A review of corporate social responsibility and real estate investment trust studies: an Australian perspective

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A Review of Corporate Social Responsibility and REIT Studies: An Australian Perspective

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Abstract:
The aim of this paper is to review empirical findings in the literature relating to corporate social responsibility (CSR) and real estate investment trust (REIT) performance. Specifically, we synthesise CSR-focused REIT performance studies in an attempt to establish empirical approaches utilised in the academic literature, present findings, identify relevant gaps and reveal themes for future research. The literature focusing on the CSR of REITs to-date has primarily focused on corporate governance, sustainability and performance, with the latter concentrating on firm-level financial consequences rather than investment return performance. The review showed that there has been limited empirical research conducted on the relationship between CSR and risk-adjusted returns of REITs, particularly in Australia.

Keywords: Corporate Social Responsibility; Investment; Real Estate Investment Trust; Performance; Real Estate.

JEL codes: G12, G14, G19.
I. INTRODUCTION

Complex contemporary issues like climate change and unequal wealth distribution are intrinsically intertwined with globalisation. This has led to a change in society’s expectations in how businesses should operate to meet their social obligations. According to Porter and Kramer (2006), businesses that contribute to negative externalities are obliged to offer solutions. This is indeed contrary to the traditional view which suggests that a business’ sole responsibility is to operate within the law while maximising shareholder wealth (Friedman, 1962). With society as the driving force behind these changes (van Marrewijk, 2003), the role of corporate social responsibility (CSR) has become increasingly important (Carroll and Buchholtz, 2015). CSR is based on the assumption that there is a broader range of stakeholders operating from social, environmental and economic perspectives that should be considered when making business/investment decisions (Freeman and Reed, 1983; Jonker and de Witte, 2006; Stoney and Winstanley, 2001).

Given the uncertainty surrounding the trade-off between the financial and non-financial benefits derived from being socially responsible (Derwall, Koedijk and Ter Horst, 2011), there is no consensus on the economic rationale for investing in companies (or funds) that engage in socially responsible practices. For example, while proponents of CSR argue that shareholder wealth maximisation and social expectations can be achieved simultaneously (e.g., Ferrell, Liang and Renneboog, 2016), there are contrary claims that CSR activities may: (i) distract managers from focusing on shareholder wealth maximising activities (Jensen, 2001), and (ii) be misused for the private benefit of managers at the expense of shareholders (Krüger, 2015).

The popularity of CSR, in general, has further been driven by initiatives promoting CSR (e.g., the Kyoto Protocol, the Paris Climate Agreement and Global Reporting Initiative) and the growing movement of socially responsible investment (SRI), which assumes that
environmental, social and governance (ESG) matters must be considered before economic preservation when investing (UNGC, 2017). For instance, as of 30 June 2017, professionally managed assets under SRI strategies accounted for about AUD$30 trillion globally, while in Australia and New Zealand, SRI accounted for approximately AUD$672 billion (GSIA, 2016). However, retail and institutional SRI funds have experienced strong growth in Australia and New Zealand in recent years. For example, while total global assets under management have grown at a compounded annual rate of 11.9 per cent during the 2014-2016 period, Australia and New Zealand have experienced compound annual growth of 86.4 per cent (GSIA, 2016).

This sees socially responsible funds establishing their significance amongst their financial peers (i.e., sovereign wealth, superannuation and investment funds). In particular, SRI assets accounted for 26.3 per cent of all assets under professional management globally and 50.6 per cent in Australia and New Zealand during the 2014-2016 (GSIA, 2016). This strong commitment towards SRI strategies in Australia and New Zealand have been primarily driven by green bonds, low carbon investments, sustainable agriculture strategies and, notably, green property/real estate funds (Bauer et al., 2011; GSIA, 2016; Newell, 2008).

Australian real estate investment trusts (A-REITs) are an example of investment vehicles that are currently being driven by the practice of CSR. A-REITs are listed indirect property investment vehicles that pool unit holder and borrowed funds to invest in income-generating properties (e.g., residential, retail and office). Their income tax exemption and direct property like characteristics (e.g., high liquidity and diversification, low transaction costs, and high yields) make A-REITs a compelling investment option for socially responsible individual and institutional investors (Newell, 2007, 2013).

1 Subject to unit holders being presently entitled to 100 per cent of the trust’s trust law income at year end.
With over AUD$130 billion in total assets, more than 2,000 institutional-grade properties and 50 per cent of total property fund assets under management, A-REITs are the largest property investors in Australia (Farrell, 2017; Newell, 2013). For instance, as of 4 July 2017, 78 A-REITs with a market capitalisation of approximately AUD$145 billion are listed on the Australian Stock Exchange (ASX), representing 90 per cent of listed real estate in Australia and 8.2 per cent of the S&P/ASX 300 index (Capital IQ, 2017). Compared to the market capitalisation of the global REIT sector (approximately AUD$1.7 trillion), this sees A-REITs being the second largest and, along with Japan, one of the fastest growing REIT markets in the world (Capital IQ, 2017; EY, 2016). Further, Table 1 highlights the strong return performance of A-REITs relative to other major asset classes in Australia. This clearly demonstrates that A-REITs are playing a significant role in the Australian financial market and broader economy.

[Insert Table 1 here]

With regard to good corporate citizenship, A-REITs have been recognised to demonstrate CSR leadership among their financial peers (Bauer et al., 2011; GSIA, 2016; Newell, 2008). This is evident in the strong representation of A-REITs in global CSR indices such as the FTSE4Good Index, the Global 100, the Global ESG Benchmark for Real Assets (GRESB), the Dow Jones Sustainability World Index (DJSI World), and the CDP ‘A List’. Nevertheless, certain ESG factors within the A-REIT sector are driving strong commitment to CSR. These factors include:

(i) At the height of the Global Financial Crisis (GFC), the A-REIT sector had lost over 80 per cent of its value.

(ii) Being accountable for 30-40 per cent of CO\textsubscript{2} emissions, the property sector is deemed to be a major contributor to climate change (UNEP, 2007).

(iii) Buildings are responsible for approximately 40 per cent of the consumption of raw material and energy (Eichholtz, Kok and Quigley, 2010).
(iv) With around 5-10 per cent at the national level, the building and construction sector is a major employment provider that generates around 5-15 percent of GDP (UNEP, 2007).

Taking these factors into account, A-REITs not only have an obligation to work towards society’s wellbeing and a more sustainable future but also could profit significantly from implementing such CSR strategies. For example, a survey on the motivation of CSR activity in the real estate market conducted by Pivo (2008), reported that 40 per cent of companies have invested in sustainable buildings – driven by their moral responsibility, opportunities to outperform, and concerns for risk and return. Notably, the latter was found to be the strongest driver. Further, the GPT Group (2017b, para. 9), an A-REIT with a CSR commitment, claims that:

“… the voice of stakeholder communities and the needs of today’s and future generations are at the heart of our decision making. Our key decisions across investment, development and operations recognise the interdependence between environment, people and economics.”

The GPT Group (2017a) also emphasise that while considering their social and environmental impact, they must, at the same time, create economic value for their business and investors. It is this collective rationale that has motivated this study. Does it pay to be responsible? Expressed differently, do CSR activities significantly contribute to REIT investor wealth maximisation? This, in turn, raises the question, do CSR activities of REITs have a positive effect on risk-adjusted return performance?

Given that the link between CSR and financial performance of REITs is a somewhat unexplored, yet important research area, it makes the sector worthy of investigation, particularly with regard to the impact of CSR on risk-adjusted return performance in Australia. Therefore, drawing upon the concepts of CSR and the efficient market hypothesis (EMH) (e.g., Fama, 1970, 1991, 1998), this paper is motivated by the risks and opportunities associated with
the performance of REITs. The aim of this paper is to review the literature relating to REIT corporate sustainability and governance and financial performance, both in Australia and abroad. Specifically, we review CSR-focused REIT performance studies in an effort to identify the empirical approaches employed, summarise the key findings, and provide suggestions for future research. Note: the majority of the literature evaluates REITs from a U.S. perspective. On the other hand, the A-REIT literature is quite limited. Given the similar structure and regulations, we review the literature on U.S. REITs and A-REITs in an attempt to establish gaps within an Australian context. Examples of these similarities include:

(i) the income tax exemption for distributed REIT income if distribution requirements are met (e.g., 90 per cent and 100 per cent for U.S. REITs and A-REITs, respectively) (Bauer, Eichholtz and Kok, 2010; Farrell, 2017);

(ii) the need to be managed by one or more trustees, directors or fund managers (Farrell, 2017);

(iii) the listing requirements of U.S. REITs and A-REITs (e.g., minimum shareholder/unit holder number of 100 and the 5/50 rule for U.S. REITs and 50 or at least 20 per cent owned by exempt entities such as superannuation funds for A-REITs and the ‘widely-held’ requirement for A-REITs that qualify as managed investment trusts (MITs) (Campbell et al., 2011; Farrell, 2017);

(iv) asset level and activity tests to ensure that investment activities of REITs are predominantly in real estate (e.g., the 75 per cent asset test and 75 per cent and 95 per cent income tests for U.S. REITs and the ‘eligible investment business’ rule for A-REITs) (Farrell, 2017; Ghosh and Sun, 2014); and

(v) no legal restrictions on leverage for U.S. REITs and A-REITs (Farrell, 2017).

The significance of the study stems from REITs’ commitment to CSR, their social and environmental responsibilities, and their ability to produce above average risk-adjusted returns.
Our study contributes to the literature by: (i) synthesising the empirical literature on the relationship between CSR and risk-adjusted returns, (ii) assessing the evidence on whether REIT markets generally accept (or reject) the EMH, and (iii) providing practical insights for those interested in the performance of CSR REITs. For instance, REIT managers could utilise the findings of the review to assess the effect CSR has on their financial performance, as well as their ability to attract capital. Market participants could also benefit from the review in regards to being more informed to make better capital allocation/investment decisions. In addition, the review could assist policy makers and regulators in determining whether changes in legislation or subsidies (e.g., tax concessions for sustainable buildings) are required to further stimulate CSR activities in the property sector.

The balance of this article contains five sections. Section II identifies recent trends in the Australian property market. Section III explores the relationship between REITs and CSR, while Section IV reviews the relationship between REITs and the EMH. Section V establishes the key gaps in the literature. The paper concludes with Section VI, which provides a summary of the key findings, along with implications and recommendations for future research.

II. THE AUSTRALIAN PROPERTY MARKET

In recent times, the substantial rise in market values of properties (particularly in capital cities) has raised concerns regarding the health of the Australian property market. For instance, since 1990, Australian house prices have more than doubled in real terms, which is considerably faster than the OECD average (approximately 50 per cent) (IMF, 2016). Figure 1 illustrates this development and shows that the property cycle has not coincided with the S&P/ASX 300 index over the last ten years. This indicates that capital growth was partially fuelled by the downturn in the share market, as well as the alleged property bubble, which was arguably driven by generous negative gearing tax concessions, the lowering of capital gains tax, record
low-interest rates and wage growth, the large number of interest-only loans, zoning in capital cities, increased interest amongst foreign buyers (RBA, 2016), and high levels of immigration (e.g., 182,608 permanent residents in 2017) (DIBP, 2017). Paired with poor housing affordability, and the oversupply of office/commercial buildings and apartments (of which many are targeted at foreign buyers and of no particular interest to domestic first home buyers) (Power and Robb, 2016; Su-Lin, 2016), these factors may be dissuading young people and first home buyers from entering the Australian property market.

[Insert Figure 1 here]

Despite the existence of certain government schemes and grants, designed to support first home owners, signs have started to emerge that the Australian property market is cooling. For instance, (i) mortgage lenders have tightened their lending practices (in particular interest-only loans, as a response to new restrictions imposed by the Australian Prudential Regulation Authority (APRA) in early 2017, and for overseas home buyers (Somasundaram, 2016)), and (ii) an oversupply of office/commercial buildings and apartments in close proximity has led to general price moderation and lower yields across most capital cities (Brown, 2014; Johanson, 2016; Su-Lin, 2016).

III. REITs & CORPORATE SOCIAL RESPONSIBILITY

CSR strategies have been a reaction to the changing environment REITs are operating within. Specifically, REITs have adopted specific measures, targets, timelines, sustainability ratings, and CSR and Carbon Disclosure Project (CDP) reporting to deal with complex contemporary issues. Largely, REITs present their sustainability reports in accordance with UN Global Reporting Initiative Guidelines. Further, CDP participating REITs generally perform well on climate scores in Australia. For example, A-REITs such as Dexus, Investa, Stockland and Vicinity Centres scored at least an A- on a scale from A (highest) to D- (lowest) (CDP, 2016).
To provide some perspective on CSR strategies, we have selected the top three A-REITs (Stockland, Dexus and GPT) ranked by highest overall sustainability rating\(^2\) and provide a brief outline of some of the key aspects associated with their respective CSR strategies.\(^3\)

**Stockland Corporation Limited**

Stockland’s sustainability strategy is designed around creating value and aims to “deliver economic value in a way that also creates value for society by addressing its needs and challenges” and by attempting to balance the triple bottom line for its current and future stakeholders (e.g., communities, customer, suppliers and investors) (Stockland, 2017, para. 3). The three pillars of Stockland’s sustainability strategy are:

(i) **Communities** - to foster education, social cohesion, and health and wellbeing within local communities.

(ii) **Innovation and optimization** – to protect and encourage biodiversity, while managing waste and carbon emissions, as well as usage of water and building material through the optimization of operations and new innovations.

(iii) **The value chain** – to promote strong environmental, social and governance and risk management, as well as engaging and collaborating with stakeholders, suppliers and employees to enrich the value chain.

Some of Stockland’s strategic CSR targets and initiatives include:

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\(^2\) Overall sustainability ratings are obtained from CSRHub - see http://accsr.com.au.

(i) Providing affordable housing options for first home buyers (e.g., Stockland’s AUD$5,000 First Home Buyer Rebate, ‘50 homes in 50 days’ – providing 50 houses to Queensland residents that are well below local median house prices, etc.).

(ii) To continue towards their 2025 target of a 60 per cent reduction in carbon emissions, with strategies such as the AUD$23.5 million solar project (Australia’s largest-ever solar project).

(iii) The development of an Environmental Management System to identify environmental risks and opportunities, along with the appointment of an external auditor to conduct a Fraud Risk Review as part of their broader governance strategy.

Dexus Property Group

Based on the six UN Principles for Responsible investment (UNPRI)⁴, Dexus’ sustainability strategy is to invest “responsibly to deliver sustained value to stakeholders” by embracing resilience, liveability and connectivity (Dexus, 2017, para. 1). Dexus’ sustainability approach is designed around key objectives and incorporates the management of ESG issues across their portfolio. The five pillars of Dexus’ sustainability strategy are:

(i) To foster and support well-connected, healthy and thriving local communities through investments that boost local employment opportunities and increase indoor environment quality.

(ii) To enable customers by facilitating flexibility, productivity and growth (e.g., offering flexible short-term and/or green leases, a desirable workspace that provides access to intelligent sustainable buildings, health and wellbeing, etc.).

⁴ For more information on the UNPRI principles – see https://www.unpri.org/about/the-six-principles.
(iii) To create leading cities that increase the liveability of the community and cement the cities’ status as cultural destinations through the activation of precincts, functional open public areas and green space, and the facilitation and promotion of events and sustainable initiatives/projects.

(iv) Contributing to an enriched environment (e.g., the transition to a low carbon operation, with zero-emission as the final goal, waste management and resource recycling, etc.).

(v) Promoting an environment that encourages gender equality and diversity and providing facilities that are compliant with workplace health and safety to support the well-being of occupants.

Some of Dexus’ strategic CSR targets and initiatives include:

(i) Philanthropic activities such as the opportunity for employees to take a one day paid volunteering leave and the appointment of 23 Community Managers to facilitate community engagement (e.g., corporate donations, employee volunteering programs and the support of not-for-profit organisations and community groups).

(ii) To provide 1,000,000 square metres (sqm) of office real estate with at least a 5-Star NABERS Energy rating and 4-Star NABERS Water rating by 2020.

(iii) The reduction of energy consumption by 10 per cent by 2020.

**GPT Group**

GPT embraces the concept of sustainability and recognizes the needs of both current and future generations. As part of their sustainability approach, GPT is committed to:

(i) The health, safety and well-being of its employees, suppliers, customers and local communities.
(ii) Improving supplier relationships in regard to positive impacts on value, communities and the environment.

(iii) The development and engagement of local communities (e.g., investments in education, the creation of employment opportunities, employee volunteering, etc.).

(iv) Provide high quality, sector-leading properties and positive customer experiences that foster customer engagement.

(v) Provide workplaces that encourage and facilitate diversity, equal opportunities and personal and professional development, high-performance workplaces and employee engagement.

(vi) Reduce environmental impacts and contribute positively to environmental sustainability and biodiversity.

As part of their governance framework, GPT has implemented a sustainability committee that oversees the policies and management systems for managing their key areas of sustainability risk and opportunities. Some of GPT’s CSR initiatives include:

(i) The development of a biodiversity measurement tool, which produces practical measures for on-site biodiversity. Notably, this tool has been incorporated into the biodiversity component of the Green Star Performance Tool.

(ii) To achieve a weighted average NABERS Energy rating of at least 4.5 stars. Notably, this target was exceeded in 2016 (5.2 stars).

(iii) The reduction of energy intensity by 40 per cent and emissions intensity by 57 per cent, and an increase in recycling rates from 29 per cent to 41 per cent since 2005.

(iv) Green leases and the implementation of ecological minimum standards for tenant fit-outs.
The relationship between REIT CSR strategies (such as the ones identified above) and financial performance have been studied widely. For instance, in their study on responsible property investment (RPI) in Canada, Hebb, Hamilton and Hachigian (2010) found that real estate firms and REITs focused more on governance and environmental aspects of RPI and less on social factors (e.g., labour and employment practices, occupational health and safety, brownfield redevelopments, urban revitalisation and affordable housing). The authors associated this to the lack of data linking financial and business implications to improved key social indicators, and the modest coverage of literature – which concentrates on governance, sustainability, and the overall CSR rating. However, Hebb, Hamilton and Hachigian (2010) suggested that social aspects are integrated with popular sustainability property certifications (e.g., LEED or the Australian Green Star).

In regard to the effect of corporate governance on REITs, generally, the legal restrictions of A-REITs function as a safeguard for unit holders’ interests and remove the need for internal governance (Bauer, Eichholtz and Kok, 2010; Feng, Ghosh and Sirmans, 2007b; Ghosh and Sirmans, 2005). Despite this safeguard, it has been argued that: (i) a significant agency problem exists, leaving REIT CEOs the discretion to design board structure and benefits (Feng, Ghosh and Sirmans, 2007a; Ghosh and Sirmans, 2005), and (ii) REIT managers may have an incentive for personal gain (Ghosh, Petrova and Xiao, 2012; Ghosh and Sun, 2014), which might lead to earnings management manipulations (Anglin et al., 2013).

To mitigate the risks of managers abusing their power for personal gain, sound internal control mechanisms as part of well-defined CSR strategies are critical. These internal control mechanisms allow REITs to respond to the lack of external governance (e.g., the potential absence of major institutional investors (Bauer, Eichholtz and Kok, 2010; Ghosh and Sirmans, 2003) and an efficient market for corporate control) and the little impact external governance has on REIT performance (Ghosh and Sirmans, 2003). According to Hartzell, Sun and Titman
the stronger the corporate governance of U.S. REITs, the more positively they respond to their investment choices. However, the majority of studies (e.g., Bauer, Eichholtz and Kok, 2010; Bianco, Ghosh and Sirmans, 2007; Ghosh and Sirmans, 2003; Hartzell, Sun and Titman, 2006) find that internal corporate governance is only weakly related to REIT performance, which suggests that the legal requirements of REITs are indeed an effective safeguard and, according to the substitution hypothesis, mitigate the need for internal corporate governance.

As noted above, the actual need for internal corporate governance remains unclear, and so does the actual effect of internal corporate governance on REIT performance. On the one hand, Campbell et al. (2011) found that staggered boards do not significantly impact abnormal bidder returns, but may be used by REITs to signal improved monitoring by independent directors. Further, there is evidence that independent directors provide additional monitoring and governance only if the CEO cannot influence the appointment of such (Ghosh and Sirmans, 2005), and that high CEO REIT ownership and long tenures negatively affect the presence and tenure of independent directors, which has been known to have an adverse impact on REIT performance (Ghosh and Sirmans, 2003).

On the other hand, several studies suggest that independent directors may indeed enhance REIT performance (Anglin et al., 2013; Feng, Ghosh and Sirmans, 2005; Ghosh and Sirmans, 2003; Hartzell, Sun and Titman, 2006). Additional board characteristics are also found to provide better monitoring and these are: board size (smaller sizes tend to be more efficient); a non-chair CEO; the number of board meetings; and audit committee financial expertise (Anglin et al., 2013; Feng, Ghosh and Sirmans, 2005). The former two characteristics were also found to contribute to an enhanced financial performance (Feng, Ghosh and Sirmans, 2005), however, this was only significant for the best and worst boards. Not surprisingly, the reviewed evidence suggests that internal control mechanisms’ effect on REIT performance strongly depends on
the influence of the REIT CEO. This is plausible, since CEOs acting in self-interests are less likely to promote additional monitoring within the company.

The following discussion looks at sustainable (green) buildings, which is arguably an area in which A-REITs can significantly benefit. A review of 17 empirical studies on the cost premium of green buildings by Dwaikat and Ali (2016) revealed that green buildings experience cost premiums between -0.4 percent and 21 per cent. It has also been shown that sustainable properties may save resources spent on energy, water, waste disposal during construction or renovation, and during the lifespan of the building (Devine and Kok, 2015; Eichholtz, Kok and Quigley, 2010). They have also been used to hedge against future energy price increases and investor preferences such as environmental awareness (Eichholtz, Kok and Quigley, 2013; Wiley, Benefield and Johnson, 2010). While current empirical studies primarily concentrate on environmental rather than economic performance, there appears to be a consensus that capital expenditure on improved real estate energy efficiency adds economic value (e.g., Kok, Miller and Morris, 2012), particularly given low interest rates and current and projected energy costs (Eichholtz, Kok and Quigley, 2010). Interestingly, commercial real estate investors in Australia and New Zealand have been found to focus on the level of energy consumption and the resulting reduction in costs and risks when determining the sustainability levels of properties (Warren-Myers and Reed, 2010).

However, there are also less tangible benefits associated with sustainable buildings where the direct economic impact is harder to assess. For example, the prime location of sustainable property might improve employees’ ease and time of commuting (Braun and Bienert, 2015); an improved indoor environmental quality in sustainable buildings may result in greater employee satisfaction, health, and productivity; and the benefits from an enhanced reputation due to the projection of a social and environmental awareness by occupying a green building and the reduction in CO₂ emissions (Allen et al., 2015; Allen et al., 2016; Eichholtz, Kok and
Quigley, 2010, 2013; Fuerst and McAllister, 2011; Miller et al., 2009). Combined or individually, these factors have also been known to help occupying businesses attract and retain highly qualified/skilled employees.

Notably, the impact of green buildings on the workforce goes beyond just the occupants of such buildings. The reduction of waste, better working conditions, and the use of environmentally friendly and quality materials may positively affect the well-being of the property service industry workforce, for example, construction, maintenance and cleaning workers. In terms of social impact, workers in unfavourable working conditions are exposed to increased health risks, psychological stress and mental illness (CSDH, 2008). Any resulting economic profits from these less tangible benefits are likely to be passed on in the form of profits to REIT investors. Interestingly, Miller, Spivey and Florance (2008) estimate the productivity benefits from green buildings to be about 10 times the energy savings of such properties.

This sees REITs benefit twice from these sustainable aspects. First, from occupying green buildings themselves and, second, from offering such properties and the benefits that come with occupying sustainable buildings to their tenants (e.g., lower utility bills, improved reputation, a better performing workforce, etc.). The empirical evidence shows that tenants of commercial properties value the benefits from occupying labelled green buildings and pay premium rent compared to conventional buildings, which is also appreciated in higher sales of green properties by the market (Deng, Li and Quigley, 2012; Deng and Wu, 2014; Devine and Kok, 2015; Eichholtz, Kok and Quigley, 2010, 2013; Fuerst and McAllister, 2011; Kok and Jennen, 2012; Kok, Miller and Morris, 2012; Newell, Macfarlane and Walker, 2014; Robinson et al., 2016; Wiley, Benefield and Johnson, 2010).

Eichholtz, Kok and Yonder (2012) show that the observed premium within their sample is higher than the effective energy cost savings, which suggests that the excess part of the
premium is driven by less tangible benefits (e.g., enhanced corporate reputation, a more productive workforce, etc.). They also show that a AUD$1.30 saving in energy cost results in an average increase of 3.5 per cent in rent and 4.9 per cent of the market value. This is consistent with, Eichholtz, Kok and Quigley (2010), who demonstrate that a reduction of 10 per cent in site or source energy in labelled green commercial office buildings results in a more than one per cent increase in value above the rent and value premium.

In addition, Braun and Bienert (2015) showed that sustainable buildings are often situated in prime locations, which infers that green buildings are likely to uphold their market value. Further, Devine and Kok (2015), Eichholtz, Kok and Quigley (2013), Fuerst and McAllister (2009) and Wiley, Benefield and Johnson (2010) found that green office buildings experience lower vacancy rates and higher tenant satisfaction. Also, increasing the supply of sustainable properties does not affect relative returns of such buildings (Eichholtz, Kok and Quigley, 2013). As a result, the prime locations, lower vacancy rates, higher rents and sales values from the increased demand, and lower environmental (e.g., little exposure to energy price shocks) and legislative risks of green buildings could imply that property investors attribute a lower risk premium and higher valuation due to lower volatility of the market value of green properties (Devine and Kok, 2015; Eichholtz, Kok and Quigley, 2010, 2013; Wiley, Benefield and Johnson, 2010). This allows REITs to use sustainable buildings to hedge against tenant preferences (i.e., environmental awareness satisfaction) and energy price shocks, and to use any additional cash flow from premiums in rent or sales value, or lower risk premiums, to offset the higher initial investment of green buildings, or even achieve higher risk-adjusted returns.

Consequently, green (sustainable) REITs have been found to improve their operational and financial performance, for example, firm value, return on assets (ROA), return on equity (ROE), funds from operation (FFO), and cash flow (Eichholtz, Kok and Yonder, 2012; Ho, Rengarajan and Lum, 2013; Sah, Miller and Ghosh, 2013). However, while Eichholtz, Kok and
Yonder (2012) could not find a significant relationship between the greenness of U.S. REITs and abnormal stock returns, they show that the greenness of U.S. REITs is significantly negatively correlated with their market betas. This may suggest that higher cash flows from these investments might already be reflected in the stock price.

In fact, there is evidence to suggest that a high CSR rating does not have a negative impact on the financial performance of REITs. For instance, Cajias et al. (2014) show that, although driven by ESG concerns rather than strength, a high overall ESG rating positively affects market value. In an earlier study, Newell, Peng and Yam (2011) found that CSR A-REITs did not significantly underperform non-CSR A-REITs, and also provide additional portfolio diversification benefits. Further, evidence for Canada (Hebb, Hamilton and Hachigian, 2010), Australia (Newell and Lee, 2012), and multi-country\(^5\) (Kerscher and Schäfers, 2015) demonstrate that REITs with a high CSR/ESG rating outperform their conventional counterparts. Overall, the empirical evidence on balance suggests that REITs can benefit from employing various CSR strategies to mitigate risks and enhance their financial performance. However, the impact of CSR strategies on risk-adjusted return performance remains less clear.

IV. REITs & THE EFFICIENT MARKET HYPOTHESIS

According to Graff (2001), the low-risk cyclical nature of institutional-grade real estate is bond-like and should be valued for its income-generating capacity. However, REITs exhibit investment characteristics of both fixed-income assets and equity assets (Graff, 2001). While the former refers to the present value of expected net cash flows from current leases, the latter refers to the present value of expectations about future prospects for the spot rental market – that is, the timing and amount of net cash flows from future leases depend on the spot rental

\(^5\) Countries investigated include Australia, Canada, France, Germany, Hong Kong, Netherlands, Singapore, Sweden and United Kingdom.
market equilibrium at the time of the lease negotiation. This sees REIT investors in the need of accurate and relevant information to be able to compute the true value of REITs. Consequently, investors closely monitor REIT performance to analyse free cash flow and dividend continuance (Graff, 2001; Hardin, Liano and Huang, 2005). Thus, having an awareness of any information inefficiencies might be what distinguishes a successful REIT investor from an unsuccessful one.

In particular, investors need to be aware that REIT managers might purposely try to mislead or forgo them with certain information needed to derive accurate cash flows projections and portfolio valuations, and use this information for insider trading purposes (Hirt and Block, 2012). Examples include denied public access to detailed information about buildings, leases and tenants (which might be consistent with requirements concerning the protection of client information) and scheduled periodic rent increases for corporate real estate financed through sale-leaseback transactions and build-to-suit purchases (Graff, 2001). However, the impact of information asymmetry on REIT pricing remains unclear. Feng, Ghosh and Sirmans (2007b) aptly addresses this issue:

“[s]ome authors assert that real estate assets are easier to value than other industries because they do not derive significant value from human capital and growth opportunities. Further, high dividend payment forces REITs to raise investment capital externally where scrutiny and monitoring by investment bankers enhance information dissemination. Others hold the contrarian view that real estate assets are illiquid and less transparent.”

This suggests that REIT prices do not reflect all available information and REITs, therefore, are not efficient in the strong-form of the EMH, which is supported by empirical evidence. For instance, Lu, Mao and Shen (2015) found that U.S. REIT managers trade on inside information when acquiring U.S. REITs and only consider an acquisition for their personal benefit rather than enhancing shareholder wealth. Cline et al. (2014) also found evidence of insider trading
around U.S. REIT seasoned equity offerings (SEOs). However, the authors did not find any evidence that managers personally benefited from these activities. The authors linked this to a lack of managers’ skill in identifying when their REIT is overvalued and which SEO will underperform in the long-run. Cline et al. (2014) further suggested that REIT managers act on the general assumption that SEOs are linked to overvalued stock prices. Given that REIT managers who traded on this general notion were not able to personally profit, shows that the REIT market already reflects this common assumption. Notably, there is no proof of a strong-form market considering skilled REIT managers could potentially profit from trading on inside information around SEOs.

Hardin, Liano and Huang (2005) showed that the immediate reaction to U.S. REIT splits and the long-term post-split performance are generally what can be expected with semi-strong form efficient market pricing. In addition, Dimovski and O'Neill (2012) analysed 55 private placements made by A-REITs between 1 July 2006 and 30 March 2011 and found that while the first-day closing price reports a loss of -0.8 per cent, the ten-day closing price after the announcement shows an average 0.1 per cent profit for existing shareholders. Similar to the first-day closing price findings of Dimovski and O'Neill (2012), Ratcliffe and Dimovski (2014) found support for the information signalling hypothesis in observing negative and significant cumulative abnormal returns of -1.3 per cent in the 0,+10 window for A-REIT private placements. In a similar vein, Anderson, Benefield and Hurst (2015) found evidence that U.S. REIT prices already reflect the difference in performance caused by diversification between diversified and specialised U.S. REITs. This suggests that A-REIT investors cannot outperform the market by actively trading on information.

Conversely, Kallberg, Liu and Trzcinka (2000) demonstrated that active managers of U.S. REITs have outperformed passive strategies by approximately two per cent. There is also a considerable evidence from the U.S. that REIT returns experience momentum, which implies
that investors are able to beat the market by actively trading on fundamentals (Chui, Titman and Wei, 2003a, 2003b; Derwall et al., 2009; Goebel et al., 2013; Hung and Glascock, 2008). There is also evidence to suggest that A-REITs experience momentum (Lee, Reed and Robinson, 2007). Further, Peng (2005) suggested that A-REITs are inefficient in the semi-strong form because of the presence of calendar anomalies. In an event study on Centro Properties and Centro Retail Trust’s earnings revision and refinancing announcement, Dimovski (2009) found that A-REITs experienced statistically significant negative abnormal returns on the announcement day of 17 December 2007. Additionally, in 45 per cent of A-REIT rights issues between January 2001 and June 2009, subscribers enjoyed a share price higher than the theoretical ex-rights share price (Dimovski, 2011). Ratcliffe and Dimovski (2012) also showed cumulative abnormal returns for A-REITs of 0.966 per cent around the three-day announcement period for merger and acquisition transactions. Given this evidence, REIT markets may not be semi-strong efficient and investors may be able to outperform by trading on public information.

Kuhle and Alvayay (2000) analysed the daily and monthly prices of 108 randomly selected U.S. equity REITs, using a runs test and an autocorrelation test. Their results suggested a degree of weak-form inefficiency, which they link to a potentially inefficient information availability and processing of such information by investors. Similar evidence is found for the A-REIT market – that is, the Random Walk Hypothesis (RWH) does not apply to A-REITs and prices can be predictable (Siew, 2015). Despite the U.S. REIT market being inefficient over their study period, Huang, Su and Chiu (2009) demonstrated that the addition to the S&P 500 index has greatly improved the market efficiency of U.S. REITs. The authors attributed this finding to increased liquidity, greater information efficiency and trading volumes of publicly traded U.S. REITs and the increased attention of investors. This is consistent with Below, Kiely and McIntosh (1996), who showed that monitoring through institutional investors, which is
amplified by the increased attention of investors in general, leads to a reduction of the bid/ask spread (i.e., effectively a reduction in trading cost) and an improvement of pricing efficiency.

Schindler, Rottke and Füss (2010) provided mixed evidence on the market efficiency of REITs. The authors found evidence showing that most international public REIT markets are mostly inefficient and investors are likely to earn excess returns by trading on past information. However, with respect to A-REITs, the study showed that the results of the autocorrelation test and variance ratio test rejected the RWH only for weekly and monthly returns. Moreover, while the results from the runs test suggest that A-REITs reject the RWH only for weekly returns, the results for the multiple variance ratio tests suggest that A-REITs confirm the RWH for daily, weekly and monthly returns. While this implies that the A-REIT market is somewhat weak-form efficient, Jirasakuldech and Knight (2005) suggested that U.S. REITs are weak-form efficient. This is further reinforced by Schindler et al. (2010) who found that U.S. REITs and A-REITs cannot earn statistically significant positive risk-adjusted returns from a moving average strategy compared to a buy-and-hold strategy. This supports the findings of (Peng, 2004), who demonstrated that investors cannot use today’s A-REIT prices to predict future prices.

Overall, while there is empirical evidence against the strong-form and semi-strong form efficiency of REIT markets, there are several studies that propose that REITs are at least weak-form efficient. Support for this assumption is provided by French, Lynch and Yan (2012), who found that short sellers positively contribute to the market efficiency of REITs by impounding information into the price. Moreover, evidence showing that U.S. REIT short sales underperform non-REIT short sales (Blau, Hill and Wang, 2011) and the diminishing effect of A-REIT calendar anomalies (Peng, 2005), also highlights increased pricing efficiency in REIT markets.
Asset pricing models are also considered tests of market efficiency. Table 2 provides a summary of studies on REIT performance using either the Fama and French (1993) three-factor model or Carhart (1997) four-factor model. While it is typically assumed that returns on liquid market assets (e.g., stocks and bonds) can be explained by multifactor models, Graff and Young (1997) make a case against the use of linear multifactor models on REITs. Analysing returns for equity REITs listed on U.S. exchanges, they found different serial persistence between their sampling frequencies (monthly, quarterly and annual returns), which suggests that such models cannot adequately explain REIT returns.

[Insert Table 2 here]

However, subsequent evidence within the REIT sector implies that Carhart’s (1997) four-factor model is suitable to evaluate REIT returns. Fei, Ding and Deng (2010) and Stevenson (2002) suggested that the S&P 500 has some influence on U.S. REIT performance. Moreover, Brounen and De Koning (2012) found that U.S. REIT and A-REIT performance are correlated with the country-specific common stock market performance. Chiang, So and Tang (2008) provided additional evidence of REIT performance correlation with country-specific common stock markets and arrived at similar conclusions to that of Brounen and De Koning (2012).

On the other hand, Peterson and Hsieh (1997) suggested that Fama and French’s (1993) three-factor model is suitable for evaluating U.S. equity REIT returns, as it is designed to evaluate common stock portfolios. The authors found that common risk factors (such as size and book-to-market) in the returns on stocks and bonds also explained the returns on U.S. equity REITs. Chui, Titman and Wei (2003a) provided further support of the significance of the size and book-to-market risk factors. The authors also found that historical returns (especially in the post-1990 period) are accurate predictors of future returns. In particular, they noted that while all the pre-1990 period factors contributed to explaining the returns
encountered, the post-1990 period returns are dominated by momentum factors with no particular significance to size or book-to-market factors.

Several studies also support Jegadeesh and Titman’s (1993) momentum factor as being significant in explaining REIT returns (e.g., Buttimer Jr, Chen and Chiang, 2012; Chui, Titman and Wei, 2003a, 2003b; Derwall et al., 2009; Hung and Glascock, 2008, 2010; Zhou and Ziobrowski, 2009). According to Chui, Titman and Wei (2003b), who analysed the performance of U.S. REITs between 1984 and 2000, the REIT momentum effect is even stronger than momentum effects encountered in other U.S. industries. Notably, Derwall et al. (2009) suggested the use of an REIT-specific momentum factor rather than a common stock momentum factor.

Empirical evidence also suggests that momentum profits in the REIT industry are significantly underestimated by conventional multifactor models and Carhart’s (1997) common stock-based momentum factor. Conversely, there is also opposing evidence that U.S. equity REITs experience a performance reversal rather than performance persistence (Zhou and Ziobrowski, 2009). Further, Cakici, Erol and Tirtiroglu (2014) found the momentum factor to be significant since the inclusion of REITs in the S&P 500 index in January 2001, while Fama and French (2012) suggested that country-specific factors rather than global factors increased the explanatory power for regional portfolios. However, recent empirical evidence by Bond and Xue (2017) showed that their proposed investment-based model based on market, investment, and profitability factors outperformed conventional multifactor models in capturing cross-sectional returns of U.S. REITs and that linking returns to REIT fundamentals suggests that market efficiency may not necessarily explain REIT return patterns.
V. GAPS IN THE LITERATURE

The literature focusing on the CSR of REITs to-date primarily centres on corporate governance, sustainability and performance, with the latter concentrating on firm-level financial consequences rather than risk-adjusted return performance (Eichholtz, Kok and Quigley, 2010). Although the literature indicates that corporations can improve their financial performance by improving their social performance (e.g., Orlitzky, Schmidt and Rynes, 2003), there has been limited empirical research conducted on the relationship between CSR and risk-adjusted returns of REITs, particularly in Australia. There are – to the best of our knowledge – only two empirical studies (Newell and Lee, 2012; Newell, Peng and Yam, 2011) with a focus on the risk-adjusted return performance of A-REITs. Both studies analysed risk-adjusted returns of 16 CSR A-REITs for similar periods: August 2005 – July 2010 and July 2005 – June 2010, respectively. While the former study did not specify which regression model was used to compute their risk-adjusted returns, the latter employed a regression model, adjusting for the market capitalisation, book-to-market, gearing and beta.

Based on the review, four gaps were identified. First, due to advances in sustainable technology and the wider uptake of CSR practices in A-REITs, there is a need for current empirical evidence. Second, no study has used the Carhart (1997) four-factor model to estimate risk-adjusted returns for CSR A-REITs, which reduces the ability to establish the performance of the sector and compare results with other international studies in this area (e.g., Eichholtz, Kok and Yonder, 2012; Hartzell, Mühlhofer and Titman, 2010). Third, despite the significant impact of the GFC on A-REIT performance, neither of the Australian studies mentioned above adjusted their models for the crisis. For instance, as A-REITs performed poorly during the GFC (Figure 2) there is a need to take into account the impact of this major economic shock when modelling the association between CSR and risk-adjusted returns of A-REITs. Finally, while Newell, Peng and Yam (2011) computed rolling 36-month averages for CSR A-REIT risk and
correlation with Australian shares, no study has estimated rolling alphas to assess the risk-adjusted returns of CSR A-REITs over time.

[Insert Figure 2 here]

These gaps, the uncertain linkages between CSR and A-REIT performance (Warren-Myers and Reed, 2010), and the importance of the A-REIT sector in general, emphasise the need for further research in this area. Specifically, a greater understanding of the linkages between CSR practices and the risk-adjusted return performance of A-REITs will aid the adoption of CSR best-practices, assist policymakers in providing a strong framework designed to foster CSR development, drive demand, and positively affect A-REIT capital allocation and investment.

Based on this review, we see future Australian research analysing this linkage to quantify the benefits of CSR A-REITs in the context of the EMH. For instance, research could investigate whether investors outperform the broader market and conventional A-REITs by passively investing in CSR A-REITs. Such research could employ Carhart’s (1997) four-factor model with an added factor to account for the GFC to estimate the risk-adjusted return performance of conventional A-REITs and CSR A-REITs. CSR A-REIT portfolios could be constructed using overall sustainability ratings (e.g., CSRHub). Ideally, studies could assess the financial performance of A-REITs across sub-sectors (e.g., retail, office, industrial, specialised, diversified, etc.) and/or based on individual CSR components (e.g., environment, employees, community and corporate governance) (Newell and Lee (2012), with the latter allowing the researcher/s to identify the key CSR drivers of A-REIT risk-adjusted return performance.

As proposed by Derwall et al. (2009), any study analysing the linkage between CSR and risk-adjusted returns in A-REITs, using the Carhart four-factor model, could increase the suitability of the model by including an A-REIT-specific momentum factor. Similar to Newell and Lee (2012), further studies are also encouraged to include leverage in the Carhart model to
analyse the impact of debt levels on A-REIT risk-adjusted return performance. Following the approach of Costa et al. (2014), rolling risk-adjusted returns could also be computed to provide a deeper understanding of A-REIT risk-adjusted return performance over time.

Further, to provide a better understanding of the cross-section of A-REIT returns, future research could also employ Bond and Xue (2017) investment-based model. As suggested by Bond and Xue (2017), analysing the exact economic forces that are driving the investment and profitability effects of their investment-based model, may provide deeper insights into A-REIT market efficiency. Last, researchers could also establish the relative market efficiency levels and transaction costs associated with CSR A-REITs. Risk-adjusted return models are a direct test of market efficiency, thus, any evidence of abnormally large risk-adjusted returns found from investing in CSR A-REIT portfolios versus the conventional A-REIT portfolio and/or the broader market may refute the EMH and agency view on CSR.

VI. CONCLUSIONS

Advocates of CSR argue that being a good corporate citizen can drive financial performance (Alexander and Buchholz, 1978; Bénabou and Tirole, 2010). However, does this hold true for REITs motivated by CSR considerations? The evidence on REITs with high CSR ratings leading to greater risk-adjusted returns presented in this review of the literature is mixed. It is evident that the majority of research in this area has been undertaken on the governance and sustainability aspects of CSR, with the latter often being based on studies of energy consumption (Eichholtz, Kok and Quigley, 2010). In recent years, however, there have been studies that have empirically examined the financial performance of REITs.

While not all studies reviewed established a significant link between CSR REITs and positive risk-adjusted return performance, there seems to be no empirical evidence in favour of the agency view on CSR. In other words, there appears to be no support of CSR activities being
a waste of REIT owners’ resources. This might be attributable to the special legal requirements of REITs, reducing agency costs and need for corporate governance (Bauer, Eichholtz and Kok, 2010; Ghosh, Petrova and Xiao, 2012; Ghosh and Sun, 2014; Hardin et al., 2009). Another plausible explanation might be that REITs can benefit substantially from sustainable investments, first, through improved reputation and lower operating costs from occupying and offering sustainable real estate and, second, from creating higher positive cash flows as a result of a green premium on rents and selling prices and lower vacancy rates. Further, the EMH suggests that the REIT market only appears to be weak-form efficient, potentially providing REIT investors the opportunity to earn higher risk-adjusted returns when acting on public and/or private information.

Despite the importance of the community around, and the workforce and occupants within, REITs, modest attention has been provided to the risk-adjusted return performance of CSR pertaining to Australian real estate investment trusts (A-REITs). This is surprising given the growing significance of urban revitalisation, brownfield redevelopments, and affordable housing in Australia, particularly in urban areas and central business districts. Based on the mixed results relating to CSR REITs and their risk-adjusted return performance, along with the identified gaps in the literature, it remains questionable whether CSR A-REITs outperform conventional A-REITs, or indeed the broader market. The uncertain link between CSR A-REITs and performance and the importance of the A-REIT sector globally and within the Australian property sector, clearly warrants further empirical investigation.
REFERENCES


MSCI (2017), 'The Property Council/IPD Australia Unlisted Core Retail Property Fund Index'. MSCI Database. Available at: https://www.msci.com.


### Table 1: Comparative Asset Class Return Performance - Australia

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Annualised total return (%)</th>
<th>1 Year</th>
<th>3 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-REITs</td>
<td></td>
<td>-1.2</td>
<td>12.1</td>
<td>13.6</td>
</tr>
<tr>
<td>Unlisted core retail property funds (GAV Weighted)</td>
<td></td>
<td>26.0</td>
<td>28.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Unlisted core wholesale property funds (GAV Weighted)</td>
<td></td>
<td>13.0</td>
<td>12.5</td>
<td>11.3</td>
</tr>
<tr>
<td>Equities</td>
<td></td>
<td>10.5</td>
<td>6.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Bonds</td>
<td></td>
<td>-4.7</td>
<td>5.3</td>
<td>4.1</td>
</tr>
</tbody>
</table>

*Notes: returns as of 30 September 2017. GAV is gross asset value. Source: (MSCI, 2017)*
### Table 2: Summary of Literature Examining REIT Performance using Multifactor Models

<table>
<thead>
<tr>
<th>Author/s</th>
<th>Year</th>
<th>Size</th>
<th>Book-to-Market</th>
<th>Momentum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: International Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peterson and Hsieh</td>
<td>1997</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Kallberg, Liu and Trzcinka</td>
<td>2000</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Chui, Titman and Wei</td>
<td>2003a</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Chui, Titman and Wei</td>
<td>2003b</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Derwall, Huij, Brounen and Marquering</td>
<td>2009</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Hartzell, Muhlhofer and Titman</td>
<td>2010</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Eichholtz, Kok and Yonder</td>
<td>2012</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Kaushik and Pennathur</td>
<td>2012</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Sah, Miller and Ghosh</td>
<td>2013</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Anderson, Benefield and Hurst</td>
<td>2015</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Panel B: Australian Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newell and Lee</td>
<td>2012</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>
Figure 1: Australian Residential Property Price Index: Eight Capital Cities Value Relative to the S&P/ASX 300 Index

Notes: The Australian Residential Property Price Index: Eight Capital Cities is used as a benchmark for real estate price development. The S&P/ASX 300 index represents the top 300 listed Australian companies ranked by market capitalisation. The chart represents quarterly price points for both indexes from 2006 to 2016. Source: ABS (2017) and Capital IQ (2017).
Figure 2: S&P/ASX 300 A-REIT Index

Source: Capital IQ (2017).