# WOMEN DIRECTORS AND AUSTRALIAN REIT PERFORMANCE

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## ABSTRACT

*This paper follows Noguera's (2012) study on factors that might influence the return on asset (ROA) performance of REITs, including the engagement of more non-executive directors and more female directors. Using Australian data, the ROA performance of 37 Australian Real Estate Investment Trusts (A-REITs) from 2008 to 2011 is examined. As with Noguera (2012), larger A-REITs are found to tend to have higher ROA performance and A-REITs that employ more debt fare more poorly.*

*However, the findings show that the proportion of non-executive directors and female directors are not statistically related to such performance. A Tobin's Q measure is also used to provide a more market-based metric of A-REIT performance. The Tobin Q measure shows improved market values for A-REITs over 2010 and 2011 while those with an "office" focus tend to have performed more poorly using this measure. A pooled regression is utilised as well as fixed and random effects approaches to investigate factors influencing REIT performance. The findings suggest useful implications for A-REIT investors and boards.*

**Key words:** A-REITs, performance

## INTRODUCTION

Noguera (2012) investigated whether the composition of US REIT boards impact on REIT profitability (as measured by return on assets (ROA)), particularly from the viewpoint of the impact of executive (inside) and non-executive (outside and independent) directors. Noguera's (2012) study followed earlier work by Ghosh and Sirmans (2003) with US REITs, who found that there was a positive relationship between the number of outside directors and REIT performance as measured by return on equity (ROE). Contrary to Ghosh and Sirmans (2003), Noguera (2012) did not find the proportion of outside directors had a positive relationship with ROA.

The purpose of this paper is to examine whether outside directorships are related to ROA performance for the second largest REIT market in the world, the Australian REIT (A-REIT) market and also to examine particularly if more gender-diverse boards are positively related to A-REIT performance. This latter aspect has not yet been reported on in the literature.

The market capitalization of the global real estate investment trust (REIT) market is over US$1 trillion (EPRA 2012). While the US REIT market is the oldest and largest, the A-REIT market is the second oldest and largest REIT market in the world with a market capitalization of around US$100 billion (EPRA 2012). The largest A-REITs include Westfield Group, Stockland and GPT. These three had market capitalizations of around A$25 billion, A$8 billion and A$6 billion respectively (EPRA 2012). The A-REIT market is larger than the French, German, British, Japanese and Hong Kong REIT markets and so worthy of attention.

Additionally, A-REITs are an important sector in Australian financial markets. They manage around A$150 billion of institutional grade property assets (PIR 2011) and constitute around 6% of the market capitalization of the Australian Stock Exchange at August 2013. Major superannuation funds and institutional investors such as ING, Vanguard and Colonial First State have substantial monies invested in A-REITs. Newell (2007) also identifies the importance of A-REITs to industry-

based super funds.

Regarding gender-diverse boards and A-REIT performance, since women constitute a substantially greater proportion of the workforce when compared to directorship positions, it is possible that their employment as directors might bring a presently underutilized skill set to the table that may improve A-REIT performance. This is the primary hypothesis examined in this paper. It appears that there has been an increase in the proportion of women directors in A-REITs over the last few years and an increase in A-REIT performance - this paper attempts to examine a possible relationship. It is not suggested that intellectual differences may be identified between men and women directors, instead it is proposed that it is possible that A-REIT boards may benefit from utilizing an intellectual capacity that they have not engaged before. Additionally since there are fewer women directors in A-REITs compared to the average of the companies that constitute the S&P/ASX 200 (Australian Census of Women in Leadership 2012) it is possible that A-REITs may benefit more.

The structure of this paper is as follows. The next section briefly summarizes the related literature. The following section presents the model and reports the findings. The last section reports the conclusions.

## LITERATURE REVIEW

This section examines two broad strands of literature. The first strand relates to board structure and firm performance, particularly the use of outside or non-executive directors. The second strand relates to women directors and firm performance.

In investigating board structure and performance, much of the literature finds the idea that non-executive directors may offer useful expert advice as well as providing an effective monitoring role to be quite appealing and hence likely to have a positive impact on performance. Mehran (1995), Klein (1998), Hermalin and Weisbach (2003) and Adams, Hermalin and Weisbach (2010) all provide useful summaries of the literature in this area and conclude there is no clear empirical outcome as to whether the proportion of outside, non-executive directors is positively related to board performance. Recent work by Lehn, Patro and Zhao (2009) also does not find statistically significant relationships between accounting measures of performance and the proportion of non-executive directors. Adams, Hermalin and Weisbach (2010) suggest board composition and board performance may be jointly endogenous and this could be the reason why no clear empirical relationship has yet been found.

Amongst the REIT literature, the relationship is also not clear. While Ghosh and Sirmans (2003) find a positive link between ROE performance and the number of outside directors, Noguera (2012) does not find a link between ROA performance and the number of outside directors. Parker (2009) broadly investigated the relationship between A-REIT board composition (board size, proportion of female directors, proportion of directors with property experience, proportion of directors with directorships in other listed entities including other A-REITs) and price performance to conclude that there didn't appear to be strong evidence linking such board composition measures and price increases and decreases.

The engagement of women directors on public company boards has been discussed in the corporate governance and management literature for nearly twenty years (see for example Burke 1994; Burke 1997; Terjesen, Sealy and Singh 2009). The earlier work was quite normative in nature and generally argued that women directors should be employed for the different insight on consumers and consumer markets that they might bring. More recently, the finance literature has taken an empirical interest. Farrell and Hersch (2005) report that women directors tend to serve on better

financially-performing boards, while Gul, Srinidhi and Ng (2011) suggest that more firm-specific information is reflected in the stock prices of firms that employ gender-diverse boards. Recently, Adams and Ferreira (2009) also found that gender diversity is positively linked to board effectiveness. These empirical investigations have added a "business case" argument to the engagement of women directors on boards. These studies and others by Bilimoria (2000), Singh, Vinnicombe and Johnson (2001), Burke (2003), Shergill and Townsend (2006) and Mateos de Cabo, Gimeno and Nieto (2012) have generally been interested in women directors on US and UK industrial public company boards, often emphasizing sectors such as retail, banking, health and media that employ a substantial number of women.

Much of the discussion regarding women directors on boards actually relates to the paucity of women directors, as in Hyland and Marcellino (2002), Sheridan (2002), Singh and Vinnicombe (2003, 2004) and Catalyst (2012), together with the possible reasons as to why there might be such a low proportional representation of women directors on boards. An extension to this discussion is Carter, Simkins and Simpson (2003) who examine the relationship between board size and women directors to find that larger boards tend to have more women. More recently, Dimovski, Lombardi and Cooper (2013) examined women directors on the boards of A-REITs, finding that only around one in every two A-REITs engaged a female director on their board. The paper concluded that larger A-REITs and A-REITs that had larger boards generally engaged more women directors.

The literature regarding firm performance and women directors on boards is also not entirely clear. Only more recently in Farrell and Hersch (2005) is one of the first empirical investigations arguing a positive relationship between firm performance and the proportion of women directors. Interestingly Adams and Ferreira (2009) found that there is greater gender diversity in firms that perform worse. They find women directors attend more board meetings and impose a greater monitoring role than their male counterparts. This, however, is in line with the argument that too much monitoring may decrease shareholder value (Adams and Ferreira 2009).

## DATA, METHOD AND FINDINGS

The sample for this study comprises an unbalanced panel of company and gender data (with two or more years of data) from 37 A-REITs listed on the Australian Stock Exchange during 2008 to 2011. The data for this study was primarily derived from the *Connect 4 Boardroom* and *DatAnalysis* databases. This study uses variables from previous board structure studies that have been found to have a relationship with current year ROA and Tobin's Q. ROA data is derived directly from *DatAnalysis* while Tobin's Q (TOBINSQ) is calculated as the ratio of the market value of equity plus the book value of the liabilities divided by the book value of the total assets using the data from *DatAnalysis* and following the method in Kohl and Schaefers (2012). The explanatory variables are:

- the lagged proportion of women (LPROPWOMEN). The lagged variable is used to better examine causality, adapted from Farrell and Hersch (2005); Adams and Ferreira (2009);
- the lagged proportion of non-executive directors (LPROPNONEXEC). The lagged variable is used to better examine causality, adapted from Noguera (2012), Ghosh and Sirmans (2003);
- the debt to equity ratio (DEBTTOEQ), adapted from Noguera (2012) who used debt to assets; and
- the natural logarithm of the market capitalization in millions of dollars (LNCAPMIL) (Noguera (2012); Ghosh and Sirmans (2003)).

A dummy variable relating to A-REITs that have stapled securities (STAPLED) is also tested. Stapled security entities (where units in a trust and shares in a company are linked and must be

traded (bought or sold) together on the stock market) are common amongst A-REITs. The trust generally owns the rental income-earning property assets and the company is often a management company and/or one that is involved in property development activities. A-REITs often focus their activities into office, retail, industrial or diversified sectors. Two additional dummy variables are included in the modelling in this study for retail and office type A-REITs (RETAIL and OFFICE) to control for such property types. Year dummies for 2009, 2010 and 2011 are also included.

Three different panel models are used on the data. Firstly, a pooled ordinary least squares (OLS) regression with cluster robust standard errors; secondly a fixed-effects model; and thirdly a random-effects model. The pooled regression assumes no unique attributes or characteristics amongst each of the A-REITs. The fixed-effects model assumes there are unique characteristics amongst the A-REITs that are not the result of random variation. The random-effects model assumes there are unique characteristics that do not correlate with the regressor variables. This model is particularly useful in drawing inferences about populations, not only the examined sample.

It is the PROPNONEXEC and PROPWOMEN variables that are the primary focus of this study. These variables test the hypotheses that the more outside expert involvement, the greater the monitoring to the firm and the more likely a positive impact on performance. Multicollinearity has been tested for and it is not a problem using both these variables in the model. Heteroskedasticity is dealt with using the robust standard error command in STATA.

Table 1 reports the summary statistics. Panel A reports the statistics for all 134 observations from 2008 to 2011. The study starts at 2008 because of the significant negative structural impact of the Centro Properties announcements in December 2007 and the global financial crisis (GFC), as identified in Dimovski (2009). The Aurora Buy Write Income trust is excluded from the data since its income is more as an investor in property securities and it is an active call and put writer being quite different to the other A-REITs. Some extreme outlier observations over 3.5 standard deviations from the mean during the global financial crisis were also excluded for Centro and Trinity.

| **Panel A**<br>**2008 to 2011** | **Mean** | **Standard Deviation** | **Min** | **Max** |
|---|---|---|---|---|
| **Prop Women** | 0.076 | 0.098 | 0.000 | 0.500 |
| **Retail** | 0.218 | 0.414 | 0 | 1 |
| **Market Cap (mill)** | 1620.156 | 3948.335 | 0.28 | 28865.88 |
| **Prop Non-exec dir** | 0.770 | 0.176 | 0 | 1 |
| **Office** | 0.156 | .364 | 0 | 1 |
| **Debt to equity** | 1.001 | 3.227 | -28.237 | 8.043 |
| **Stapled** | 0.626 | 0.486 | 0 | 1 |
| **ROA** | 0.042 | 0.051 | -0.191 | 0.200 |
| **Tobin's Q** | 0.860 | 0.118 | 0.556 | 1.269 |

| Panel B<br>2008 to 2011 | Mean 2008 | Mean 2009 | Mean 2010 | Mean 2011 |
|---|---|---|---|---|
| **Prop Women** | 0.059 | 0.075 | 0.084 | 0.107 |
| **Retail** | 0.235 | 0.226 | 0.222 | 0.229 |
| **Market Cap (mill)** | 1928.02 | 1992.92 | 1797.27 | 1301.80 |
| **Prop Non-exec dir** | 0.767 | 0.775 | 0.815 | 0.777 |
| **Office** | 0.118 | 0.129 | 0.167 | 0.143 |
| **Debt to equity** | 1.019 | 0.420 | 1.005 | 1.296 |
| **Stapled** | 0.676 | 0.677 | 0.639 | 0.657 |
| **ROA** | 0.037 | 0.037 | 0.039 | 0.053 |
| **Tobin's Q** | 0.820 | 0.813 | 0.875 | 0.879 |

**A-REIT Summary Characteristics for 2008 - 2011**
**Source: Authors**
**Table 1**

Panel B reports the means by year. A steady increase in the proportion of women directors and ROA is evident over the years 2008 to 2011. Tobin's Q performance appears to improve in 2010 and 2011. While not specifically in the tables, it is worth noting that the largest A-REITs also tended to employ the most women directors, with Westfield Group, Stockland, GPT and Goodman Group all employing two female directors in 2011 (and all having at least one female director during the four year period of the study). Many smaller A-REITs and even some larger ones, such as BWP and Centro Retail, did not engage any women directors at all during the four years. Table 2 provides a correlation matrix for the explanatory variables used in the model, observing that stapled A-REITs tend to be larger.

| | Lprop Women | Lprop nonexec | Debttoeq | Stapled | LnCapmil | Retail |
|---|---|---|---|---|---|---|
| **Lprop Nonexec** | -0.045 | | | | | |
| **Debttoeq** | 0.030 | -0.208 | | | | |
| **Stapled** | 0.127 | 0.231 | -0.227 | | | |
| **LnCapmil** | 0.340 | 0.064 | -0.028 | 0.482 | | |
| **Retail** | -0.015 | -0.126 | 0.039 | -0.150 | 0.196 | |
| **Office** | -0.147 | -0.048 | -0.001 | -0.237 | -0.129 | -0.224 |

**Correlation Matrix for Explanatory Variables**
**Source: Authors**
**Table 2**

Table 2 reports the results for the variables discussed and their relationship to A-REIT ROA performance during the four year period 2008 to 2011. The signs of the coefficients on the lagged proportions of women directors and non-executive directors are not quite as expected although the p-values are not significant. The signs on the other coefficients are generally as might be expected. (While the time dummies are not formally reported, they are not significant either). The p-values on the F tests for the fixed events model and the chi squared for the random events model suggest the models are not ideal. There does not appear to be evidence of significant enough differences across A-REITs for these panel models to be utilized, therefore a pooled panel remains to explain the factors that influence ROA for A-REITs. In brief, it appears that those firms that employed a higher debt to equity ratio (holding other factors constant) performed more poorly on the ROA measure while larger firms (holding other factors constant) performed better during this 2008 to 2011 period.

| | **Pooled Panel** | | **Fixed-Effects Panel** | | **Random-Effects Panel** | |
|---|---|---|---|---|---|---|
| Observations 134 | Coef.# | Pr.# | Coef. | Pr. | Coef. | Pr. |
| C | 0.018 | 0.503 | -0.017 | 0.749 | 0.015 | 0.599 |
| LPROPWOMEN | -0.007 | 0.900 | 0.024 | 0.766 | -0.005 | 0.927 |
| LPROPNONEXEC | -0.031 | 0.305 | -0.32 | 0.441 | -0.030 | 0.276 |
| DEBTTOEQ | -0.002 | 0.032** | 0.001 | 0.783 | -0.001 | 0.425 |
| STAPLED | -0.009 | 0.551 | omitted | | -0.008 | 0.520 |
| LNCAPMIL | 0.008 | 0.042** | 0.126 | 0.063* | 0.008 | 0.004*** |
| RETAIL | 0.001 | 0.981 | omitted | | 0.001 | 0.931 |
| OFFICE | -0.005 | 0.726 | omitted | | -0.004 | 0.761 |
| R Squared | 0.135 | | 0.067 | | 0.134 | |
| F | | | 0.93 | 0.491 | | |
| Wald chi2 | | | | | 16.86 | 0.077 |

***, ** and * indicate the level of significance at 1%, 5% and 10% respectively.
# cluster robust coefficients and p-values are reported.
Year dummies of 2009, 2010, 2011 are included in the models but not formally reported.

**Regression Results for ROA Performance of A-REITs, 2008 to 2011**
**Source: Authors**
**Table 3**

Tobin's Q is sometimes used as a market based performance measure, so a similar modeling approach is attempted using Tobin's Q as the dependent variable rather than the accounting based ROA measure in Table 3. This, however, presents an endogeneity problem with LNCAPMIL. ROA is selected as the instrumental variable for LNCAPMIL and the models rerun. The Hausman test suggests the random-effects approach is preferable to the fixed-effects approach (with a chi squared of 3.23 and p-value of 0.863). In considering the pooled regression, it appears that A-REITs which had a better ROA performance performed better on this market based metric while office A-REITs appear to have performed more poorly than other sector types. There is also some evidence to suggest that those A-REITs that employed a higher debt to equity ratio performed more poorly on this metric.

When the individual attributes of each of the A-REITs are controlled using the fixed and random effects models, it appears that the A-REITs themselves that employed more debt performed more poorly while A-REITs that had higher ROA performance also rated higher on this market based metric. It is worth noting also that year dummies for 2010 and 2011 were statistically significantly

positive, at the 1% level, in all models, suggesting that A-REIT values improved significantly during these two years.

| | Pooled Panel | | Fixed-Effects Panel | | Random-Effects Panel | |
|---|---|---|---|---|---|---|
| Observations 134 | Coef.# | Pr.# | Coef. | Pr. | Coef. | Pr. |
| C | 0.831 | 0.000*** | 0.863 | 0.000*** | 0.861 | 0.000*** |
| LPROPWOMEN | 0.103 | 0.326 | -0.186 | 0.085* | -0.081 | 0.381 |
| LPROPNONEXEC | -0.023 | 0.611 | -0.036 | 0.522 | -0.044 | 0.363 |
| DEBTTOEQ | -0.006 | 0.069* | -0.007 | 0.004*** | -0.006 | 0.002*** |
| STAPLED | -0.010 | 0.744 | omitted | | -0.001 | 0.995 |
| ROA | 0.446 | 0.008*** | 0.223 | 0.111 | 0.299 | 0.024** |
| RETAIL | 0.018 | 0.697 | omitted | | 0.019 | 0.556 |
| OFFICE | -0.056 | 0.013** | omitted | | -0.061 | 0.111 |
| R Squared | 0.249 | | 0.115 | | 0.216 | |
| F | | | 6.69 | 0.000 | | |
| Wald chi2 | | | | | 51.30 | 0.000 |

***, **, and * indicate the level of significance at 1%, 5% and 10% respectively.
# cluster robust coefficients and p-values are reported.
Year dummies of 2009, 2010, 2011 are included in the models but not formally reported.

**Regression Results for Tobin's Q Performance of A-REITs, 2008 to 2011**
**Source: Authors**
**Table 4**

## CONCLUSIONS

The findings are consistent with Noguera's (2012) study of US REITs, suggesting that the proportion of non-executive directors is not related to the return on asset performance of REITs. This study also does not find that the proportion of women directors is statistically significantly related to the ROA performance of these firms either. It appears the skill set that is brought to the table by such directors per se doesn't appear to impact the performance of A-REIT firms. Similarly, no causal relationship is identified using a Tobin's Q metric as the dependent variable instead of the more accounting based ROA measure. It is likely that having such directors may offer an external monitoring role often sought as part of the useful governance of firms but, as Adams and Ferreira (2009) conclude, greater external monitoring and female representation doesn't automatically permit better performance.

It is found that larger, by market capitalization, A-REITs have performed better, on a ROA performance basis, than smaller firms during the period of 2008 to 2011. Additionally, A-REITs that had better return on asset performance had better Tobin's Q performance while A-REITs with an Office focus have tended to perform more poorly on a Tobin's Q basis. It is also worth noting that A-REITs more broadly have had their Tobin's Q values significantly and positively enhanced over 2010 and 2011. When the individual attributes of A-REITs are considered and fixed and random effects models employed, it may be observed that those which employed more debt did more poorly on a Tobin's Q measure while those that performed better on a ROA basis also did better on the Tobin's Q metric.

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