, prosopography, social network analysis, social movement, feminism

**Conflict of interest statement:** the authors have no conflicts to declare.

## Introduction

Board diversity is crucial for corporate governance, with directors responsible for monitoring, approving, and guiding company decisions. Board diversity has attracted significant public, regulatory and research interest, and has been found to be important for reducing ‘group think’, and encouraging better monitoring, oversight and decision-making (Adams and Ferreira, 2009; Guest, 2019; Kagzi & Guha, 2018; Rao & Tilt, 2016b). It has also been important for creating space for women’s empowerment generally, setting an exemplary message throughout the organisation and encouraging the education and career aspirations of girls and women (Matsa and Miller, 2011). In response, many countries, including Australia, have introduced mechanisms to improve board diversity, including quotas, mandates, incentives, and ‘comply or explain’ procedures. For example, in Australia in 2010, the Australian Stock Exchange (ASX) revised its *Corporate Governance Principles and Recommendations* to encourage firms to monitor, disclose and establish policies to improve the number of women in corporate leadership.

Research on board diversity is bifurcated between those studies examining the presence and structure of interlocking directorships (*social diversity*) (Gray & Nowland, 2018; Kiel & Nicholson, 2003; Miglani et al., 2020), or the presence of boardroom gender diversity (Agrawal & Knoeber, 2001; Frijns et al., 2016; Griffin et al., 2019; Kagzi & Guha, 2018; Post & Byron, 2015). Although many studies have considered both individual drivers and organisational predictors of women on corporate boards (Hillman et al. 2007; Nekhili and Garfaoui 2013; Sheridan et al. 2021), in this article we examine the role of national, regional and global institutional structures for enabling and constraining board diversity. Within this literature, the influence of global social movements (GSMs) has been neglected, with research briefly gesturing to the influence of public activism (Ghauri et al., 2021; Perrault, 2015; Rose & Bielby, 2011; Spear & Roper, 2013), and the introduction of regulatory initiatives (Clark et al., 2022; De Vos & Culliford, 2014; Huse et al., 2011; Seierstad & Opsahl, 2011). We contribute to these efforts by examining a broad range of diversity categories (gender, ethnicity, age, class) alongside social diversity in the form of interlocking directorates. We then extend research on the local translation of GSMs by examining the progress of multiple types of board diversity in Australia compared to the progress of their relevant activisms.

To understand the role of GSMs on the deconstruction of minority corporate leadership appointments, we examine two cohorts (2019 and 2023) of board members of ASX50 companies. We use social network analysis (SNA) to analyse *social diversity* through connections across ASX50 firms and directors based on interlocking directorships. We then examine prosopography – or collective life history – data on director’s gender, age, ethnicity and professional career path to understand the group’s *demographic diversity*.

This paper will progress as follows. In section 2 we review the literature relating to the importance of board diversity and the role of GSMs for disrupting appointment practices. In section 3 we outline our theoretical arguments, considering the external institutional isomorphic forces that drive ‘sameness’ in Australia’s director community, and the role of GSMs for ‘deconstructing’ appointment norms. In section 4 we discuss our data and methods for understanding social and demographic diversity. Section 5 includes the empirical results, where we find an identifiable corporate community amongst the ASX50, with most boards and directors connected within the same cluster, sharing multiple connections to one another, and limited connections to other groups. Directors’ *social sameness* is combined with *demographic sameness*, with a narrow range of ‘acceptable’ demographic characteristics in the corporate community.

Interpreting the empirical results, section 6 concludes that the relative importance of women in top company boards is the culmination of decades of feminist activism, which developed a ‘pipeline’ of women with the necessary qualifications and experience, and then a ‘catalyst’ to their board appointments. In contrast, the absence of targeted action on diversity other than gender, and the intensification of directors’ professional requirements, has institutionalised the group’s social and demographic profile. These findings make a theoretical contribution, extending institutional theory by highlighting the reliance GSMs for deconstruction of board appointment practices, and the resulting tension between strides made in equality in some domains, against increased homogenisation in others. These findings are also relevant to policymakers and corporations, highlighting the way institutional forces entrench appointment practices, and the role of GSMs for disrupting the status quo.

## Literature review

The last four decades have witnessed a significant increase in public, government, regulatory and media interest in the composition of corporate boards (Armour, 2020; Fairfax, 2005; Groutsis et al., 2018; McDonnell & Cobb, 2020; Rao & Tilt, 2016a). Although board diversity can manifest in several different ways, research in management and corporate governance has largely considered *demographic* diversity, or the representation of population-level differences such as gender, age, class, ethnicity and sexuality. research has examined the gender composition of boards, the appointment process, and compliance with regulatory conditions (Agrawal & Knoeber, 2001; Farrell and Hersch, 2005; Frijns et al., 2016; Griffin et al., 2019; Hutchinson et al., 2015; Kagzi & Guha, 2018; Post & Byron, 2015; Singh et al., 2015; Torchia et al., 2011). There is a limited range of research that examines ethnic diversity in corporate leadership (Abebe & Dadanlar, 2021; Azmat & Rentschler, 2017; Brammer et al., 2007; Carter et al., 2010; Fredette & Sessler Bernstein, 2019; Guest, 2019; Upadhyay & Zeng, 2014). Some have acknowledged that diversity is much broader than gender, however, there is very little research that documents a range of diversity dimensions (Kang et al. 2007; Frijns et al., 2016; Rao & Tilt, 2016b; Vinnicombe et al., 2008). Australian research has largely followed the international literature, examining gender, with very little work on other demographic diversities (Ahmed & Ali, 2017; Ahmed et al., 2018; Gyapong et al., 2021; Hutchinson et al., 2015; Strydom et al., 2017).

Board composition refers to the mixture of skills and experiences amongst a team of directors, with diversity seen as important for reducing 'group think', and encouraging better monitoring, oversight and decision-making (Dalziel et al., 2011; Guest, 2019; Kagzi & Guha, 2018; Rao & Tilt, 2016b). While most board diversity research has examined *demographic* diversity, work has also acknowledged the importance of social and professional connections for board diversity. The relative proportions of executive and non-executive directors, outside directors, and directors with multiple interlocking board roles indicate conflicts of interest and the degree of distinctiveness of directors' social contacts and knowledge resources (Ahamed, 2014; Buch-Hansen, 2014; Handschumacher et al., 2019; Hudson and Morgan, 2022; Miglani et al., 2020; Mizruchi, 1996; Westphal and Khanna, 2003). Australian research has examined the role of board networks for trust, coordination, financial control, and resource dependence (Etheridge,

2012; Rolfe, 1967; Wright 2023), with Wright (2022) demonstrating the impact of interlocks for corporate governance. The board diversity literature is thus bifurcated, with existing studies examining either the presence and structure of interlocking directorships, or the presence of boardroom gender diversity. To the best of our knowledge, we are the first to examine a broad range of diversity categories (gender, ethnicity, age, class) alongside interlocking directorates.

The board of directors are responsible for the most significant decisions within any corporation. As such, board diversity – whether demographic or social – can influence a company’s access to knowledge, skills, and contacts (resource dependency theory), and can also be important for aligning the interests of managers and shareholders (agency theory) (Bendickson et al., 2016; Hillman and Dalziel, 2003; Kaczmarek et al., 2014; Liu et al., 2014; Wright 2023). Independent directors – those with social diversity – reduce the potential for conflicts of interest (Buch-Hansen, 2014; Wright, 2022). A diverse board can also enhance decision-making and facilitate more effective mediation between managers and investors (Bendickson et al., 2016; Clarke, 2004; Devos et al., 2009; Kaczmarek et al., 2014; Rao & Tilt, 2016b). The act of interlocking – reducing social diversity – additionally risks over-commitment and busyness that may reduce director’s capacity to provide diligent monitoring (Handschumacher et al., 2019; Méndez et al., 2015).

Demographic diversity is also important for corporate governance (Guest, 2019; Kagzi & Guha, 2018; Rao & Tilt, 2016b). Much of the literature has focussed on the micro (individual), meso (firm) and macro (societal) drivers of gender diversity in corporate leadership. Women’s education, experience, and engagement with training and mentorship have been important precursors to their board appointments (Nekhili & Gatfaoui, 2013). Firm-level drivers, including company size, industry, presence of women chairs, degree of family ownership, and extent of outside board membership, have been positively associated with the appointment of women to boards (Bianco et al., 2015; Geiger & Marlin, 2012; Hillman et al., 2007; Nekhili & Gatfaoui, 2013). Important macro national or societal drivers include the country’s gender pay gap, political representation, and legislative changes (Brieger et al., 2019; Grosvold & Brammer, 2011; Grosvold et al., 2015; Terjesen et al., 2015; Wang and Kelan 2013). In Australia the appointment of women to boards has been associated with a similar range of

individual, firm and societal drivers (Ahmed et al., 2018; Cermak et al., 2018; Du Plessis et al., 2014; Handley et al., 2018; Klettner et al., 2021; Ross-Smith & Bridge, 2008).

Although there has been significant interest in the role of national and global structures for board diversity, the influence of GSMs has been neglected. Research has gestured to the influence of public activism, with the appointment of women directors often used to signal the firm's alignment with values of social justice and equality (Ghuri et al., 2021; Perrault, 2015; Rose & Bielby, 2011; Spear & Roper, 2013). Some have addressed the influence of activism on board appointments (Briscoe & Gupta, 2016; Buchter, 2021; DeCelles et al., 2020; Perrault, 2015), the way that global activism interacts with local conditions (Chen et al., 2022; Clark et al., 2022; Seierstad et al., 2017) and the intercepting of social movements by other campaigns (Geletkanycz, 2020). A popular thread of literature on board gender diversity has examined the introduction of regulatory initiatives such as quotas and 'comply or explain' regimes, finding that it has served to increase the number of women on boards, but with the risk of tokenism and 'golden skirts' amongst the most privileged women in society (Clark et al., 2022; De Vos & Culliford, 2014; Huse et al., 2011; Seierstad & Opsahl, 2011). In Australia, research has focussed on the recent introduction of 'comply or explain' regimes for gender diversity, but is yet to understand the multi-faceted, long-term integration of GSMs to Australia's corporate leadership appointments (Sheridan et al., 2021). We extend Chen et al's (2022) work on the local translation of GSMs, and Geletkanycz's (2020) work the open system of social movements by examining the progress of multiple types of board diversity in Australia compared to the progress of their relevant GSMs.

## **Theoretical framework**

The board of directors is arguably the most significant governance authority in modern corporations. Directors are appointed, in part, for their individual knowledge and skills that allow them to align the interests of managers and shareholders (*agency theory*) and guide company operations (*resource dependence theory*) (Bendickson et al., 2016; Kaczmarek et al., 2014). In practice, boards both monitor and provide resources, with committees internalising and integrating these two motivations as they decide on new

appointments (Hillman and Dalziel, 2003). Board members are often career professionals, with a common educational base and the establishment of standards of conduct, seen as appropriate external sources of knowledge and validation (Bendickson et al., 2016; Kaczmarek et al., 2014). Large companies, or those with specific needs generally require a more diverse range of skills and experience to draw on (Ahmed et al., 2018; Geiger & Marlin, 2012; Hillman et al., 2007; Singh, 2007; Terjesen et al., 2009). Appointments are also governed by directors' role as the public face of the corporation, with leaders expected to appear knowledgeable, ethical and community-minded in order to secure investment capital and maintain the company's social license to operate (Barnes, 2013; Beji et al., 2021; Rixom et al. 2022; Wright & Forsyth, 2021). Consistent with our focus on the role of GSMs on a cohort of companies, we examine general appointment criteria of company directors rather than more granular individual and firm-level motivations.

Examining cohorts of company board members prompts conceptualising leadership as a collective organisational form. Institutions are the "cognitive, normative, and regulative structures" (Scott, 1995, p. 33) that provide the "rules of the game" for social thought and action (Bachrach & Baratz, 1970, p. 43). Even with no specific duty to comply, or mechanism for enforcement, these norms become "infused with value" over time as they gain acceptance among organisational members (Selznick, 1957, p. 19). Di Maggio and Powell (1983) studied the dynamic evolution of organisations – including boards of directors – arguing that institutional isomorphisms (coercive, mimetic and normative pressure) encourage organisations to conform, not necessarily due to efficiency, but for the purpose of establishing power and legitimacy in their field. Coercive isomorphism encompasses factors determined by the external environment, including pressure from regulators, legal requirements, and cultural and societal expectations. Mimetic pressure involves firms imitating others or modelling past successful performance. Normative pressure stems from organisations conforming to 'best practice' established or legitimised through professional structures and industry associations.

We focus on external institutional isomorphisms, or those related to Australia's macro socio-political environment. As such, we disregard mimetic pressure as a micro firm-level institutional pressure unsuitable for consideration with the cohort data under



consideration here. For our case, leadership appointments amongst the ASX50 have been governed by coercive pressure in the form of public policy, regulation, and the societal gender, class and race regimes that dictate those able to be appointed to the leadership suite (Colic-Peisker & Tilbury, 2007; Du Plessis et al., 2014; Sheridan et al., 2021; Taksa and Groutsis, 2017; Wright 2021). Normative isomorphism has resulted from education standards and industry and professional associations – including the long professional career pathway for company directors – corporate governance recommendations published by the Australian Stock Exchange (ASX), and the training, lobbying, communication activities of the key board member professional body, the Australian Institute of Company Directors (AICD) (Gray and Nowland, 2018; Sheridan et al., 2014; Wright 2000; Wright and Forsyth, 2021).

Destructuration influences the practices, norms and obligations that take on a “rule like status”, establishing new norms by which, in our case, minority directors are sought for board positions (Meyer & Rowan, 1977; Scott, 1995; Selznick, 1957; Sheridan et al. 2021). GSMs have the potential to disrupt accepted board appointment practices in multiple ways. Social movements often focus on legislature, lobbying governments, international organisations, and regulatory institutions regarding equality in employment, promotion and equal pay (Chen et al., 2022; Du Plessis et al., 2014; Sheridan et al. 2014; Terjesen et al., 2015). This can change the composition of those promoted through the corporate labour market, influencing the ‘pool’ of candidates able to be appointed to leadership roles. Regulatory pressure may also focus specifically on leadership, through quotas, targets or ‘comply or explain’ procedures (De Vos & Culliford, 2014; Huse et al., 2011; Krook, 2007; Rixom et al., 2022; Seierstad & Opsahl, 2011; Seierstad et al., 2017; Sheridan et al. 2021; Terjesen et al., 2015; Wang and Kelan, 2013). Professional bodies can establish normative through ‘best practice’ standards, as well as training and mentorship programs to assist aspiring directors from minority backgrounds (Sheridan et al., 2014). Finally, social movements may pressure corporations directly through shareholder activism, including threats to boycott or withdraw capital for companies that do not comply with equality and diversity aims (Chen et al., 2022; Perrault, 2015; Rastad & Dobson, 2022).

By analysing the role of GSMs for board appointment practices, we extend institutional theory. As we discuss, institutions tend to remain the same over time, with

disruption to the status quo often requires the focussed energy of a social movement. The reliance on GSMs thus means that any deconstruction is often uneven in scope. Rather than the broad dismantling of white male capitalism that would make corporate leadership more inclusive for all, the need for the focussed energy of GSMs means that progress on equality for some groups is likely met with stagnation or increased homogeneity for others. As our results reveal, the composition of ASX50 boards demonstrates both the importance of GSMs for disrupting the status quo, and the resulting tensions between great strides made on equality in some domains, against the backdrop of increased homogenisation in others.

To understand the role of GSMs on the deconstruction of minority corporate leadership appointments, we examine:

1. The extent of social and demographic diversity amongst directors of ASX50 companies in 2019 and 2023.
2. The role of institutional isomorphisms for fostering *sameness* amongst ASX50 directors, and
3. The role of a global social movement – in our case feminism – for deconstructing gender appointment practices amongst ASX50 companies.

## **Data and methods**

We examine board members of firms listed on the S&P/ASX50 index as at 1 July 2019 and 14 March 2023. The sample of firms was capitalised at \$1.4 trillion in 2019, or 65% of ASX total market capitalisation, and in 2023 was capitalised at \$1.8 trillion, or 72% of ASX total market capitalisation (Table 3 and 4). Two benchmarks, in years without major disruptive economic events, were chosen as a robustness test. The analysis of both benchmarks also aligns with the longitudinal nature of our work, demonstrating that our results are part of longer trends in Australia's corporate sector. ASX50 firms were chosen because of the long-term dominance of the 'big end of town', with capital, personnel and power concentrated with a relatively small number of very large firms (Fleming et al., 2004).

The sample includes all major sectors of the economy, but is skewed towards banks and financial institutions (22% in 2019, 20% in 2023), and materials (16% in 2019, 20% in

2023), with smaller proportions in health, real estate, industrials, energy, and consumer industries (see table 3 and table 4 for the full list of firms included in the sample). The ‘other’ category – including tertiary or service industries – are underrepresented amongst the ASX50, comprising 70% of the sample in 2019 and 2023, but around 80% of GDP (Ville & Withers, 2015). The ASX50 is relatively more concentrated in materials (11-15% of GDP, 16-20% of ASX firms), reflecting the capital needs of these industries, and their tendency towards larger operations (Reserve Bank of Australia, 2020). Australia’s largest firms include many household names such as Commonwealth Bank, BHP, Telstra, Woolworths, Origin Energy, Qantas, Stockland, and Caltex (Australian Stock Exchange, 2019).

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To understand *social diversity*, we used SNA to analyse connections across ASX50 firms and directors based on interlocking directorships. Company boards are, in this case, the ‘foci’ for professional interactions, with board membership associated with regular meetings, correspondence, and shared decision-making (Feld, 1981). If a director was a member of two or more sampled company boards, this indicates a *tie* between those individuals (director network) and between companies (firm network), as the director has the ability to act as an intermediary and broker contacts and resources between the two groups (Hanneman & Riddle, 2005).

ASX50 boards comprised 382 directors in 2019, and 389 directors in 2023. Firms had between 7-11 directors, with 1-2 executive directors, and 7-8 non-executive directors (table 1). We have used *NetDraw* to visualise, and *UCINET* to analyse the network of board members and firms. *Degree* measures the number of connections held by the actor (director or firm). *Betweenness centrality* measures the relative importance of the actor’s connections, based on the proportion of paths between two sections of the network that pass through the actor. This is commonly used as a measure of network power and/or importance, as it indicates the reliance of others on the actor for contacts and resources.

To understand *demographic diversity*, we have collected prosopography data. Prosopography seeks to understand the common characteristics of a group of actors

through the analysis of their collective life histories (Keats-Ronan, 2007). We have examined basic demographics – gender, age, ethnicity – for the whole group of ASX50 directors. Informed by the theoretical framework – particularly the appointment of directors based on professional knowledge and skills – we have examined detailed professional histories for the small group of interlocked board members. Interlockers’ education, qualifications, accreditation, and career path have illuminated the life-long process of becoming a company director, intersections between professionalism and other demographic diversities, and the role of external institutional drivers such as GSMs on the pool of suitably qualified directors. We have gathered these data from a variety of sources, including the Connect4 Boardroom database, *Who’s Who Australia* (and various sub-imprints), annual reports, media interviews, personal websites and LinkedIn profiles. Although coverage is good, data quality is inherently non-random, and influenced by self-reporting and those media have chosen to profile. For example, media have disproportionately profiled women and those from non-white backgrounds. Consulting a wide range of material, and focussing our analysis on a close range of theoretically-informed variables, has mitigated the extent of this bias.

## **Empirical analyses**

### *Firm and director networks*

Networks indicate firms’ and directors’ access to contacts and resources. Figures 1 and 2 show the firm networks in 2019 and 2023 respectively, and indicate that the majority of ASX50 companies (94% in 2019 and 76% in 2023) were connected through at least one director, with 95-96% of these connected in a single, main component (table 1). Between 2019 and 2023, there was a decrease in the extent of interlocking amongst the ASX50, with the number of interlocked firms, number of ties, and average number of ties per firm declining (table 1). This was the result of a greater number of isolated boards in 2023 (3 in 2019, 11 in 2023). Nevertheless, the networks structures are similar in each year, with a primary cluster of firms containing multiple paths between nodes, and peripheral ‘tails’ of single and dyadic connections. These results indicate that most ASX50 companies had access to one another within a small number of network ‘moves’.

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The director networks (figures 3 and 4) shows those who connected ASX50 boards. Nodes located in the middle of groups indicate interlockers, or those who were members of multiple boards and could share contacts and resources between them. Interlocking was prominent in this community, with 11-14% of directors holding 21-27% of board positions (table 1). Much like the firm network, interlockers connected most directors (93% in 2019, 78% in 2023) in a single component, with a cluster of multiple pathways and dense connections alongside peripheral members who connected otherwise isolated boards. The clustering of director networks indicates *social sameness*, with over 300 of Australia's most prominent directors able to contact one another in a small number of network moves. This indicates a limited extent of professional connections and little capacity for directors to develop outside contacts.

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### *Demographic characteristics*

In addition to social sameness, company directors in our sample also comprised a homogenous group with *demographic sameness*. Directors occupied a very narrow age range, with members almost exclusively in their 50s and 60s at the time of each benchmark. For example, all the directors of GPT in 2019 were aged between 59 and 67 at the time of the annual report, with directors of National Australia Bank similarly aged

between 58 and 65 in 2019. In 2023, the age distribution of directors was much the same, with an average age of 60, and the majority (85%) in their 50s and 60s at the time of the benchmark (table 2). Some companies appointed directors in their 40s, for example Bridget Loudon on the board of Telstra (age 35), Natalie Bancroft on the board of News Corp (age 43), and Anil Sabharwal on the board of Wesfarmers (age 45). However, this was the minority by far, with only 5% of the cohort under the age of 50.

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Directors of ASX50 companies also represented a narrow range of ethnic groups. Those from ‘Anglo-Celtic’ or Western European backgrounds represented 90-93% of all directors, and 92-95% of interlockers (table 2). Non-white directors were marginalised in the network, found on isolated boards, or on the fringes of networks. As such, non-white directors were less likely to be interlockers (8% in 2019, 5% in 2023) compared to the whole group (12% in 2019, 10% in 2023), and had lower average *betweenness* scores compared to their white colleagues (table 2).

Gender diversity in Australian corporate leadership has improved greatly over the last two decades. In 2019, each firm had, on average, three female board members, with women occupying 34% of all board seats of ASX50 companies. In 2023 gender diversity improved: each board had 3.5 women, and 173 seats (39%) were occupied by women (table 2). In both benchmarks, women’s representation in the ASX50 exceeded gender diversity in the corporate sector more broadly, with 29% of ASX200 board seats occupied by women at the end of 2018 (AICD2019), and 35.1% of the same in August 2022 (AICD2021). In contrast to ethnic diversity, women have also been very central to the director community. They were more likely, on average, to be interlockers (46-47%), and had higher average *betweenness* scores compared to their male colleagues (table 2).

### *Professional characteristics*

ASX50 directors have had very similar education and career trajectories. In both benchmarks, all interlocked directors had some form of professional training, with at least a Bachelor's degree in their chosen field. In 2019, training in business disciplines – such as marketing, economics and management – was most common (30%). When combined with accounting and finance, and banking/investment banking groups, the gamut of 'business' professions accounted for 74% of interlocked directors (table 2). Law was prominent, covering 13% of the sample, and the 'other' category – covering IT, medicine, the public service, and industrial design – comprised 26% of members. By 2023 the professional profile of interlocked directors had narrowed. Accounting was the largest category, with 30% of members, and the full suite of business professions accounted for 81% of directors. The minority (12, or 28%) had training in law, engineering and science.

Directors have had general business experience rather than specialised training. Work for external service firms and business consultancies was a common pathway into board membership. Lawyers, for example, had experience with mergers and acquisitions before 'retiring' to focus on directorships. Accountants often worked for the 'big 4' firms, and management graduates worked for multinational consultancy firm McKinsey and Co., rather than within ASX50 companies. Investment bankers, similarly, worked for external firms responsible for new capital issues and long-term strategic issues. These forms of consulting exposed lawyers, accountants, management professionals and investment bankers to high-level corporate strategy across a range of sectors, while also helping develop professional networks with those in company leadership (Wright, 2000; Wright and Forsyth, 2021).

Professional accreditation has also been important. Accountants comprised 26-30% of interlocked board members, with admission to the top echelon of this profession requiring accreditation as a 'chartered accountant' (CA), or a 'certified practicing accountant' (CPA). Amongst our sample of interlocked board members, 28% held these postnominals (table 2). The Master of Business Administration (MBA) has also been an important precursor to board work, with 21-23% of members completing the qualification. In several cases, this was a method of upskilling for those in 'non-business' professions such as medicine or engineering (Tilbrook, 2014). The AICD has become the

most influential professional association for the corporate sector. The cornerstone of the organisation is a series of company director qualifications, indicated by the postnominals GAICD (graduate), MAICD (member) or FAICD (fellow). In our sample, 70-80% of members are associated with the organisation and have AICD postnominals (table 2).

The dominance of directors with a professional background means that access to Australia's top boardrooms appears, on the surface at least, to have emerged through an ostensibly 'merit'-based system of higher education and bureaucracy. Having said this, board membership is not a bastion of social mobility, with most directors occupying a privileged class profile. Few experienced discernible class transformation, with most the sons and daughters of members of the professional middle class such as lawyers, doctors, scientists, and engineers. They attended private boys or girls high schools such as SCEGS/SCEGGS, North Sydney Girls/Boys, King's, or Cranbrook (Sydney); Melbourne Girls/Boys Grammar or Geelong Grammar (Melbourne); Seymour College (Adelaide); The Southport School (Brisbane); or PLC (Perth). Due to the geographic diversity of private schools represented, it is unlikely that professional connections were directly formed in these places. However, similar class background and schooling in a private environment reinforced the demographic sameness of this group. Sameness has also been reinforced by the intersections of class and ethnicity in Australian schooling, with elite private schools increasingly "mono-cultural bastions of whiteness" (Ho 2015).

### **Discussion: Destructuring corporate norms**

The appointment of company directors are a collective organisational form governed by institutional behaviour. The network of board connections, and the personal and professional characteristics of members, reveals a group of directors with social and demographic *sameness*. With the exception of gender, most directors have relatively limited access to knowledge or experience outside their narrow age, ethnic, and class group. Drawing on DiMaggio and Powell's (1983) work on institutional isomorphism, we contrast the progress of gender against other diversities, considering, simultaneously, the constraining forces of sameness and the deconstruction of gender norms in Australian company boards over past decades.



### *The 'destruction' of gender norms*

There have been improvements in gender diversity in our sample, with women occupying 34% of ASX50 board seats in 2019, 39% in 2023, and enjoying a central place in the corporate network (table 2). The gender pattern we observe is the culmination of decades of change, with the proportion of board seats held by women roughly doubling each decade since the 1990s (Wright, 2021). The improvement in women's status in corporate leadership is the result 'destruction', or the long-term establishment of new norms by which minority directors have been sought for board positions.

Feminism has established public, governmental, regulatory and industry pressure for the appointment of women to Australian company boards, with this first influencing the *pipeline* of qualified and experienced women, and then acting as a *catalyst* to their board appointments.

### Pipeline

Feminism, the feminist Women's Movement, or the range of GSMs aiming to establish the political, economic, personal and social equality of the sexes, has been responsible for the destruction of gender norms in Australian corporations (Sheridan et al. 2014). Feminism's 'first wave' comprised suffrage movements in the late-19<sup>th</sup> and early 20<sup>th</sup> centuries, which included women's violent struggle for the right to vote. The second wave, also called the Women's Movement or Women's Liberation Movement, began in the 1960s and focussed on women legal and social equality, and equal opportunities in work and pay. In terms of work, second wave feminists fought to allow women to remain in the workforce after marriage, expand their access to traditionally male-dominated workplaces, and dismantle the male-breadwinner model to establish pay for equal work.

Australia was an early pioneer of second wave feminism (Arrow, 2019). Activism alongside policy reform by the short-lived but progressive Whitlam Labor Government (1972-75) targeted improvements in women's education and workplace participation, the removal of barriers to employment for married women, and access to childcare. As a result, women increasingly completed tertiary education, and their professional career

choices diversified beyond teaching, nursing and social work to include 'corporate' professions such as accounting, law, engineering and business (Du Plessis et al., 2014; Wright, 2021). In the 1980s, legislation promoted equal opportunity and affirmative action measures, commencing with the Commonwealth *Sex Discrimination Act* (1984). This public activism and subsequent legislative changes exerted coercive pressure on the corporate labour market, improving the pipeline of women in corporate work. Women went from 27% of the labour force in 1971, to 42% in 1991, with a "conspicuous" number of new female professionals (Bongiorno, 2015, p.197; Forsyth, 2018; Hatton & Withers, 2015).

In the 1980s and 1990s, a branch of feminist activism, 'postfeminism' split the feminist movement between mainstream groups focussed on labour politics and union organising, and liberal groups emphasising women's participation in capitalist structures such as the corporate ladder (Gill, 2007). Focussing on female autonomy, agency and choice, postfeminism was found, in part, through 'diversity management' initiatives that transformed the radical struggle towards women's equality and human rights into an opportunity for profit. Throughout the 1990s and 2000s, diversity management initiatives adopted in public and private sector organisations increased equitable training and recruitment policies and procedures, in order to 'make the most' of a diverse workforce (Du Plessis et al., 2014; Ross-Smith & Bridge, 2008; Taksa & Groutsis, 2017).

These public, legislative and industry pressures resulted in greater numbers of women in corporate professions. Women were able to stay in the workforce, obtain professional training and qualifications relevant to the corporate sector, and be promoted through the professional hierarchy. These coercive pressures changed the composition of the corporate labour market, which developed a *pipeline* for women in leadership who satisfied the agency and resource dependence appointment procedures of corporations (Bendickson et al. 2016; Hillman and Dalziel 2003; Kaczmarek et al. 2014). The changing corporate labour market then also exerted its own coercive pressure on appointment committees, with a greater number of women applying to leadership roles, and making it less acceptable for corporations to claim there were a lack of suitably qualified female candidates. This required companies take the appointment of women

more seriously, in order to maintain their social license to operate (Barnes, 2013; Beji et al. 2021).

## Catalyst

Over time, postfeminist action shifted towards increasing the number of women in corporate leadership. Earlier feminist policies to improve the number of women in elected office and public service boards – through quotas, targets and gender balance recommendations – were adopted by corporations. The first board gender quota was announced, unexpectedly, in Norway in February 2002, mandating at least 40% representation from each gender (Seierstad & Opsahl, 2011). The Norwegian Minister of Trade and Industry advocated for the drastic measure, as the proportion of women directors remained stubborn at 10%, despite myriad government initiatives such as networking groups, mentorship programs, training, and databases (Terjesen et al., 2015). Although initially surprising for the international business community, the Norwegian quota acted as a ‘snowball’, gathering momentum as a response to the systemic marginalisation of women in corporate leadership. Over the next decade, dozens of countries introducing formal quotas, and dozens more voluntary codes for women on boards (De Vos and Culliford, 2014; Krook, 2007; Terjesen et al., 2015).

Although an early pioneer of second wave feminism and equal opportunity measures, Australia lagged behind other countries regarding women’s corporate leadership appointments. In the twenty-first century, in a similar way to the public pressure acting on Norwegian lawmakers a decade earlier, shareholder activism and criticism from the Australian Human Rights Commission increased scrutiny of women in corporate leadership. The AHRC’s *Gender Equality Blueprint* (2010), for example, identified women in leadership as a key priority for achieving gender equality, noting the “alarming” finding that the number of women on boards was virtually unchanged for a decade, and the number of women in executive roles had decreased (see also Ross-Smith & Bridge, 2008). The Australian chapter of the advocacy group The 30% Club, founded in 2010, lobbied major companies and filed shareholder resolutions to increase the number of women on boards (Fitzsimmons et al., 2021). In 2012, in response to public pressure, the Federal government implemented the *Workplace Gender Equality*

*Act*, requiring firms with than 500 employees to implement a strategy to address numerous issues, such as workplace gender composition, the gender-pay gap, flexible work arrangements, or sex-based harassment and discrimination. These external coercive pressures were less stringent than the formal quotas adopted elsewhere, but nevertheless established expectations for women's involvement in corporate leadership.

To deflect government intervention, the Australian Stock Exchange (ASX) and the Australian Institute of Company Directors (AICD) adopted a self-regulation approach to improve women's representation in leadership. This has manifested as normative pressure, encouraging firms to conform with industry 'best practice', and portraying those who fail to meet targets as archaic and unprofessional. In 2010, the ASX revised its *Corporate Governance Principles and Recommendations* to encourage firms to monitor, disclose and establish policies to improve the number of women in leadership at the executive and board level. This has operated on a 'comply or explain' basis, with firms able to establish their own goals and timelines, and justify their appointment processes if they fail to meet targets (Du Plessis et al., 2014; Handley et al., 2018). In the 2014 amendment, they argued that "a listed entity should [...] set measurable objectives for achieving gender diversity in the composition of its Board, senior executive and workforce" (Australian Stock Exchange, 2014, p. recommendation 1.5). The AICD has monitored the number of women on boards, and set highly-publicised targets for the sector. A range of other professional bodies, including Women on Boards (est. 2001), Chief Executive Women (est. 1985) and Male Champions of Change (est. 2010) have supported industry efforts towards women in corporate leadership (Du Plessis et al., 2014; Ross-Smith & Bridge, 2008; Sheridan et al., 2021; Sheridan et al., 2014).

A range of external institutional pressures have thus 'destructured' the gendered hierarchy of corporate leadership in Australia. Activism from the global feminist social movement has been translated to the Australian context through long-term coercive pressures that have influenced the gender composition of the corporate labour market. Shareholder activism, regulation and industry pressure have then provided a coercive and normative catalyst for the appointment of women to company boards. These institutional pressures have established new norms by which minority directors – in this case women – have been sought for board positions.

### *Forces encouraging sameness*

The improvement in gender diversity contrasts with broader social and demographic ‘sameness’ amongst board members. Directors occupied a very narrow age range, were predominantly white in ethnicity, and were members of very similar professions (table 2). Simultaneously, directors in our sample experienced *social sameness*, with concentration of communication and contracts through board networks (table 1). A lack of targeted action on diversity other than gender, and normative pressure in the form of the professional enclosure of board membership has dictated a very narrow age, ethnic, and class profile in our sample. This has narrowed the pool of potential directors and increased the time commitment for directorships, contributing to an interlocked board network.

### Lack of targeted action

Australian corporations have been relatively uninterested in diversity other than gender. In contexts like the US the civil rights movement established pressure to advance non-white employees and leaders since the 1960s, with the advocacy group the Thirty Percent Coalition focussing on “gender, racial, and ethnic diversity” on American company boards since 2011. In Australia there has relatively little attention to this issue. Class diversity, or the representation of those with a working-class background, has not been addressed by corporations. There has been some representation of workers on the boards of corporations with untraditional governance structures such as superannuation firms and co-operations, but has had little resonance in the mainstream (Addison & Schnabel, 2011; Stern, 1988).

Shareholder activism and lobbying groups have largely addressed women on boards, with age and ethnic diversity largely not seen as an urgent issue. The 2010 ASX *Corporate Governance Principles* recommended considering diversity of “gender, age, ethnicity and cultural background” (recommendation 3.2), though the document placed far more emphasis on the appointment of women (recommendations 3.3 and 3.4) (Australian Stock Exchange, 2010). In 2019, the 4<sup>th</sup> edition of the *Principles* recommended that companies “consider other facets of diversity [...] having directors

of different ages, ethnicities and backgrounds” (Australian Stock Exchange, 2014, p. 34), but did not set expectations on this matter. Age diversity has received limited discussion in the AICD *Company Director* magazine, acknowledging there is still a “long way to go” with regards to age diversity (AICD, 2015, 2016). In terms of ethnic diversity, a 2018 study commissioned by the AICD reported that those from non-white backgrounds are underrepresented at leadership levels in both the private and public sectors (Groutsis et al., 2018). The AICD has begun to address the representation of Indigenous leaders, releasing their Reconciliation Action Plan in 2019, and in 2021 recommending boards foster “genuine, ongoing connections with First Peoples” (Southward, 2021). These normative pressures, while welcome, have been far less stringent than the pressure applied to women on boards, and as such have had little impact on age or ethnic diversity to date.

#### Professionalisation of board membership

The enclosure of the board member profession has acted as normative pressure for the social and demographic profile of directors. Professionals have long dominated Australia’s company boards, with directors drawn from the top echelon of the professions in order to meet the agency and resource requirements of boards (Bendickson et al. 2016; Kaczmarek et al. 2014; Hillman and Dalziel, 2003; Wright and Forsyth 2021). From the 1980s onwards, the increased size and complexity of Australia’s corporate sector, deregulation of the banking system, increased presence of institutional investors, microeconomic reform, a series of high-profile corporate collapses necessitated an overhaul of the professional standards of board members (Wright, 2022). The AICD, established in 1990, amalgamated various professional groups for company directors that had existed since the 1960s. With more than 45,000 members, the AICD has aimed to improve standards for board members, and build a community of professional company directors. In addition to their accreditation, members are connected through events, newsletters, lobbying activities and AICD-approved standards of good corporate governance.

These normative pressures have raised the education and accreditation requirements of directors, with the goalposts shifting from undergraduate education and work as a

professional, to postgraduate qualifications, work for a top tier professional firm, and the accreditation pattern that we observe in 2019 and 2023 (table 2). These intensified barriers to entry have created an interstice between the ranks of professional workers in Australia, and the top echelon of professionals who sit on company boards, with only the most privileged professionals able to access the now-necessary education, experience and accreditation standards for modern corporate board membership. In terms of class, those already from an upper-middle class background were more easily able to access elite schools and universities, which made it easier to be admitted to a top-tier professional firm, who would often then pay for AICD, CA/CPA, or MBA accreditation. The long career pathway from entry level to board membership has dictated that directors are generally between the age of 50 and 70 (table 2). The group's narrow ethnic profile – with less than 10% of directors from a non-white ethnicity – has also been due to this normative pressure, with Australian corporations systematically less likely to hire or promote those from non-white backgrounds (Colic-Peisker & Tilbury, 2007; James & Otsuka, 2009). This has limited access to the necessary career pipeline, meaning there are fewer non-white corporate leaders who have what is considered the necessary experience for board membership.

In addition to demographic sameness, the professionalisation of board membership has encouraged social sameness by monopolising directors' time. AICD accreditation is often completed over the course of months, with the maintenance of a "director mindset" through ongoing professional development such as attending courses, participating in events, and completing readings, webinars and recordings. Directors' workloads have also increased, with the proliferation of board committees, and intensifying governance and regulatory requirements increasing the time members are required to spend on each board role (Gray & Nowland, 2018). As a result, directors have substituted a range of professional activities – such as board memberships, auditing, corporate law, medical practice and so on – with full-time commitment as a company director. This contextualises the clustering of firms and directors that we observe in table 1, and figures 1-4, with directors experiencing intense connections with others in their professions, and decreased opportunities for developing outside connections and accessing external resources.

The professionalisation of board membership has thus narrowed the social and demographic pool of potential directors. There are relatively few with the necessary education, accreditation, experience and time to dedicate to company directorships, and those that do conform tend to be from a narrow, privileged background.

Demonstratively, those women who have progressed to board positions have done so by conforming with the professional standards of company directors which, as above, means they also conform to the group's age, ethnic, and class norms. In the absence of disruption or deconstruction, this sameness is self-sustaining, with the coercive and normative status quo encouraging conformity amongst firms over time. As noted by DiMaggio and Powell, "much homogeneity in organisational structures stems from the fact that despite considerable search for diversity there is relatively little variation to be selected from" (1983: pp.151-2).

## **Conclusions**

Board diversity is crucial for corporate governance, helping to improve the board's monitoring, decision making, and mediation functions. Countries around the world have acknowledged the importance of diversity in corporate leadership, and yet with the exception of women, the appointment of a homogenous group of directors persists. Academic research has been interested in the progress of women in corporate leadership, and the role of interlocking (social sameness) for corporate governance, but is yet to integrate the study of social and demographic sameness.

In this paper we study social and demographic sameness to understand the institutionalisation of board appointment practices, and the role of GSMs for 'destructuring' gendered appointment norms. The SNA reveals an identifiable corporate community amongst the ASX50, with most boards and directors connected within the same cluster, sharing multiple connections to one another, and limited connections to other groups. These network characteristics, combined with the enclosure of the board member profession over the last 30 years, and the time requirement for directorships, suggests that board members have had little access to *social diversity*. Board members also experience *demographic sameness*. The prosopography data reveals a narrow range of 'acceptable' demographic characteristics in the corporate community, with most



directors occupying a very narrow age, ethnic and class range. Directors spend most of their professional life in contact and conversation with others of a similar milieu, who have similar training, class background, ethnicity, and who sit on a similar range of company boards.

The simultaneous improvement in gender diversity alongside increasing homogeneity in other social and demographic categories highlights the role of social movements for 'destructuring' board appointment practices. The importance of women to company boards in 2019 and 2023 has been the result of activism from the second wave feminist Women's Movement, with regulatory changes and diversity management initiatives establishing a 'pipeline' of women who had the necessary qualifications and experience to be appointed to leadership roles. Over time, the focus shifted to increasing the number of women in leadership, with a range of public, regulatory and industry pressure acting as a catalyst to women's board appointments. In contrast, the absence of targeted action on diversity other than gender, and the intensification of directors' professional requirements has institutionalised the group's social and demographic profile. Only the most privileged professionals can become company directors, and their professional life is almost completely subsumed within the board member profession.

Our results highlight the way that institutions, if left alone, replicate and reinforce the status quo. We also reveal the conditions under which GSMs can destructure board appointment practices, with the endurance and mainstreaming of the feminist Women's Movement contributing to the stringency of external coercive and normative pressures in recent years. Our analysis also highlights the importance of focussed, disruptive energy from GSMs for deconstructing board appointment practices. While this has led to great strides in equality for some women, deconstruction has been uneven across the sector. By analysing the simultaneous disruption of gender appointment practices against increased homogenisation in other forms of diversity, our analysis reveals that there is tension between focussing on the needs of a particular group, and the broad dismantling of white male capitalism that would make corporate leadership more inclusive for all.

Our study is limited by a relatively small sample of companies and a limited range of years. Although Australian corporations are clustered in the 'big end of town', the ASX50 represents a small segment of the corporate sector. The analysis of multiple

benchmarks speaks to the robustness of the results, though there are undoubtedly important longitudinal changes that we do not capture in our data. Nonetheless, the social and demographic sameness we observe has important implications for corporate governance. Director's intense professional networks, and similar age, ethnic, and class profiles risks 'group think', or decisions based on the interests and perspectives of the dominant group. While the trust and common lexicon developed in corporate networks may ease communication, it may also contribute to poor oversight. The inwardness of Australia's corporate community thus raises important questions about the effectiveness of company boards in representing the interests of owners. Future research could consider comparative dimensions, including the relative progress of deconstruction in various contexts. Future research could also consider the impact of this social and demographic sameness on board decision-making, and the extent to which minority directors are able to disrupt board processes, or improve board governance and monitoring functions.

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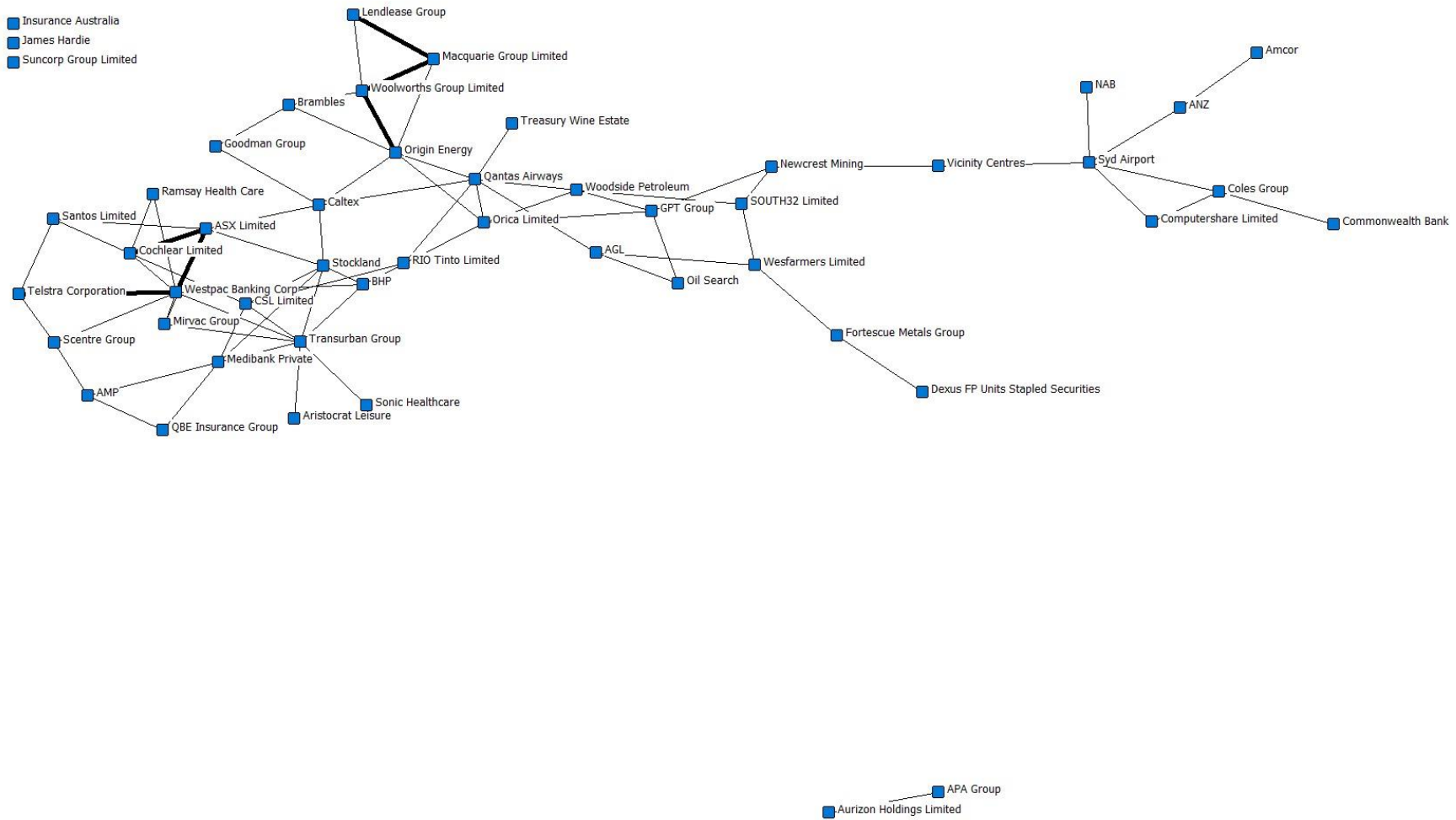
## Tables and figures

Table 1: Summary of data

		2019	2023
Sample	Number of firms	50	50
	Total directors	382	389
	Total board positions	450	440
	Executive positions	58	51
	NED positions	392	389
Sector (%)	Consumer Discretionary	2 (4)	2 (4)
	Consumer Staples	3 (6)	3 (6)
	Energy	5 (10)	3 (6)
	Financials	11 (22)	10 (20)
	Health Care	4 (8)	6 (12)
	Industrials	5 (10)	4 (8)
	Information Technology	1 (2)	4 (8)
	Materials	8 (16)	10 (20)
	Real Estate	8 (16)	3 (6)
	Telecommunication and Media	1 (2)	3 (6)
	Utilities	2 (4)	2 (4)
Firm network structure	Interlocked firms (%)	47 (94)	38 (76)
	Firms in main component (%)	45 (96)	36 (95)
	Interfirm network ties	152	110
	Average degree	3.04	2.25
Director network structure	Interlocked board positions (%)	120 (27)	94 (21)
	Interlockers (%)	53 (14)	43 (11)
	Connected directors (%)	355 (93)	303 (78)
	Directors in main component (%)	342 (89)	280 (72)
	Average degree	9.54	9.21

Note: Sample based on firms listed on the S&P/ASX50 index as at 1 July 2019 and 14 March 2023. Firm and director network measures calculated with *UCINET*. *Average degree* refers to the average number of connections between each firm or each director.

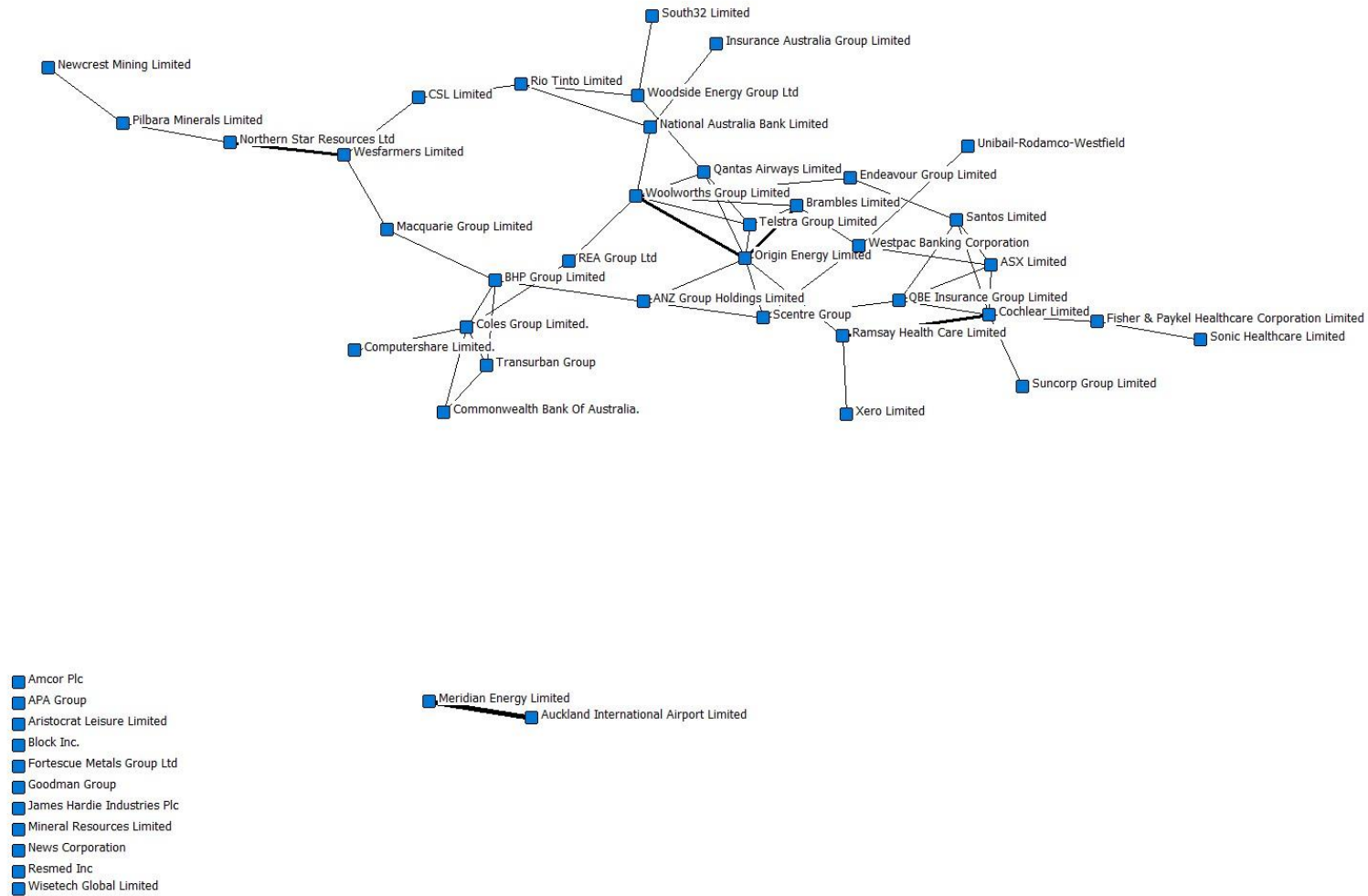
Figure 1: Firm network, 2019



Note: Nodes represent firms, ties indicate firms shared at least one director. Thicker ties indicate that firms shared more than one director.

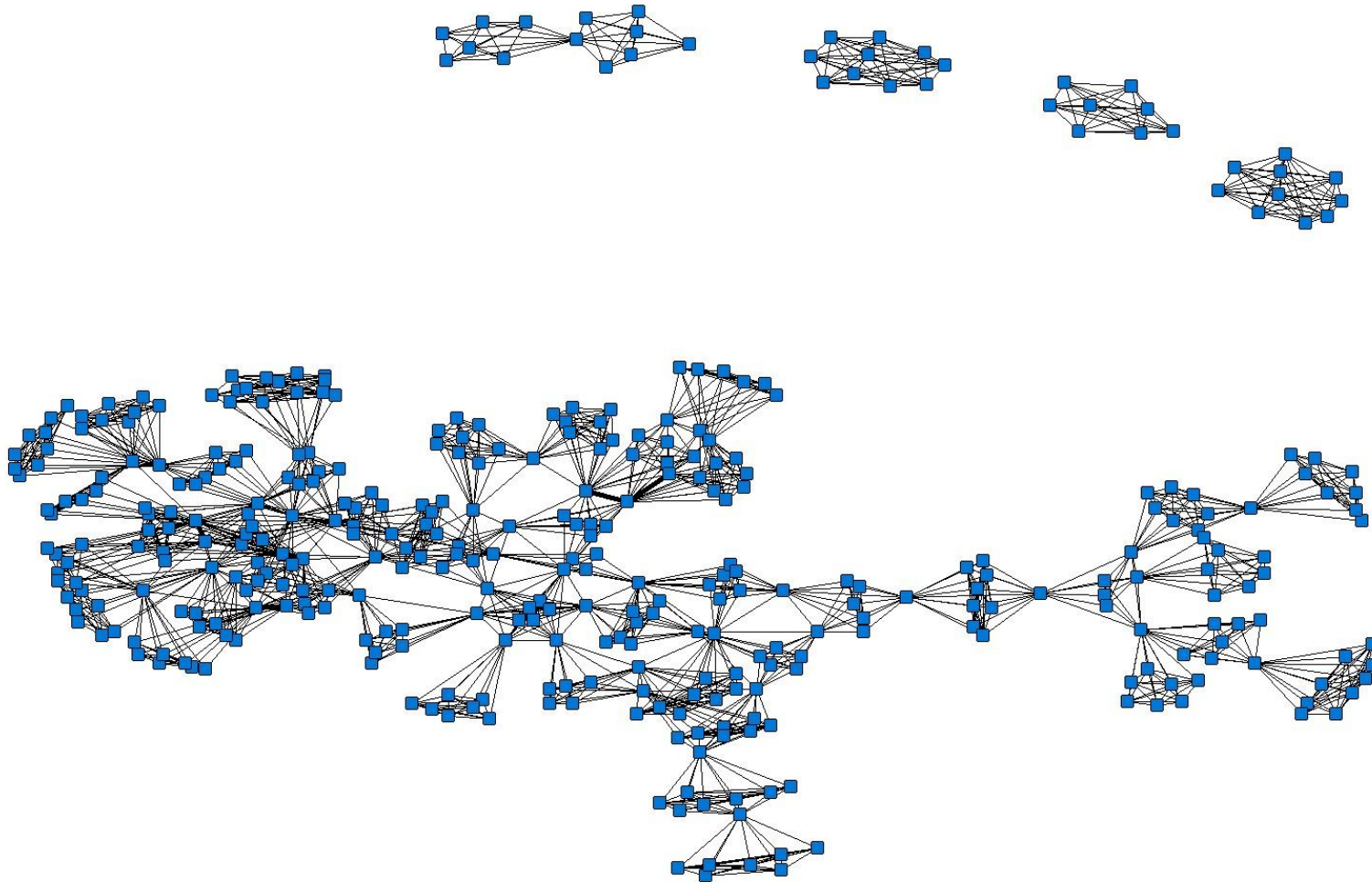


Figure 2: Firm network, 2023



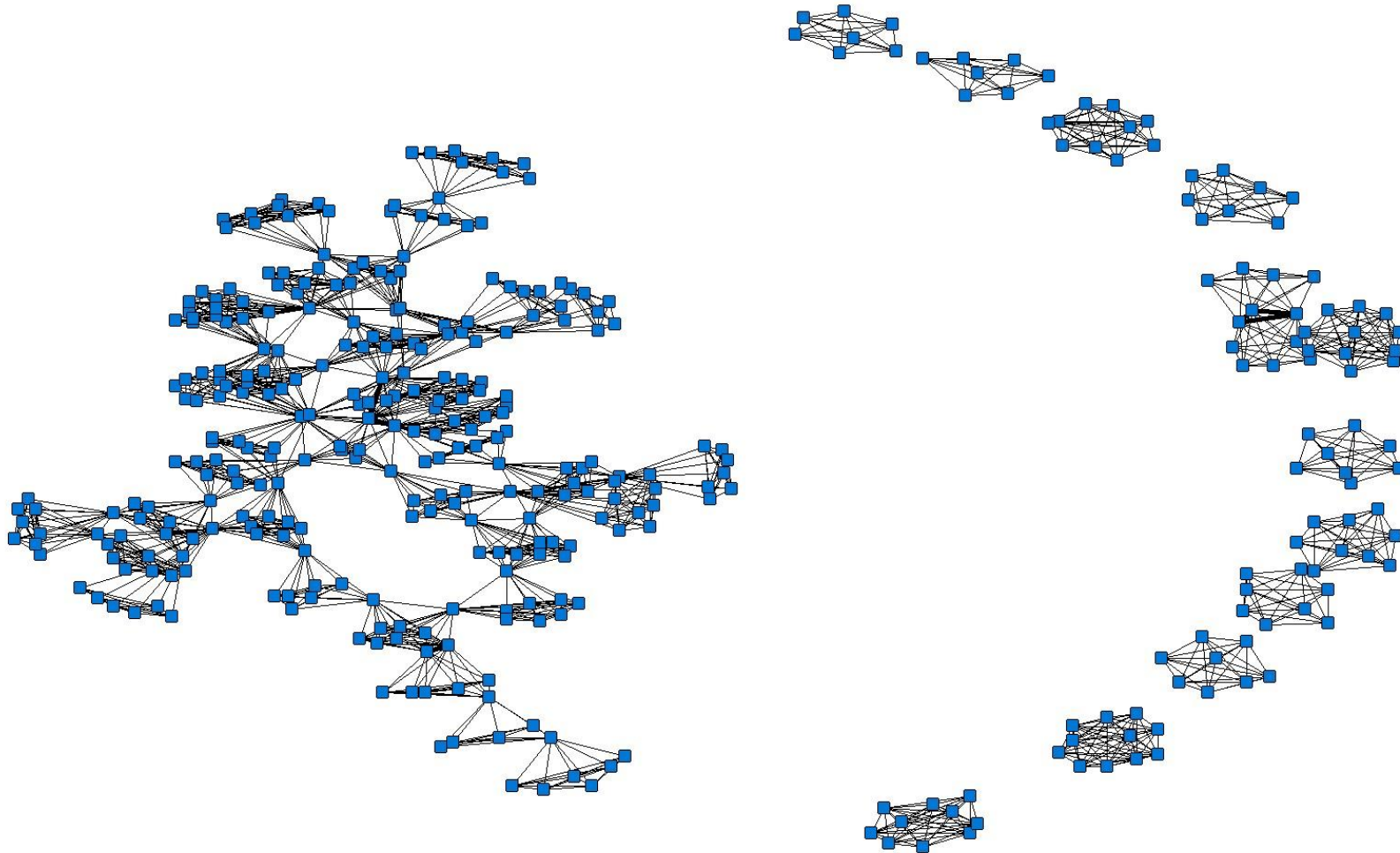
Note: Nodes represent firms, ties indicate firms shared at least one director. Thicker ties indicate that firms shared more than one director.

Figure 2: Director network, 2019



Note: Nodes indicate individual board members, ties between nodes indicate they sat on one board together; thicker ties indicate they sat on more than one of the same boards.

Figure 3: Director network, 2023



Note: Nodes indicate individual board members, ties between nodes indicate they sat on one board together; thicker ties indicate they sat on more than one of the same boards.

Table 2: Demographic characteristics

		<b>2019</b>	<b>2023</b>
Sample	<i>Sample (board seats)</i>	450	441
	<i>Sample (interlockers)</i>	53	43
Age	<i>Average age</i>	61	60
	<i>Average age, interlockers</i>	61	62
	<i>Age range</i>	42-77	45-92
Ethnicity	<i>Board positions, non-white (%)</i>	47 (10)	30 (7)
	<i>Non-white interlockers (%)</i>	4 (8)	2 (5)
	<i>Average betweenness, white</i>	4626	3389
	<i>Average betweenness, non-white</i>	2710	1477
Gender	<i>Board positions, women (%)</i>	151 (34)	173 (39)
	<i>Women interlockers (%)</i>	24 (46)	20 (47)
	<i>Average betweenness, men</i>	4591	2974
	<i>Average betweenness, women</i>	4669	3674
Profession	<i>Accounting (%)</i>	14 (26)	13 (30)
	<i>Law (%)</i>	7 (13)	5 (12)
	<i>Banking/investment banking (%)</i>	9 (17)	10 (23)
	<i>Management/business (%)</i>	16 (30)	12 (28)
	<i>Other (%)</i>	14 (26)	7 (16)
Accreditation	<i>CA/CPA (%)</i>	15 (28)	12 (28)
	<i>MBA (%)</i>	12 (23)	9 (21)
	<i>AICD (%)</i>	42 (79)	30 (70)

Note: Basic demographics (age, ethnicity, gender) captured for every director. Profession and accreditation for interlockers. Profession data exceeds sample size, as one director may have been associated with multiple professions. Betweenness for each node calculated through UCINET, and compared across cohorts.

## Appendix

Table 3: Firms and network statistics, 2019

	<b>Sector</b>	<b>Market cap (\$bn)</b>	<b>Degree</b>	<b>Betweenness</b>
<i>AGL</i>	Utilities	13	3	93.13
<i>Amtcor</i>	Materials	18	1	0.00
<i>AMP</i>	Financials	6	3	5.58
<i>ANZ</i>	Financials	80	2	43.00
<i>APA Group</i>	Utilities	13	1	0.00
<i>Aristocrat Leisure</i>	Consumer Discretionary	20	1	0.00
<i>ASX Limited</i>	Financials	16	8	88.75
<i>Aurizon Holdings Limited</i>	Industrials	11	1	0.00
<i>BHP</i>	Materials	121	4	222.42
<i>Brambles</i>	Industrials	21	3	5.55
<i>Caltex</i>	Energy	6	5	176.13
<i>Cochlear Limited</i>	Health Care	12	6	19.85
<i>Coles Group</i>	Consumer Staples	18	3	43.00
<i>Commonwealth Bank</i>	Financials	147	1	0.00
<i>Computershare Limited</i>	Information Technology	9	2	0.00
<i>CSL Limited</i>	Health Care	97	5	43.90
<i>Dexus FP Units Stapled Securities</i>	Real Estate	14	1	0.00
<i>Fortescue Metals Group</i>	Materials	28	2	43.00
<i>Goodman Group</i>	Real Estate	27	2	7.30
<i>GPT Group</i>	Real Estate	12	4	268.79
<i>Insurance Australia</i>	Financials	19	0	0.00
<i>James Hardie</i>	Materials	8	0	0.00
<i>Lendlease Group</i>	Real Estate	7	3	0.00
<i>Macquarie Group Limited</i>	Financials	43	5	20.00
<i>Medibank Private</i>	Financials	10	5	70.65
<i>Mirvac Group</i>	Real Estate	12	3	1.50
<i>National Australia Bank</i>	Financials	75	1	0.00
<i>Newcrest Mining</i>	Materials	25	3	289.83
<i>Oil Search</i>	Energy	11	2	6.50
<i>Orica Limited</i>	Materials	8	5	318.19
<i>Origin Energy</i>	Energy	13	7	161.10
<i>Qantas Airways</i>	Industrials	8	7	223.96
<i>QBE Insurance Group</i>	Financials	16	2	0.00

<i>Ramsay Health Care</i>	Health Care	15	2	0.00
<i>RIO Tinto Limited</i>	Materials	39	2	39.27
<i>Santos Limited</i>	Energy	15	3	6.40
<i>Scentre Group</i>	Real Estate	20	3	12.77
<i>Sonic Healthcare</i>	Health Care	13	1	0.00
<i>South32 Limited</i>	Materials	16	3	67.07
<i>Stockland</i>	Real Estate	10	6	89.13
<i>Suncorp Group Limited</i>	Financials	17	0	0.00
<i>Syd Airport</i>	Industrials	18	5	239.00
<i>Telstra Corporation</i>	Telecommunication Services	46	4	4.85
<i>Transurban Group</i>	Industrials	39	8	124.52
<i>Treasury Wine Estate</i>	Consumer Staples	11	1	0.00
<i>Vicinity Centres</i>	Real Estate	9	2	259.00
<i>Wesfarmers Limited</i>	Consumer Discretionary	41	3	89.83
<i>Westpac Banking Corp</i>	Financials	99	10	137.12
<i>Woodside Petroleum</i>	Energy	34	4	76.06
<i>Woolworths Group Limited</i>	Consumer Staples	42	6	22.83

Note: *Market capitalisation* as captured on 1<sup>st</sup> July 2019. *Degree* refers to the number of connections a firms has with other firms in the network. *Betweenness* measures the proportion of paths between two sections of the network that pass through the relevant actor.

Table 4: Firms and network statistics, 2023

	<b>Sector</b>	<b>Market cap (\$bn)</b>	<b>Degree</b>	<b>Betweenness</b>
<i>Ancor Plc</i>	Materials	24	0	0.00
<i>ANZ Group Holdings Limited</i>	Banks	72	3	128.58
<i>APA Group</i>	Utilities	12	0	0.00
<i>Aristocrat Leisure Limited</i>	Consumer Services	24	0	0.00
<i>ASX Limited</i>	Diversified Financials	13	4	14.75
<i>Auckland International Airport Limited</i>	Transportation	12	3	0.00
<i>BHP Group Limited</i>	Materials	228	4	149.58
<i>Block Inc.</i>	Software & Services	63	0	0.00
<i>Brambles Limited</i>	Commercial & Professional Services	18	5	11.11
<i>Cochlear Limited</i>	Health Care Equipment & Services	15	7	105.25
<i>Coles Group Limited.</i>	Food & Staples Retailing	24	5	75.67
<i>Commonwealth Bank of Australia.</i>	Banks	161	2	0.00
<i>Computershare Limited.</i>	Software & Services	15	1	0.00
<i>CSL Limited</i>	Pharmaceuticals, Biotechnology & Life Sciences	138	2	45.17
<i>Endeavour Group Limited</i>	Food & Staples Retailing	12	2	34.44
<i>Fisher &amp; Paykel Healthcare Corporation Limited</i>	Health Care Equipment & Services	14	2	34.00
<i>Fortescue Metals Group Ltd</i>	Materials	66	0	0.00
<i>Goodman Group</i>	Real Estate	36	0	0.00
<i>Insurance Australia Group Limited</i>	Insurance	12	1	0.00
<i>James Hardie Industries Plc</i>	Materials	14	0	0.00
<i>Macquarie Group Limited</i>	Diversified Financials	71	2	89.42
<i>Meridian Energy Limited</i>	Utilities	12	3	0.00
<i>Mineral Resources Limited</i>	Materials	16	0	0.00
<i>National Australia Bank Limited</i>	Banks	91	3	76.83

<i>Newcrest Mining Limited</i>	Materials	21	1	0.00
<i>News Corporation</i>	Media & Entertainment	13	0	0.00
<i>Northern Star Resources Ltd</i>	Materials	12	3	66.00
<i>Origin Energy Limited</i>	Energy	14	10	185.67
<i>Pilbara Minerals Limited</i>	Materials	12	2	34.00
<i>Qantas Airways Limited</i>	Transportation	12	4	59.75
<i>QBE Insurance Group Limited</i>	Insurance	22	4	34.31
<i>Ramsay Health Care Limited</i>	Health Care Equipment & Services	15	4	91.58
<i>REA Group Ltd</i>	Media & Entertainment	16	2	56.83
<i>Resmed Inc</i>	Health Care Equipment & Services	47	0	0.00
<i>Rio Tinto Limited</i>	Materials	43	3	65.08
<i>Santos Limited</i>	Energy	24	4	26.36
<i>Scentre Group</i>	Real Estate	15	4	62.28
<i>Sonic Healthcare Limited</i>	Health Care Equipment & Services	16	1	0.00
<i>South32 Limited</i>	Materials	20	1	0.00
<i>Suncorp Group Limited</i>	Insurance	16	1	0.00
<i>Telstra Group Limited</i>	Telecommunication Services	48	4	1.00
<i>Transurban Group</i>	Transportation	44	3	8.33
<i>Unibail-Rodamco-Westfield</i>	Real Estate	12	1	0.00
<i>Vanguard Australian Shares Index ETF</i>	Financial Services	12	0	0.00
<i>Wesfarmers Limited</i>	Retailing	57	4	110.08
<i>Westpac Banking Corporation</i>	Banks	76	5	55.92
<i>Wisetech Global Limited</i>	Software & Services	21	0	0.00
<i>Woodside Energy Group Ltd</i>	Energy	65	3	51.75
<i>Woolworths Group Limited</i>	Food & Staples Retailing	45	8	160.25
<i>Xero Limited</i>	Software & Services	13	1	0.00

Note: *Market capitalisation* as captured on 14 March 2023. *Degree* refers to the number of connections a firm has with other firms in the network. *Betweenness* measures the proportion of paths between two sections of the network that pass through the relevant actor.



